



# SOMALIA DROUGHT UPDATE (Aug-Sept 2022)

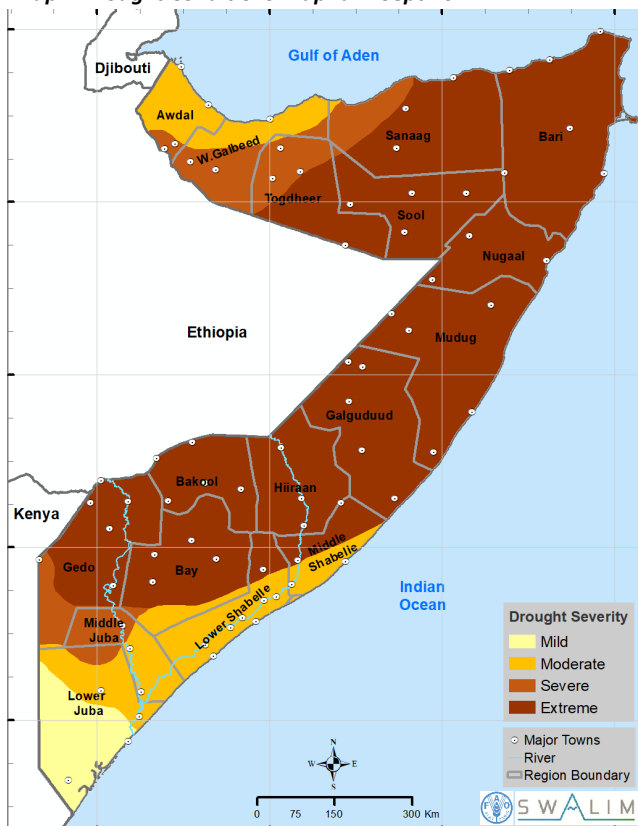
Issued on 11 August 2022

## Drought Severity

| DROUGHT CONDITION  | IMPROVING | STABLE                           | WORSENING  |
|--|-----------|----------------------------------|--|
| <b>NORMAL</b><br><i>Normal conditions</i>  |           |                                  |  |
| <b>MILD</b><br><i>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</i> |           |                                  |  |
| <b>MODERATE</b><br><i>Crop or pasture losses are likely; water shortages trucking common; Abnormal livestock migration and death cases</i>   |           | Awdal and Southern coastal areas |  |
| <b>SEVERE</b><br><i>Crop or pasture losses are likely; water shortages trucking common; Abnormal livestock migration and death cases</i>   |           |                                  | Lower Juba, Wooqoyi Galbeed, parts of Togdheer and Sanaag                            |
| <b>EXTREME</b><br><i>Major crop/pasture losses with limited migration options; increased livestock death; widespread water shortages and water trucking</i>                          |           |                                  | Togdheer, Saanag, Sool, Bari, Nugaal, Mudug, Galgaduud, Hiraan, Bay, Bakool and Gedo |

### Drought conditions continue to worsen across Somalia during July– September period

Map1: Drought Conditions Map Jul–Sept 2022

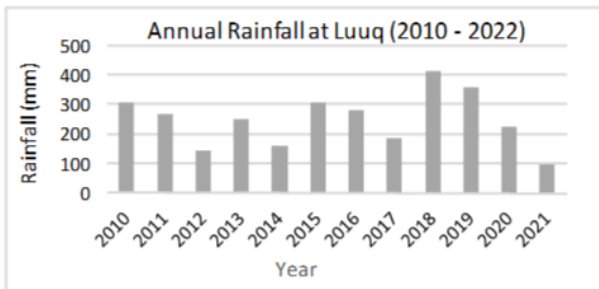


- Drought conditions improved slightly in the southern coastal areas and Awdal region in July following moderate Karan rains. Although the rains were not well distributed, they improved the vegetation conditions, which may be short-lived due to an influx of livestock into these areas.
- The other areas were dominated by dry and hot weather conditions, worsening drought severity in many parts of Somalia, leaving 90% of the country under extreme drought conditions.
- The groundwater levels across the country are going down, at alarming rates in some regions, from over pumping due to increased pressure to meet demand.
- Water trucking for domestic and animal use has been intensified.
- The Juba and Shabelle River levels are below the short-term average, with little water available to support irrigation of crops and other uses.

• Current long-range forecasts indicate a below-average 2022 *Deyr* rainfall season ([IRI/NOAA](#)). La Nina conditions will also be sustained during the last quarter of the year. The country's drought conditions are expected to deteriorate in the coming months, **setting the requirements for a worsening multi-season drought well into 2023.**

## Drought severity as of July 2022

**South and Central:** A few stations in **Hiraan, Bay** and **Bakool** regions received moderate rains in June and July. Cumulatively, Baidoa recorded 59 mm, Qansaxdheere 53mm, and Hudur 21mm. However, the rains were localized and inadequate to alleviate the existing drought conditions. Crops grown during the last Gu rains have failed, and pasture is depleted. Livestock from these areas have migrated to Lower Shabelle in search of pasture.



**Gedo** region recorded the least annual rainfall in 2021 over the last 20 years. The area is experiencing extreme drought conditions with no pasture and limited water access. Livestock migration to Lower Juba has been reported in the region.

In the **Middle Juba, Lower Juba, Middle Shabelle** and **Lower Shabelle** regions, localized light rains were received in July. This led to pasture generation and partial water replenishment, as shown in Map 2, which shows the vegetation conditions during the last dekad of July.

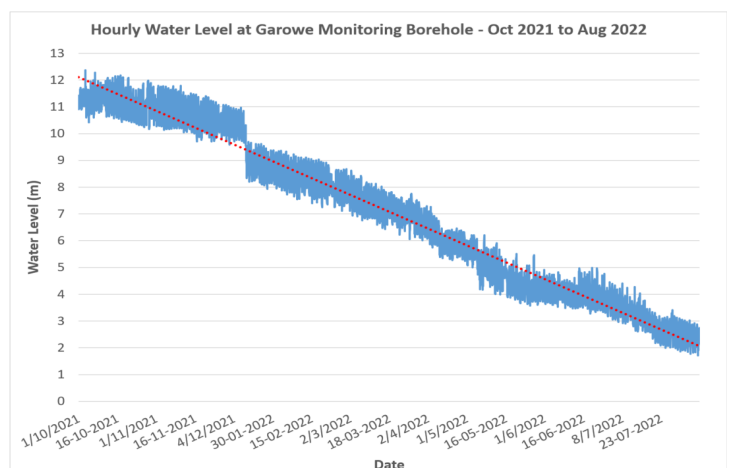
Afmadow, Qooqani, Jamaame, Jilib, Bualle, Kismayo and Kudha in the Jubas are some locations that recorded rains. Barowe, Kuntiwaarey, Sablaale, Marka, Qoryooley, Daafed in Lower Shabelle also received moderate rains in July. This boosted crop production, and if the Karan rains continue in August, the crop harvest is expected to improve the food availability in the regions.

However, the migration of livestock from Gedo, Bay and Bakool regions is putting pressure on the limited pasture and water resources which will soon be depleted unless the Karan rains are extended in August.

**Puntland:** The region is experiencing extreme drought conditions that worsened in the last two months due to dry and harsh weather conditions. Pasture and water resources have come to complete depletion. Many pastoralists have abandoned the villages and moved to urban centers to get help from relatives and well-wishers. Livestock sales have decreased due to weak animal body conditions and low purchasing power. Water prices are skyrocketing, putting immense pressure on pastoralists.

The current global increase in fuel and other items has had a toll on the poor population in the urban centres, especially the IDPs, who are in dire condition. Exhausted women are often seen carrying heavy containers of ice cream and selling them along the streets to earn some money to buy food for their children. The situation is expected to worsen as the country's dry condition continues.

Groundwater levels have dropped drastically in Puntland due to increased extraction and limited recharge from the short Gu rains. One of the monitoring wells installed by SWALIM in Garowe has recorded a continuous drop in water level from October 2021. The graph shows a decline of about 10m in the last ten months, which leads to an average reduction of one meter per month. Consequently, this has led to lowering the water table, which will take a long time to restore.



## Drought severity as of July 2022

**Somaliland:** The western parts of Somaliland, mainly Awdal Region, have received good Karan rains since June. The rains have been moderate and well distributed for some locations such as Tog Wajaale and Gebilley, where 146mm and 134mm have been recorded, with 16 and 14 rainy days, respectively. The table on the right summarises the stations where over 50mm of rainfall has been recorded since June 2022.

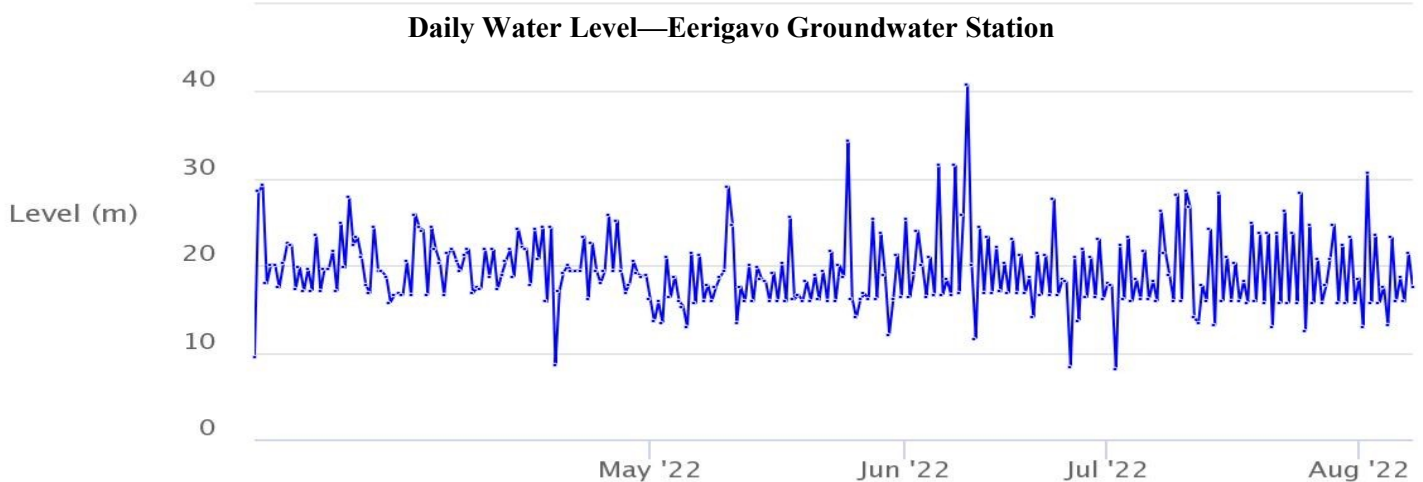
The cropped areas in this region had reduced significantly due to the failure of *Gu* rains. However, suppose the rains continue in August, the agro-pastoral farmers could take advantage to re-plant the rain-fed crops.

Water availability and pasture have slightly improved in the districts that received rains. Still, more rains are required for their sustainability.

The rest of Somaliland has remained dry since June, and pasture condition is deplorable. Water shortages are experienced in all sectors, with intensified water trucking activities from strategic boreholes. Livestock body conditions are poor, and in/out migration depends on pasture and water availability.

| Station     | Jun/July Rainy Days | June/July Total Rainfall (mm) |
|-------------|---------------------|-------------------------------|
| Tog Wajaale | 16                  | 146                           |
| Gebilley    | 14                  | 134                           |
| Taysa       | 8                   | 111                           |
| Amoud       | 3                   | 97                            |
| Botor       | 6                   | 93                            |
| Hargeisa    | 5                   | 82                            |
| Magalo-cad  | 8                   | 76                            |
| Aburin      | 11                  | 69                            |
| Borama      | 13                  | 62                            |
| Dararweyne  | 5                   | 61                            |
| Dilla       | 9                   | 59                            |
| Sayla Bari  | 3                   | 56                            |

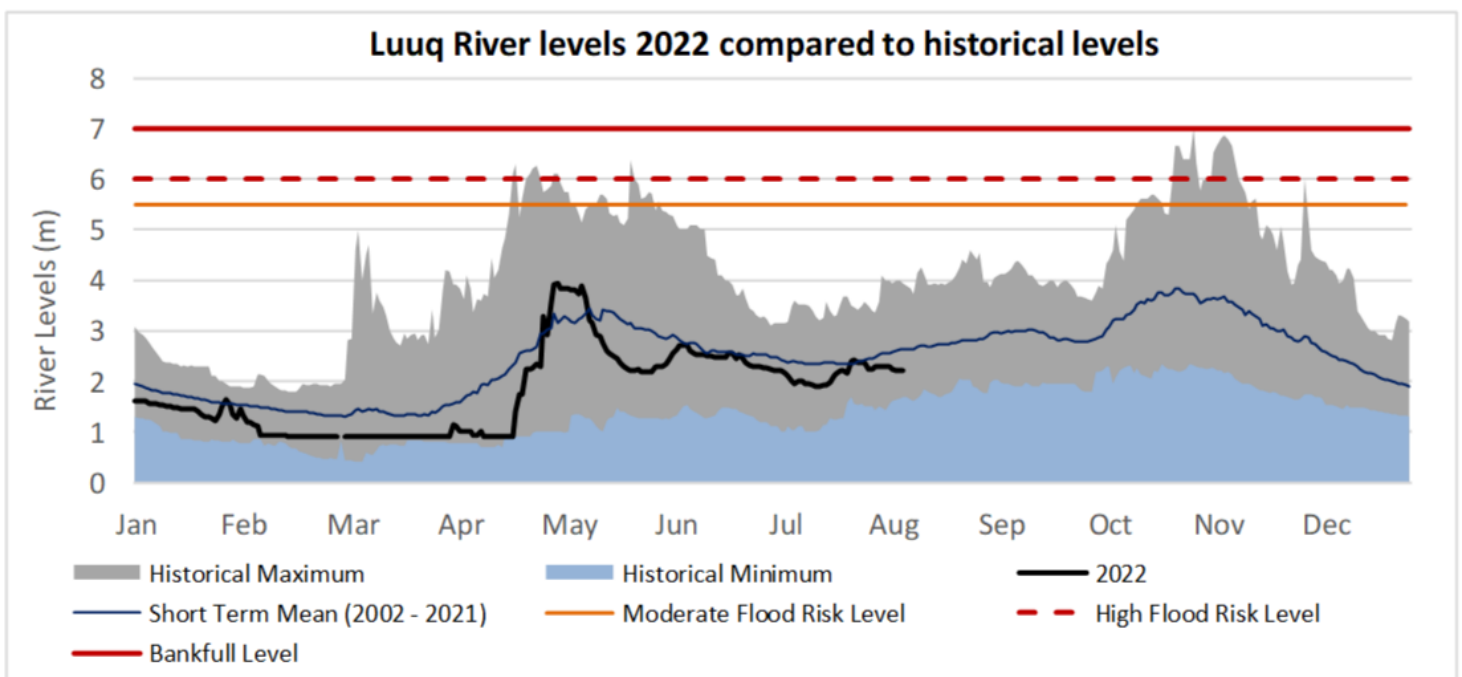
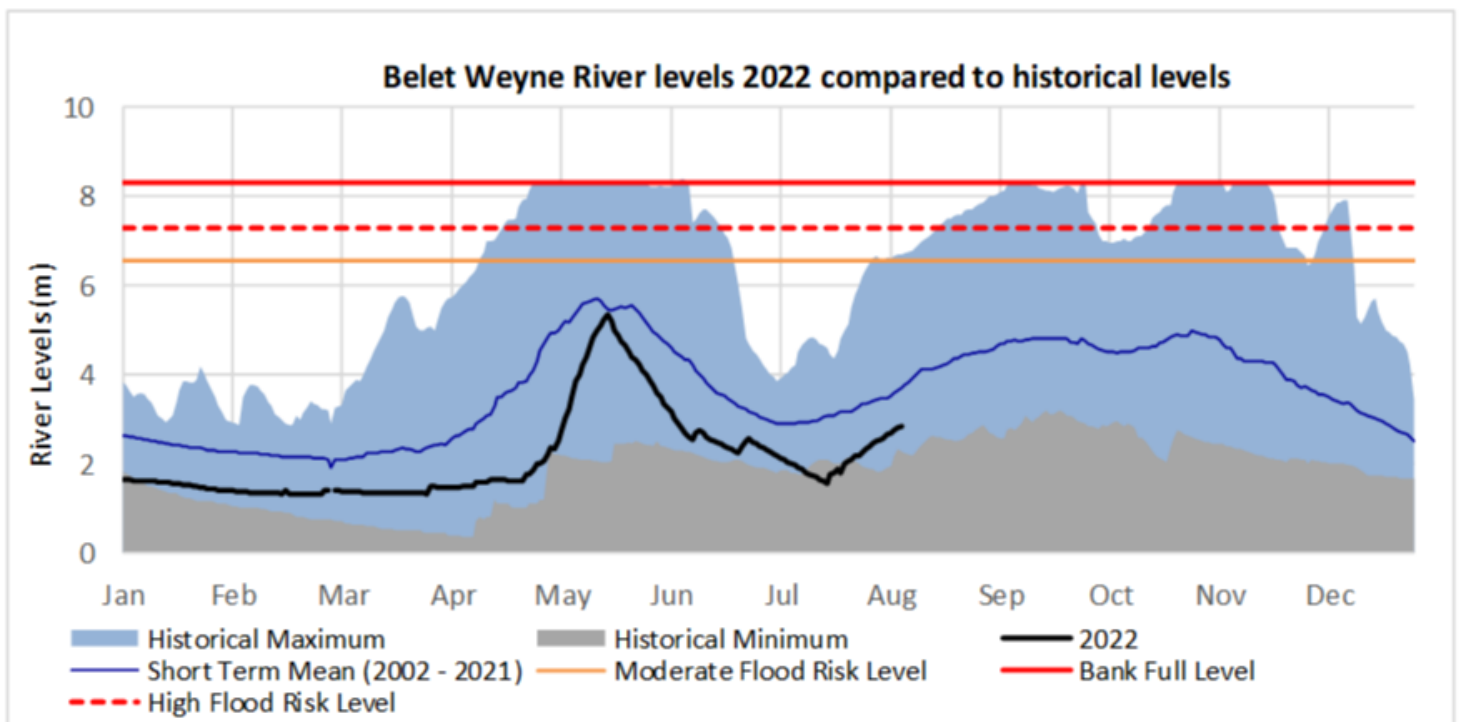
The ongoing drought has adversely affected the water resources sector across Somaliland, where most surface water sources have dried out. The graph below shows the water level of a productive well in Erigavo. The water pumping rate has increased steadily since mid-May (increased daily fluctuations) with the risk of overstretching the boreholes beyond their production capacity.



## Update on the Juba and Shabelle Rivers

River levels along the Juba and Shabelle Rivers started to decrease soon after the Gu 2022 rains. The levels have remained below the Short Term Mean (STM, 2002-2021) for this period of the year. However, since mid-July a slow but gradual increase has been noted in both rivers, as seen in the below graphs for Shabelle at Belet Weyne and Juba at Luuq. The increase is attributed to the ongoing rains in the Ethiopian highlands, which contribute more than 80% of the flow in both rivers. The current levels are still low to support agricultural activities for the riverine communities. The river levels are updated on a daily basis and can be found in this link: <http://frrims.faoswalim.org/rivers/levels>

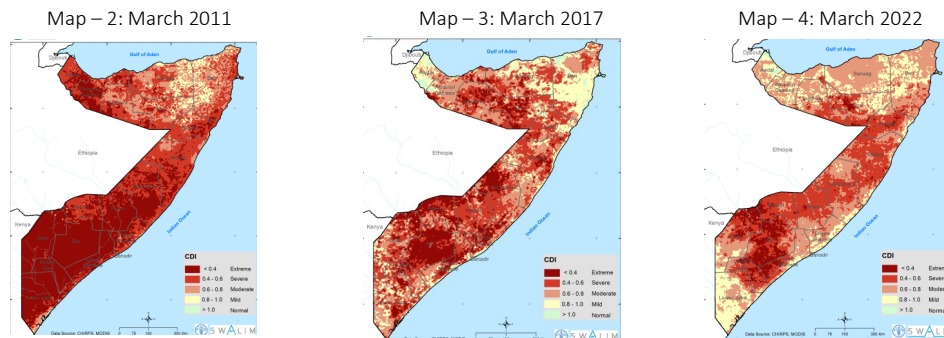
The low river levels provide an opportunity to fix the river breakages and strengthen the weak river banks, in readiness for the *Deyr* rainy season. SWALIM is currently updating the existing river breakages using high resolution satellite images, and will share the updated database by end of August.



## Annex I: A Comparison of three worst droughts in the recent history of Somalia

The rainfall of Somalia varies a lot in time and space. As such, it is necessary to use climate indices to monitor rainfall. This document presents a seasonal rainfall performance over Somalia for the period ranging from 2007 to 2022 using the Rainfall Anomaly Index (RAI). In addition, the Combined Drought Index (CDI) has been used to show various drought dimensions, including the start, duration, end and severity. In this analysis, an emphasis has been put on the most recent drought periods of 2011/12, 2016/17 and 2021/22. It is worth noting that there are no two identical drought periods in terms of spatial distribution and severity. Each drought period is unique, as are the impacts, given the associated prevailing environmental conditions. For instance, the drought of 2011/12, which led to several human deaths in Somalia, was shorter and more severe than 2016/17 and 2021/22. With time, early warning systems and efforts to elevate resilience among the Somali communities have led to improved adaptabilities and reduced impacts related to climate hazards.

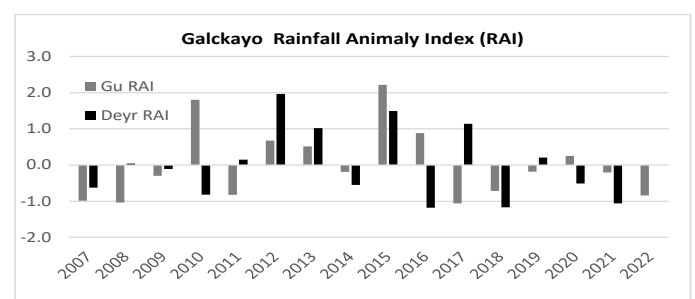
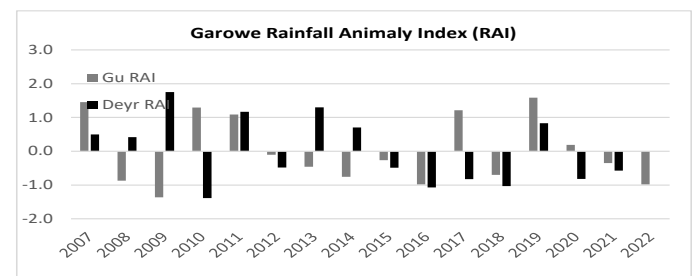
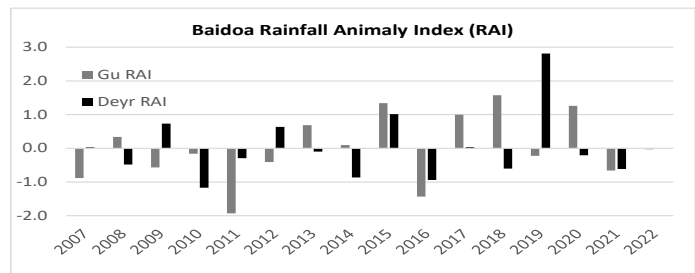
During the three drought periods, the peak was observed in the month of March, just before the Gu rains. The southern regions of Bay, Gedo, Middle Juba and Hiraaan were worst affected in all three periods. From maps 2 – 4, the spatial distribution of the drought was clearly different in each drought period. In March 2011, the entire southern, central and Somaliland were in extreme drought conditions, and Puntland was in severe drought conditions. In the same month, in 2017, extreme drought conditions were present in the entire country. In March 2022, drought conditions were severe to extreme in the southern, central and Puntland, while Somaliland was under mild to severe conditions. There was a short lived improvement in April–June occasioned by Gu rains. The performance of the Gu rains was however poor across the country and the short gains have since been eroded leading to deteriorating drought conditions. The situation is expected to worsen in August and September or until the onset of Deyr rains.



### Severity and duration of 2011/12, 2016/17 and 2021/22 droughts

The Rainfall Anomaly Index (RAI) has been used to visualize the dry/below average and wet/above average Gu and Deyr rainy seasons from 2007 to 2022. In this analysis, one of the worst affected districts of Baidoa in the south has been selected due to its significance in agricultural activities contributing to the country's food basket. The positive values represent wet seasons, and the negative values represent the dry ones with different degrees of intensity. During the same period, there were 18 dry and 13 wet seasons. In other words, there were more seasons of drought than rainy ones during the 16 years. The most extended dry periods were observed during the 2011/12 drought that saw five consecutive failed seasons in Baidoa. In 2016/17, there were two successive dry seasons, while in 2021/22, there has been four subsequent below-normal seasons with a fifth one expected given the poor Deyr 2022 seasonal forecast.

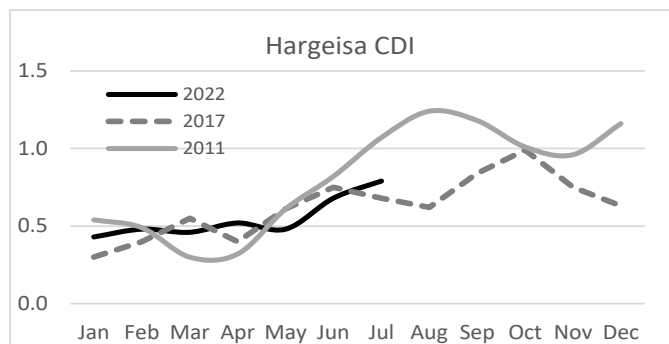
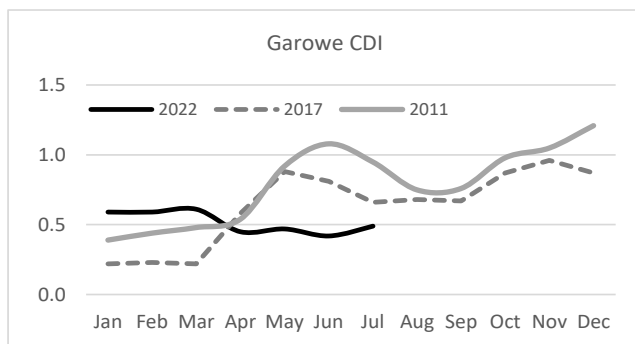
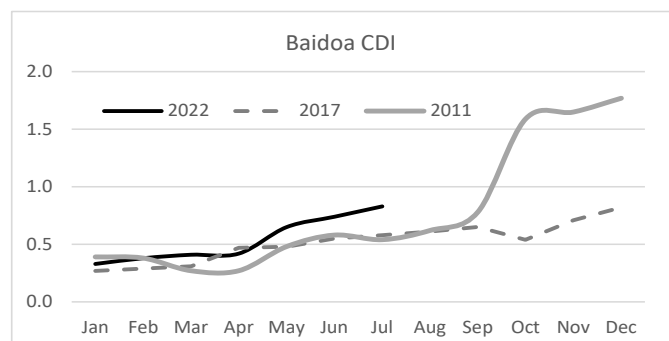
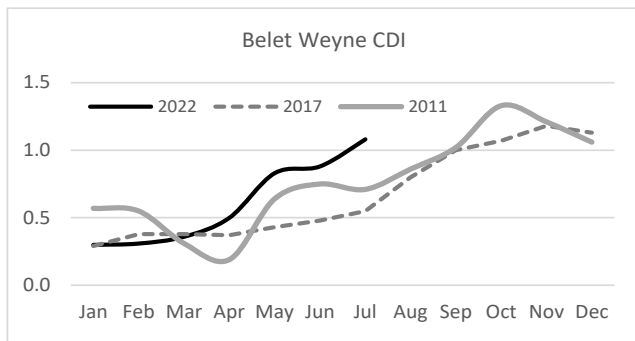
Garowe and Galckayo stations have been used to represent central and Puntland regions. The 2011/12 drought was less severe in these regions compared to the southern regions. The two graphs however depict four failed rainy seasons since Deyr 2020. More analysis for other stations has been done and can be availed on request to SWALIM.



## Annex I: A Comparison of three worst droughts in the recent history of Somalia

The Combined Drought Index (CDI) used to measure the magnitude and severity of drought. The index is derived from a combination of rainfall, temperature and vegetation conditions. In 2011/12, the drought conditions were evident from October 2010, peaked in March 2011 and lasted for ten months. However, the rains of Deyr 2011 were good, and the situation started to improve after that. The 2016/17 drought lasted 23 months, from May 2016 to March 2018. The current drought has been ongoing for the last 17 months and will continue, given the rainfall forecast for the coming Deyr 2022 rainy season, which is likely to be below average.

**A comparison the three droughts show that, the current drought severity has surpassed the levels of 2011/12 and 2016/17 in some parts of the country.**



| LEGEND     |                   |
|------------|-------------------|
| CDI Value  | Drought condition |
| 0.0 to 0.4 | Extreme           |
| 0.4 to 0.6 | Severe            |
| 0.6 to 0.8 | Moderate          |
| 0.8 to 1.0 | Mild              |
| > 1.0      | No Drought        |

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