



# Somaliland Deyr Seasonal Performance: October | November | December, 2024

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Varying rainfall patterns were observed across Somaliland during the Deyr 2024 season with notable differences in total rainfall amounts and their impacts on the environment, agriculture, and livelihoods. The season began with peak in October, tapering off in December in many regions (refer to the three-monthly maps). While some areas experienced favorable total rainfall, others recorded significantly lower totals compared to the Long-Term Mean (LTM) (refer to the Deyr rainfall anomaly map)

Hargeisa experienced substantial rainfall, reaching 6 times the (LTM). The onset of Dayr rains occurred in early October the rains initially spread across central and eastern parts of Somaliland but ended in sharp early December, with no rainfall recorded in December. In most regions observed more than 30 consecutive dry days between November 1st and December 31st, 2024.

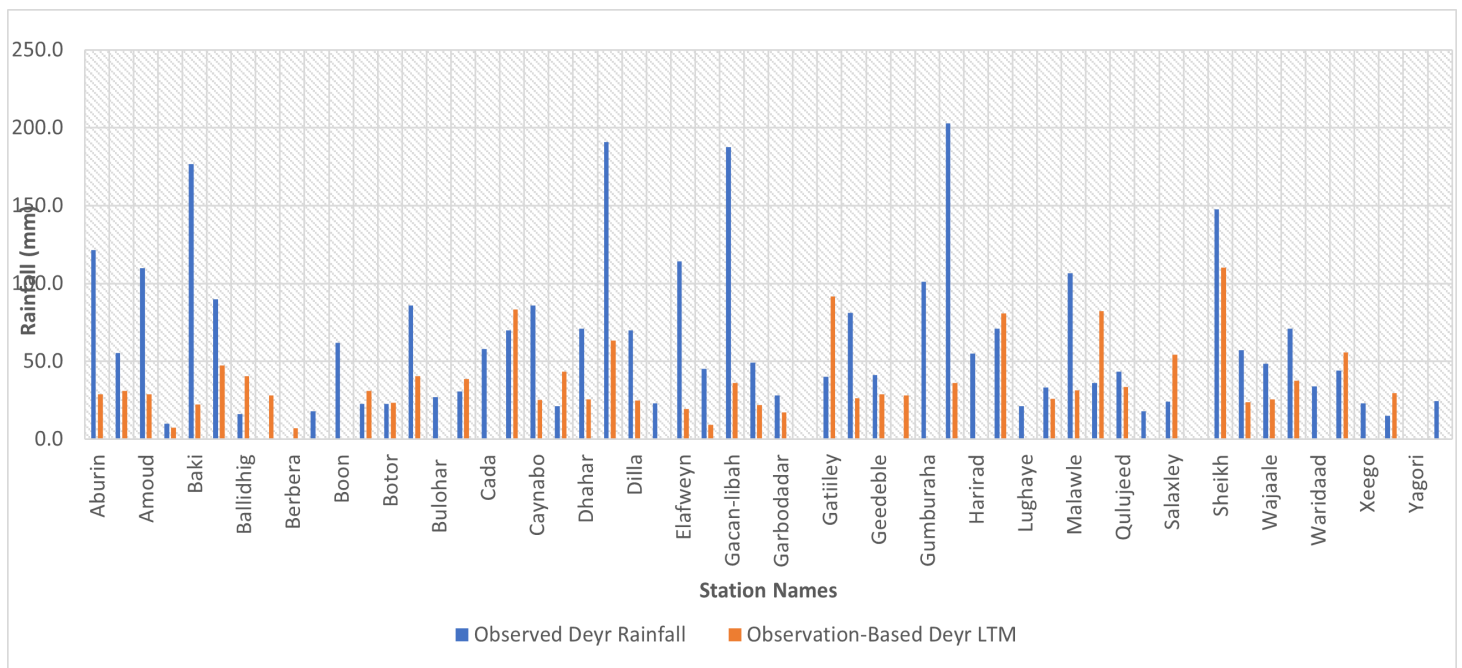
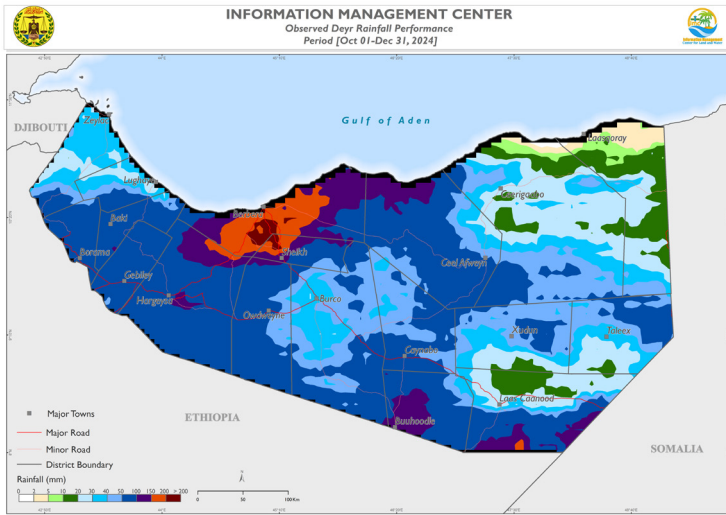


Figure 1: Rainfall Totals (Deyr Season)

Figure 1 illustrates observed rainfall (in millimeters) recorded across various weather stations during October, November, and December, representing the total observed Deyr rainfall observed Somaliland. Notable observations include varying rainfall patterns among the stations, with some experiencing substantial rainfall. For instance, Hargeisa recorded a significant total rainfall of 203 mm, primarily in October and November. Other stations, such as Xudun, Badhan and Ruqi reported less than 20 mm rainfall during the Dayr season.

Overall, the data highlights the diverse rainfall distribution in different. Aburiin, Dhubato, Hargeisa and Taysa Stations in Maroodijeex region, Amoud, Baki and Dilla Stations in Awdal regions, Buhoodle and Caynabo stations in Sool region, Sheikh station in Saaxil region and Ceel-afwayn station in Sanaag region These station received significantly more rainfall compared to the LTM, with observed rainfall above 50 mm, while the LTM is much higher. Also Dararwayne, Cadadley, Gacanlibaax, Lasadacawo and Salaxley stations in Maroodijeex region ,Ballidhiig, Hajisalah and Burco stations in Togdheer region, Borama station in Awdal region, Gabiley and Salahley stations in Maroodijeex region these stations experienced significantly less rainfall compared to their LTM, highlighting the persistent dry conditions in these areas during this period.



Map 1: Rainfall Total, October 1- December 31 2024

The map showing the total rainfall during the Deyr season (October-December 2024) in Somaliland gives us a detailed look at the region's climate. It helps us understand how rain was distributed and how intense it was across different areas, which is essential for knowing its impact on the environment and agriculture in various regions.

Specifically, the highest rainfall totals ranging between 100 mm - 200 mm were recorded in Hargeisa, Gacalibah, El-afwayn, Gumburaha, Malawle, Baki, Sheikh, Aburin to Dhubato areas, indicating a concentration of precipitation conducive to favorable agricultural conditions. Conversely, moderate rainfall, ranging from 100 mm – 40 mm, was observed in locations such as Odwayne, Burco, Caynabo, parts of Ceel afwayn, Buhodle, and parts of Awdal. Understanding these variations is essential for assessing the resilience and productivity of diverse regions within country, crucial information for sustainable development and resource management.

## Rainfall Anomaly (% of Observation-Based LTM)

The rainfall anomaly graph provides insights into the variation of Dayr rainfall compared to the long-term mean for each station. Positive values indicate above-average rainfall, negative values indicate below-average rainfall, and the extent of the percentage indicates the severity of the anomaly.

- Positive values in the “rainfall anomaly” indicate that the observed rainfall is higher than the Observation-Based Dayr LTM. This can be considered as an above-average rainfall scenario.
- Negative values suggest that the observed rainfall is lower than the Observation-Based Dayr LTM. This indicates a below-average rainfall scenario.

The level of the percentage represents the extent of the anomaly. A higher positive percentage indicates a more significant surplus in rainfall compared to the long-term mean, while a higher negative percentage suggests a more significant deficit. For instance, in the case of “Hargeisa,” the Rainfall Anomaly is 561.67%, indicating a substantial positive anomaly, meaning that the observed rainfall is much higher than the long-term mean. Aburin, Gabiley, Ceerigaabo and El-afwayn received 26,23, 14 and 8 times more than the long-term averages respectively.

On the other hand, for the stations in the western regions “Qulujeed,” the Rainfall Anomaly is -27.8%, “Cadadley,” the Rainfall Anomaly is -19.7%, “Wajale,” the Rainfall Anomaly is -13.9%, “Dilla,” the Rainfall Anomaly is -12.8%, “Cadadley,” the Rainfall Anomaly is -5.8%, “Dilla,” the Rainfall Anomaly is -12.9%, “Borama,” the Rainfall Anomaly is -5.0%, “Botor,” the Rainfall Anomaly is -5.0%, indicating a negative anomaly, suggesting that the observed rainfall is to some extent below the long-term mean.

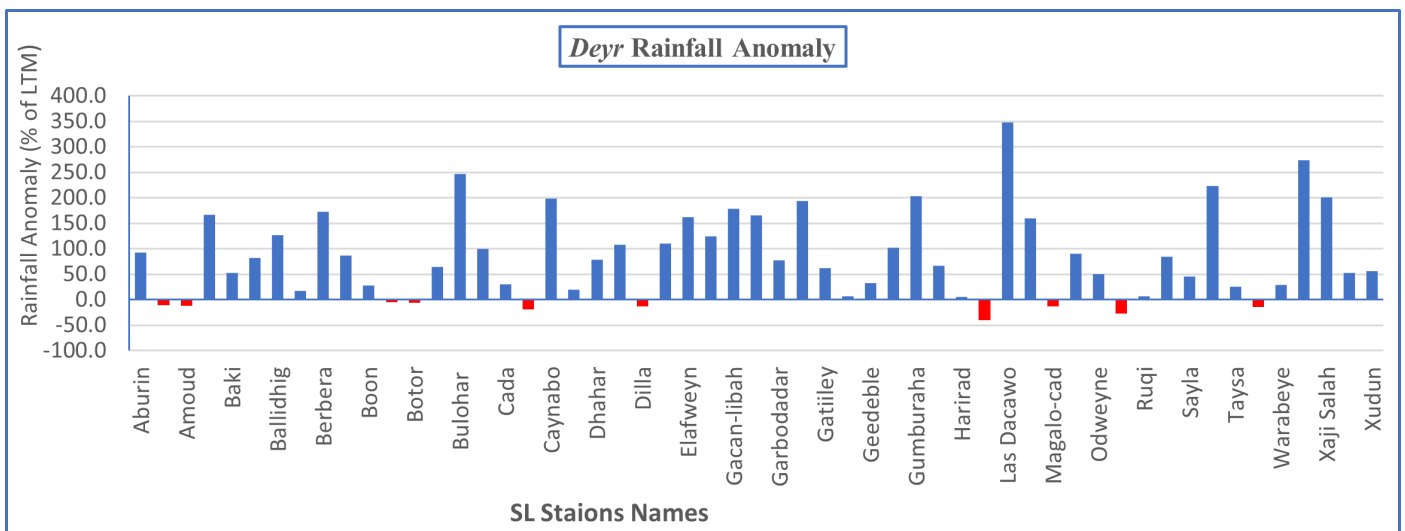
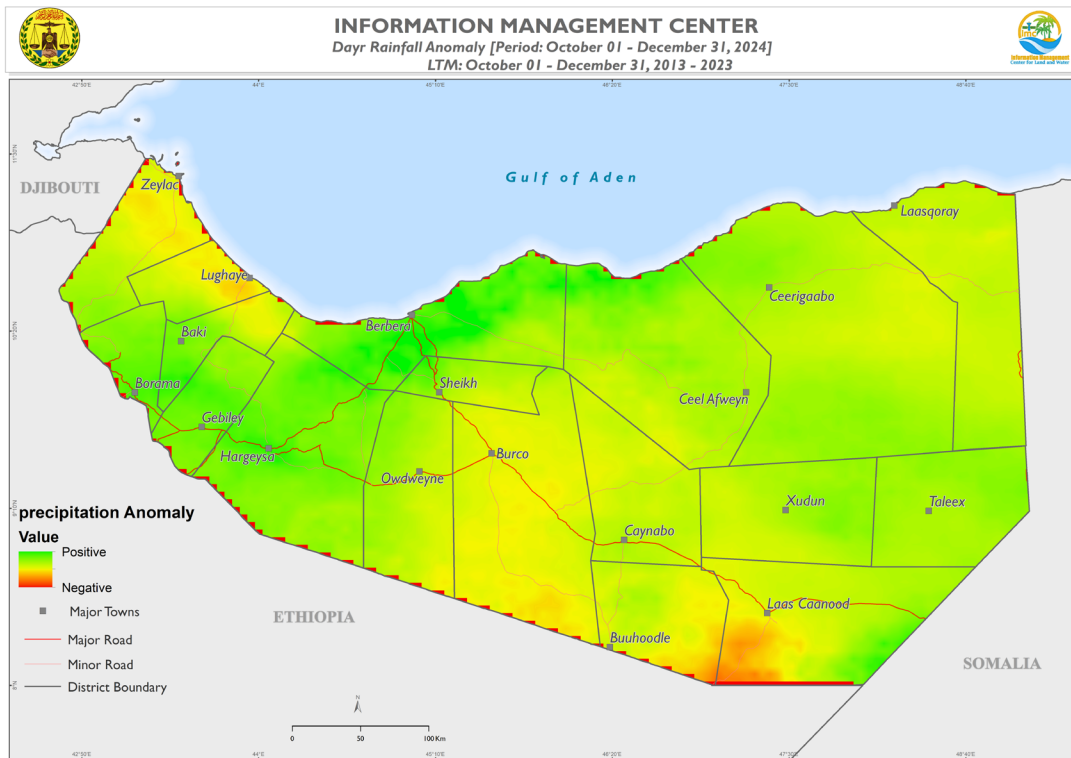


Figure 1: Rainfall Anomalies



Map 2: Rainfall Anomalies (Dayr) The "Rainfall Anomaly (% of Observation-Based LTM)" graph represents the percentage difference between the observed Dayr rainfall and the Observation-Based Dayr Long-Term Mean (LTM).

Station	Oct	Nov	Dec	Total Deyr Rainfall	Deyr LTM	RF Anomaly
Aburin	57.5	64	0	121.5	28.92888	92.571118
Allaybaday	0	20.5	0	20.5	30.88142	-10.38142
Amoud	0	17	0	17	28.96047	-11.96047
Badhan	62	112	0	174	7.40316	166.59684
Baki	26	48.5	0	74.5	22.26477	52.23523
Baligubadle	14	115.5	0	129.5	47.48224	82.01776
Ballidhig	30	137	0	167	40.36757	126.63243
Beer	0	45	0	45	28.03555	16.96445
Berbera	110	69	0	179	6.86561	172.13439
Bodale	52.5	34	0	86.5	0	86.5
Boon	0	28	0	28	0	28
Borama	0	26	0	26	31.06717	-5.06717
Botor	0	17.5	0	17.5	23.28059	-5.78059
Buhoodle_SL	45.5	59	0	104.5	40.36759	64.13241
Bulohar	11	236	0	247	0	247
Burao	66	72	0	138	38.47031	99.52969
Cada	30	0	0	30	0	30
Cadaadley	7	56.5	0	63.5	83.23318	-19.73318
Caynabo	86.5	137	0	223.5	25.18975	198.31025
Dararweyne	9	53.5	0	62.5	43.42689	19.07311
Dhahar	57.5	47	0	104.5	25.66406	78.83594
Dhubato	76	95.5	0	171.5	63.43476	108.06524
Dilla	0	12	0	12	24.85765	-12.85765
Dooxaguban	85.5	25	0	110.5	0	110.5
Elafweyn	82.5	99.5	0	182	19.47037	162.52963
Erigavo	76.5	57	0	133.5	9.189725	124.31028
Gacan-libah	86.5	128	0	214.5	36.14232	178.35768
Garadag	55	132	0	187	21.86957	165.13043
Garbodadar	27	67	0	94	17.10276	76.89724

Gargara	81	113	0	194	0	194
Gatiley	40	114	0	154	91.72727	62.27273
Gebilley	1	32	0	33	26.12651	6.87349
Geedebble	25	36	0	61	28.91695	32.08305
Gerisa	24	98.5	7	129.5	27.95652	101.54348
Gumburaha	98	105	0	203	0	203
Hargeisa	23	80	0	103	36.14232	66.85768
Harirad	0	5	0	5	0	5
Las Anod_SL	0	0	0	0	40.59293	-40.59293
Las Dacawo	222	207	0	429	80.8656	348.1344
Lughaye	61	83	16	160	0	160
Magalo-cad	0	13	0	13	25.83398	-12.83398
Malawle	37	85	0	122	31.27277	90.727232
Odweyne	73	59	0	132	82.04351	49.95649
Qulujeed	0	5.5	0	5.5	33.35572	-27.85572
Ruqi	3	4	0	7	0	7
Salaxley	37	101	0	138	54.1226	83.8774
Sayla	0	45	0	45	0	45
Sheikh	136	197	0	333	110.0237	222.9763
Taysa	2	47	0	49	23.65616	25.343845
Wajaale	0	11.5	0	11.5	25.44271	-13.94271
Warabeye	67	0	0	67	37.52177	29.47823
Waridaad	127.5	146	0	273.5	0	273.5
Xaji Salah	151	105	0	256	55.54541	200.45459
Xeego	0	52	0	52	0	52
Xudun	51	35	0	86	29.64028	56.359718
Yagori	10.5	77.5	0	88		
Zaila	52.5	34	0	86.5		

Table 1 Deyr Rainfall Meta Data

## Somaliland 2024 NDVI Anomaly (2024-2023 LTM)

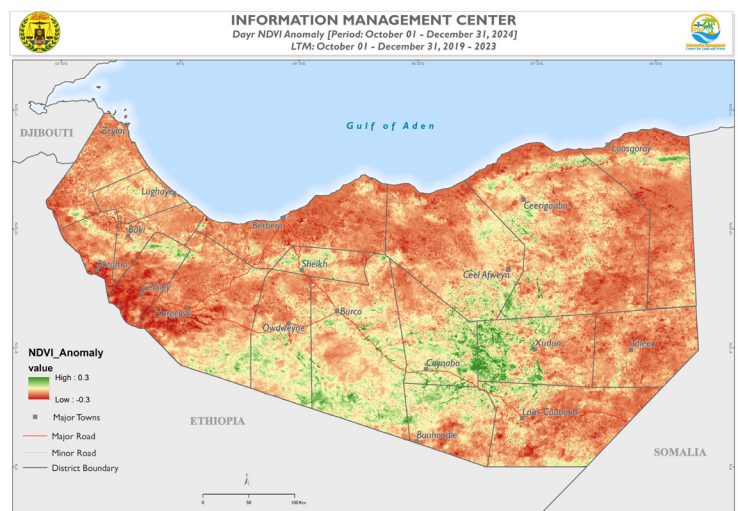
### Introduction:

Over the past two decades, the Dayr season in Somaliland has experienced an unusual increase in rainfall, with precipitation levels consistently exceeding historical averages. This anomaly has resulted in a notable change in the seasonal rainfall patterns, leading to a positive impact on agriculture and the natural environment, Dayr season of 2023 in Somaliland witnessed a remarkable improvement in vegetation and rainfall patterns, contributing to a positive impact on agriculture and the environment.

As this map shows, that areas in green have a positive NDVI anomaly, which means that the vegetation in those areas is greener than average for this time of year. Areas in brown have a negative NDVI anomaly, which means that the vegetation in those areas are drier than average.

As the map showing Laasqoray, Ceerigaabo, Sheikh, Baki, parts of Buhodle, Ceel Afwayn, Xudun, Caynabo, Burco and Odwayne has a ranging between 0.03 to greater than 0.5, This means that the vegetation in these areas is greener than average for this time of year due to Normal-average rainfall during the Dayr season,

while the most of the country has a ranging between  $-0.01$  to  $-0.03$  which means the vegetations of that areas is below the average for this time due to below-average rainfall during the Dayr season.



Map 3. Somaliland Deyr NDVI Anomaly

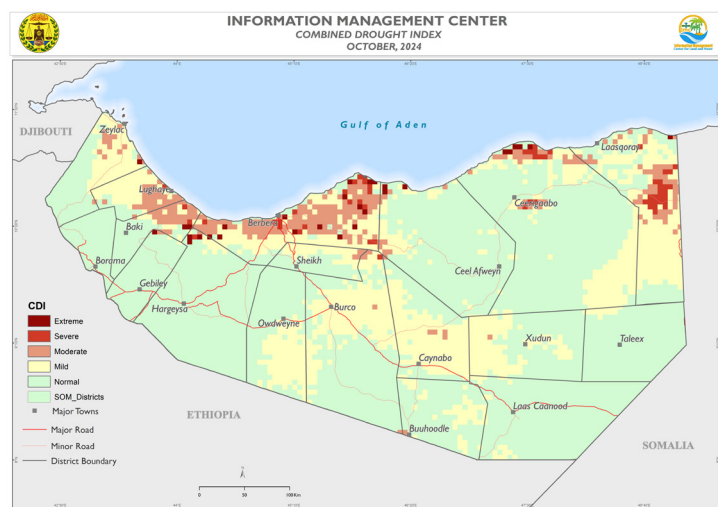
The map of Somaliland, showing the Combined Drought Index (CDI) for October 2024 highlights various levels of drought conditions across the region. Here's a summary of the drought conditions:

**Extreme Drought:** The coastal districts, particularly around Berbera in Saaxil region Lughaye in Awdal region and Ceerigaabo in Sanaag region are experiencing extreme drought conditions.

**Severe Drought:** The eastern districts, including areas around Burco in Togdheer Region, Sheikh in Saaxil and Ceel Afwayn in Sanaag region are facing severe drought conditions.

**Moderate Drought:** The eastern areas around Buhoodle, Xudun, and Taleex districts in Sool region are experiencing moderate to mild drought conditions.

**Normal Conditions:** Some parts of the southern regions are experiencing normal conditions with patches of mild drought.



Map 4 Combined Drought Index October 2024

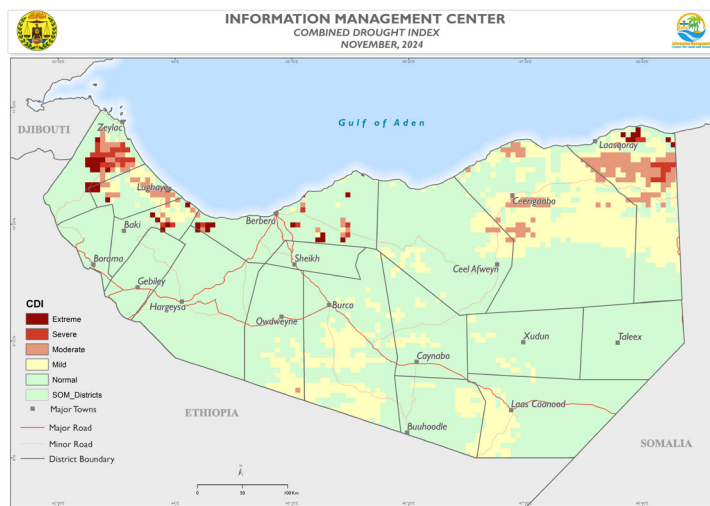
In November 2024, the drought conditions in Somaliland worsened compared to October. Here's a summary of the drought conditions for November:

**Extreme Drought:** The drought conditions intensified in the northern coastal regions, including areas around Berbera, Lughaye in Awdal region and Ceerigaabo in Sanaag region.

**Severe Drought:** The Districts, such as Burco, Sheikh, and Ceel Afwayn, continued to experience severe drought conditions.

**Moderate to Drought:** The eastern districts, including Buhoodle, Xudun, and Taleex in Sool region faced moderate to mild drought conditions.

**Normal Conditions:** Some parts of the western and eastern regions still experienced normal conditions with patches of mild drought



Map 5 Combined Drought Index November 2024

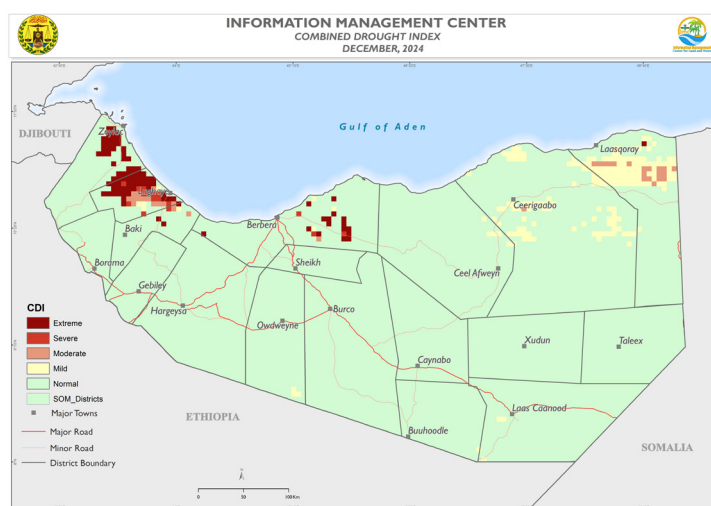
In December 2024, the drought conditions in Somaliland continued to be severe.

**Extreme Drought:** The northern coastal including Zeylac and Lughaya districts in Awdal region, experienced extreme drought conditions.

**Severe Drought:** The eastern parts, such as Sheikh district in Saaxil region and Ceerigaabo district in Sanaag region continued to face severe drought conditions.

**Moderate to Mild Drought:** The eastern parts, including Laasqorey district in Sanaag region experienced moderate to mild drought conditions.

**Normal Conditions:** Some parts of the eastern and western Hargeisa and Gabiley districts in Maroodijeex region Baki and Borama in Awdal region, Odwayne and Burco districts in Togdheer region Talex, Buhoodle, Xudun and Laascanod districts in Sool region and still had normal conditions with patches of mild drought.



Map 6 Combined Drought Index December 2024

# SOMALILAND JILAAL STATUS AND GU OUTLOOK 2025

## 1. Key Highlights

The Deyr 2024 season in Somaliland experienced normal rainfall, although there were significant variations in both temporal and spatial distribution, with some prolonged dry spells. leading to moderate - severe drought conditions in coastal area and eastern regions. The ongoing Jilaal season, characterized by intense heat and aridity, is likely to have further exacerbated water and pasture stress, intensifying livelihood challenges. Looking ahead, the Gu 2025 season is forecasted to bring below-normal rainfall, delayed onset, and above-average temperatures, amplifying drought conditions and increasing humanitarian needs.

The season began with peak in October, tapering off in December in many regions (refer to the three-monthly maps). While some areas experienced favorable total rainfall, others recorded significantly lower totals compared to the Long-Term Mean (LTM) (refer to the Deyr rainfall anomaly map)

### Key observations from the Deyr 2024 season

- Widespread rainfall was near normal, with many regions receiving less than 30% of their long-term averages.
- Realization of rainfall onset and prolonged dry spells at same stations, leading to poor performance of the season.
- Significant spatial variability in rainfall anomalies, with a few areas in the country experiencing normal-average rains.

The outlook for Gu 2025 presents additional challenges:

Below-normal rainfall is expected across most of Somaliland, with a delayed onset predicted in key agricultural areas.

Above-average temperatures will increase evapotranspiration, exacerbating water stress and reducing agricultural productivity.

Humanitarian needs, including food security, malnutrition, and displacement, are expected to worsen, with women, children, and marginalized groups likely to be disproportionately affected.

### Conclusion:

In conclusion, substantial rainfall was observed during the Dayr season, leading to improved vegetation, agricultural production, and livelihoods. Additionally, the surplus rainfall has contributed to the replenishment of groundwater, further enhancing the overall environmental and agricultural conditions in the region.

he NDVI anomaly map for the Dayr season of 2024 illustrates significant variations in vegetation health across the region. Positive anomalies, particularly in the highlighted areas, reflect the beneficial impact of normal-average rainfall, leading to improved agricultural and environmental conditions. On the other hand, regions with negative anomalies may face challenges due to drier-than-average conditions. Overall, this map provides valuable insights into the spatial distribution of vegetation health and can be used to inform agricultural planning, environmental management, and resource allocation.

Drought these three months October, November and December Somaliland experienced worsening drought conditions. In October, northern coastal regions faced extreme drought, central regions had severe drought, and the same parts of eastern regions experienced moderate to mild drought. By November, the drought intensified with more areas experiencing extreme and severe conditions Lughaya, Zeilyac districts in Awdal region. In December, the drought persisted with no significant relief, impacting water availability, agriculture, and pastoral activities in Lughaya and Zeilyac districts in Awdal region, The consistent appearance of extreme and severe.

