

2021 Gu (March-June) Rainfall Performance

Summary

The 2021 Gu rainy season performance varied across Somalia with many places recording average to below average rainfall (Maps 1 & 2, and Annex I). The seasonal rains which started in late April lasted for three weeks and came to an early end during the first week of May 2021. During the three weeks of rainfall, some places recorded heavy rains that led to flash floods in the northern parts of the country. The southern regions recorded below normal seasonal rains, leaving many places under water stress. This follows another poor rainfall performance during the 2020 Deyr (October-December) season which led to moderate drought conditions this year that lasted till late April.

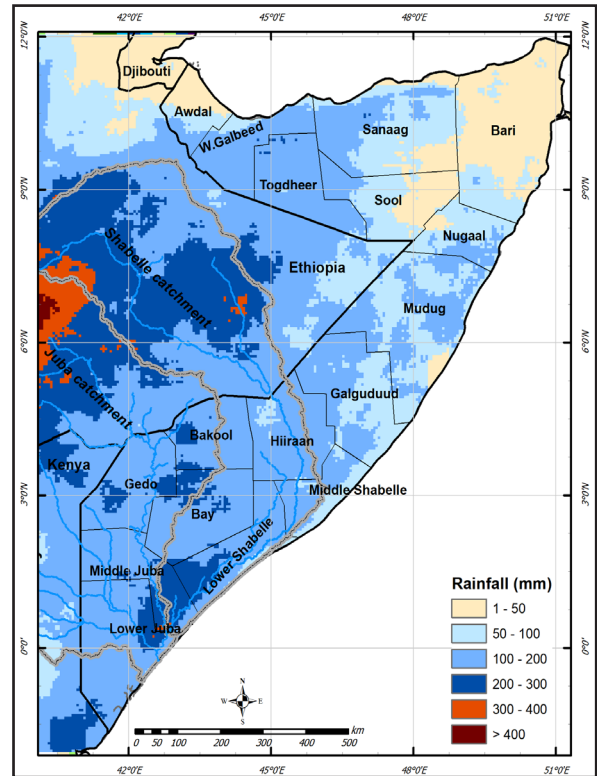
Map 1 shows the cumulative rainfall amounts for March to May, while Map 2 shows a comparison of the seasonal rainfall with the long term mean for the same period both based on satellite rainfall estimates data. Both maps indicate varied rainfall performance during 2021 Gu. Positive cumulative anomalies are observed in a few places within Somaliland and localized areas in Nugaal, Mudug and Gedo regions while widespread negative anomalies are seen in most of the northern, central and southern regions of Somalia.

Heavy rains in the Ethiopian highlands led to increased river flow along the Juba and Shabelle rivers leading to riverine flooding in some areas. New and unrepaired open breakages on embankments of the Shabelle river also contributed to river flooding especially in Belt Weyne and Jowhar districts.

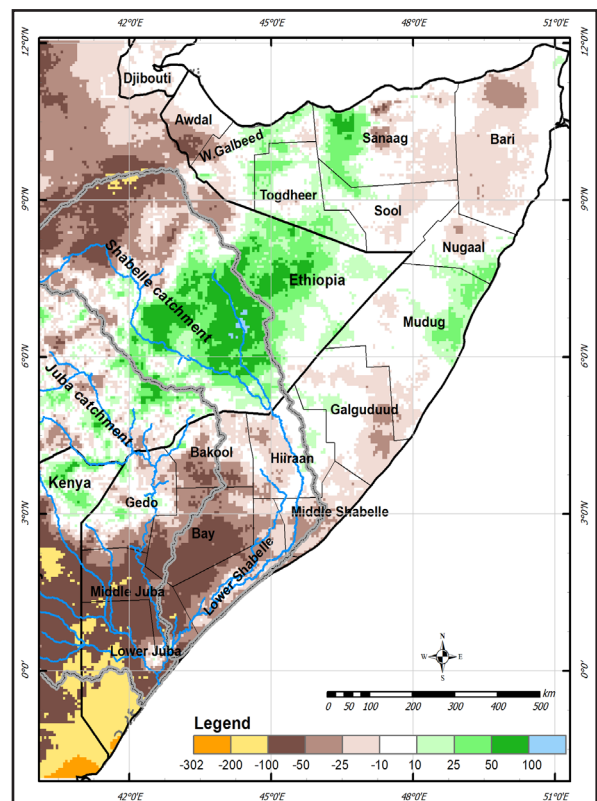
The suppressed rains in the southern parts of the country and a few pockets of Puntland and Somaliland have led to poor vegetation conditions and reduced farmland activities in the agricultural areas. There has been widespread crop moisture stress in most agro pastoral areas in southern regions, resulting in poor seed germination and crop wilting. Driest conditions were reported in Galgaduud, Middle Shabelle, Lower Shabelle, Bay, Bakool, Gedo, Middle Juba and Lower Juba regions. As a result, FSNAU reports indicate a likely below average Gu season harvest in July/August.

There is also a concern that there will be rapid deterioration of vegetation conditions in many parts of the country due to short lived Gu rains. With no rains expected until October 2021, moderate to severe drought conditions in Somalia cannot be ruled out during the mostly dry Hagaa (July to September) season.

Map 1: 2021 Gu (March to May) cumulative rainfall (mm)



Map 2: 2021 Gu rainfall anomaly (Absolute difference) -mm



Overall 2021 Gu Rainfall Performance

South and Central

Several places in the central and southern parts of the country received poor rains. Notably, the Sorghum Belt of Bay and Bakool, Hiiraan and Middle Shabelle regions received normal to below normal rains while areas in Gedo and Bakool (bordering Ethiopia) recorded normal rains. Middle and Lower Juba regions recorded the least amounts of rainfall. Figure 1 presents the 2021 Gu cumulative rainfall amounts compared to the Long Term Average (LTA) for the same season for some selected rainfall stations in

south and central regions. Only two stations (Bulo Burti and Diinsor) recorded above 200 mm of rainfall during the season. Compared to the LTA, most stations recorded significantly below normal rains. The rains were poorly distributed in terms of time and space with most of it concentrated within a few days. Annex I presents the total amounts of rainfall during the 2021 Gu season for individual stations compared to the long term average for the same season.

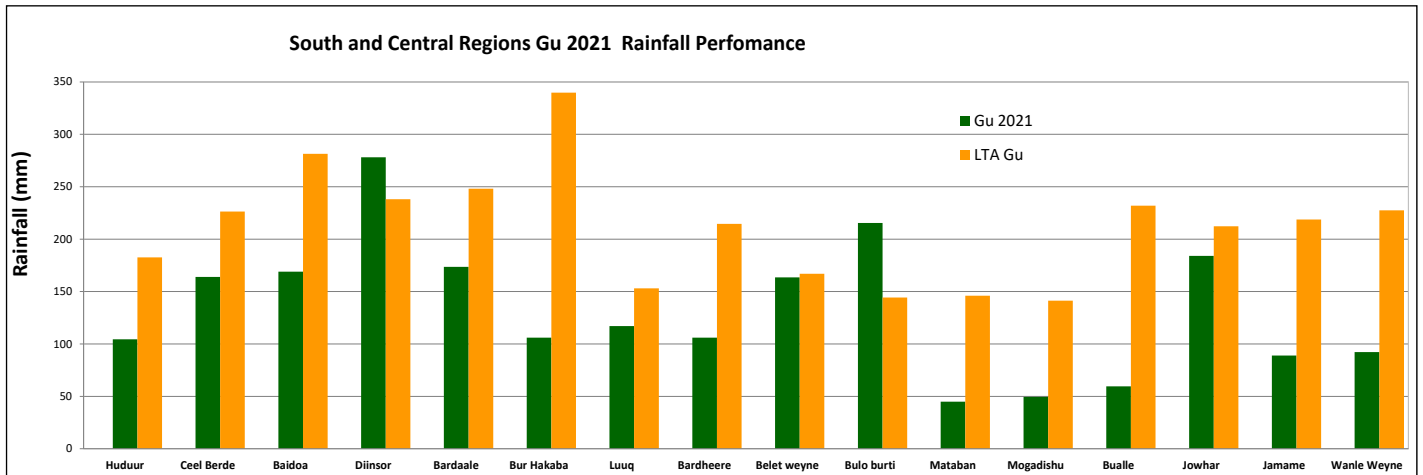


Figure 1: 2021 Gu Rainfall Performance in South and Central Regions

Somaliland

The overall 2021 Gu season rainfall performance was within the normal range in most parts of Somaliland. The rains started in the second week of April, followed by heavy rains during the second half of April and first week of May. Some of the stations that recorded the highest amounts of the rainfall include Baki (214 mm), Caynabo (266 mm), Balidhiig (231 mm), Sheikh (242 mm), Hargeysa (191 mm), and Borama (205 mm).

Other stations recorded cumulatively significant amounts (more than 100mm) of the rainfall. The north western parts of Somaliland in Awdal region however recorded light to moderate rains. Figure 2 presents the 2021 Gu cumulative rainfall amounts compared to the Long Term Average (LTA) for the same season for some selected rainfall stations in Somaliland.

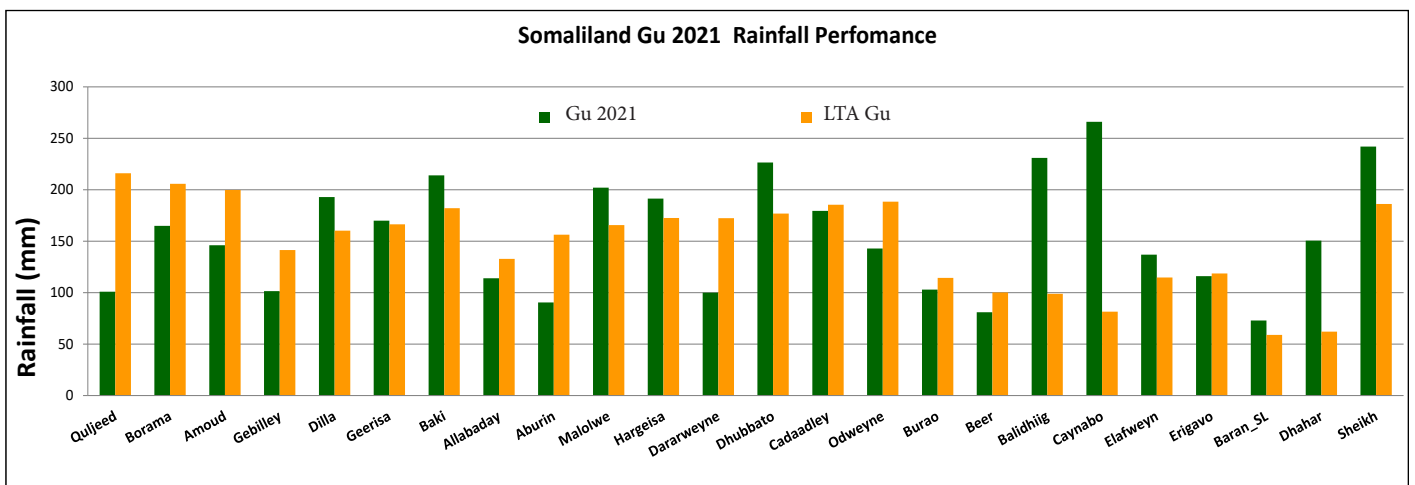


Figure 2: 2021 Gu Rainfall Performance – Somaliland

Puntland

The overall 2021 Gu rainfall performance in Puntland was average to below average. The intensity and distribution of rainfall varied from place to place with most rains being concentrated in the last week of April and first week of May. The rains were poorly distributed in terms of time and space with less than five days of rainfall in many areas. On the positive side, the short lived rains were beneficial to all sectors especially livestock and water resources as there was notable regeneration of pasture and replenishment of water sources. It was also a relief of the dry and harsh weather conditions that had been caused by rainfall failure during the 2020 Deyr season.

Figure 3 shows a comparison of 2021 Gu and the long term average rainfall of the same period in Puntland using observed rainfall data from selected stations. Evidently, most stations recorded normal to below normal rains. This analysis is also in line with a recent field survey finding by the Puntland Humanitarian Affairs and Disaster Management Agency (HADMA) which indicates that water stress conditions are being experienced in parts of Puntland especially in the areas where there was insufficient rains during the 2021 Gu season. With no rains expected in the region until October 2021, moderate to severe drought conditions are likely during the mostly dry Hagaa (July to September 2021) season

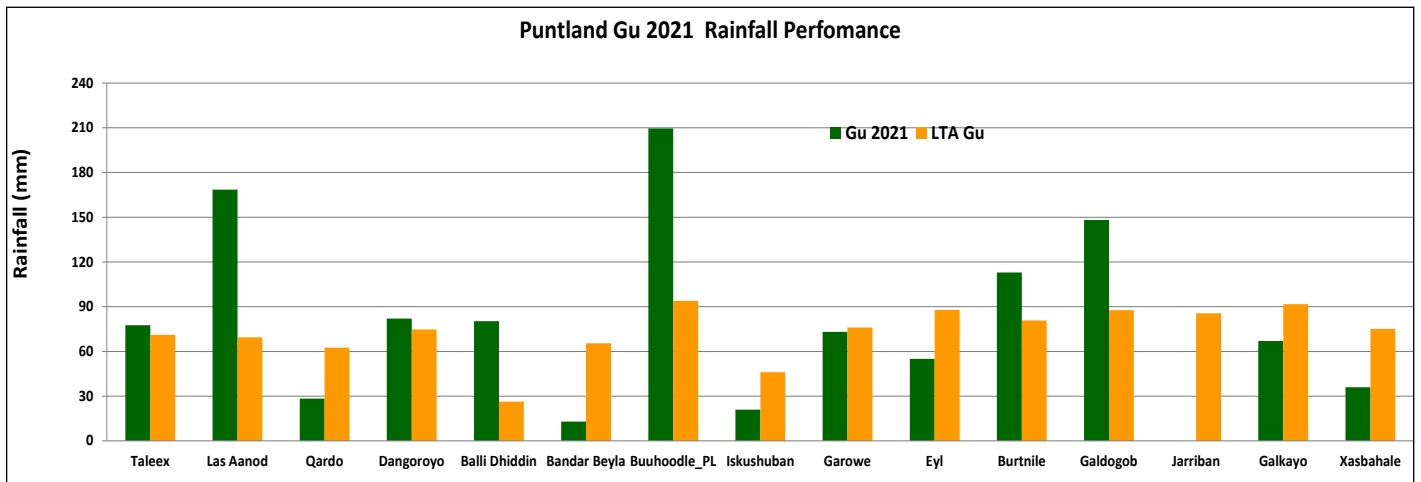


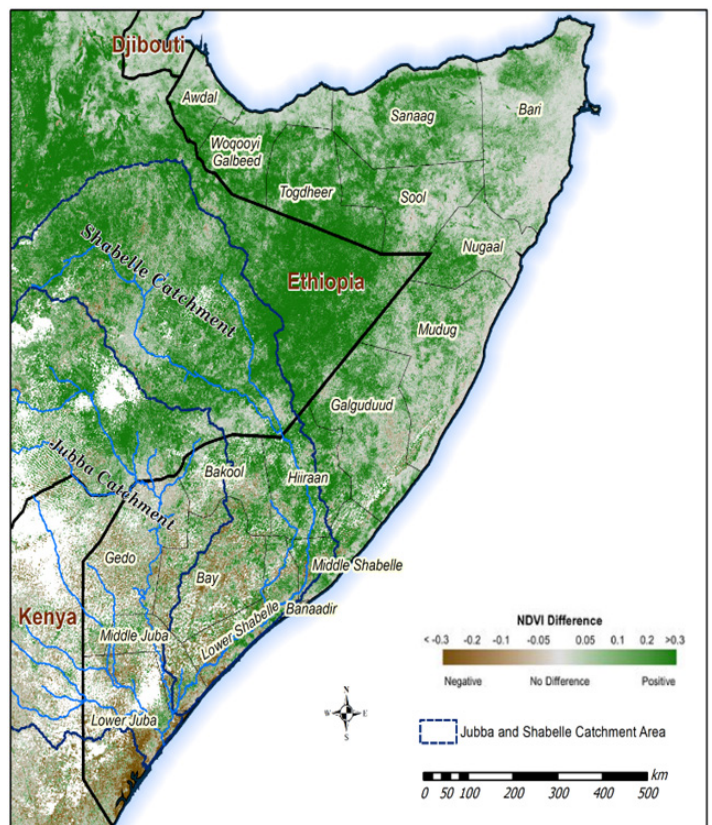
Figure 3: 2021 Gu Rainfall Performance – Puntland

Vegetation conditions

Satellite-derived Normalized Difference Vegetation Index (NDVI) which measures vegetation conditions indicates negative or no change in many areas in southern and central parts of Somalia compared to the long-term average. Few pockets show improved vegetation conditions.

Deteriorating vegetation conditions in the south are due to the short lived rains and prolonged dry period that were experienced in the first quarter of 2021. The situation is expected to get worse as no more rains are expected until the start of the next rainy season in October.

Most regions in the north show enhanced vegetation conditions compared to the long term average, mostly reflecting the impact of intense rainfall between late April and mid-May. However, the positive vegetation conditions may not be sustained due to the early cessation of Gu rains.



Map 3: Vegetation Conditions as at 20 June 2021 (Source—USGS)

Water Resources

Generally, the 2021 Gu season rainfall performance was poor, but the rains received were beneficial in terms of water availability for domestic use, irrigation and livestock across the country. In particular, parts of the northern regions of the country benefited immensely from the heavy rains in late April and early May by replenishing the ground water which is the major source of water in the regions. However, this was short lived and currently water resources are depleting fast.

Rainfall in the Ethiopian highlands is usually responsible for more than 80 percent of the flow in Juba and Shabelle rivers inside Somalia. During the 2021 Gu season the Ethiopian highlands recorded very high amounts of rainfall that led to increased river flow inside Somalia leading to floods in Belet Weyne and Jowhar districts along the Shabelle River.

The levels remained low through April until mid-May when there was a sharp rise following two weeks of heavy rains in the Ethiopian highlands (Figures 4) with the upper and middle reaches experiencing overbank flow that led to floods in confined areas.

In Jowhar, there was massive flooding that was caused by open river breakages at Moyko and Baarey villages and several households were affected by the floods and large portions of cropped land was inundated. The river levels along the Juba River fluctuated during the season with floods being reported in Dollow in early May following heavy rains in the highlands. Currently the river levels along the two rivers are within normal.

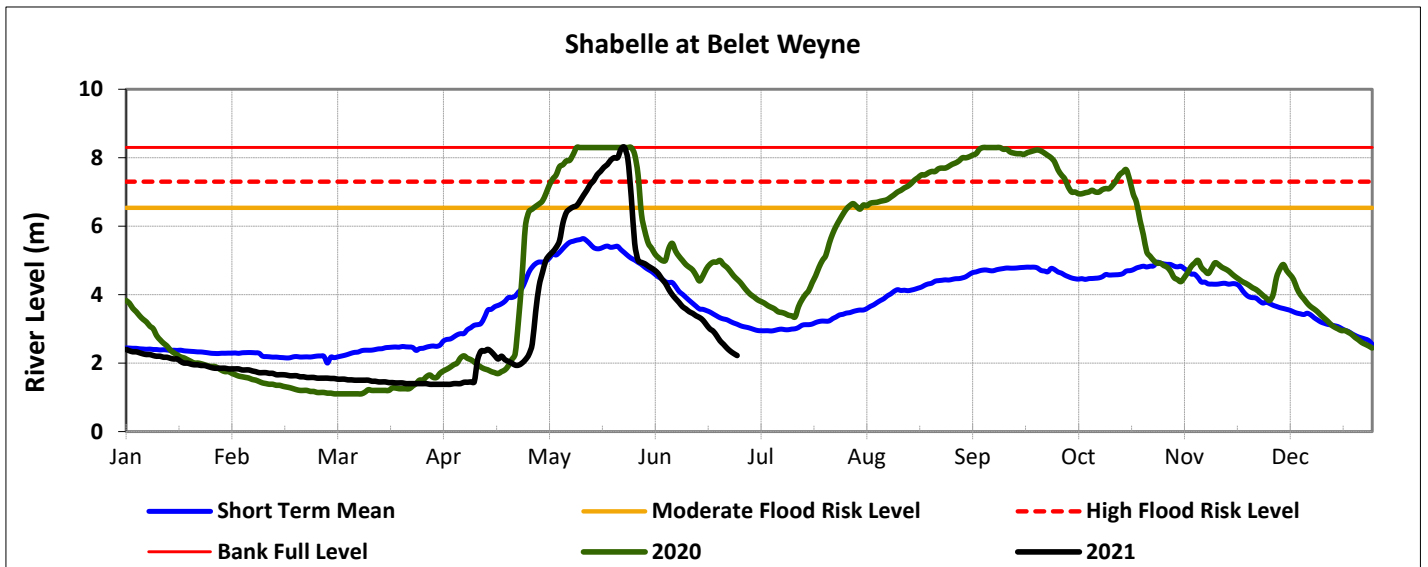


Figure 4: Observed river levels at Belet Weyne, Hiran Region

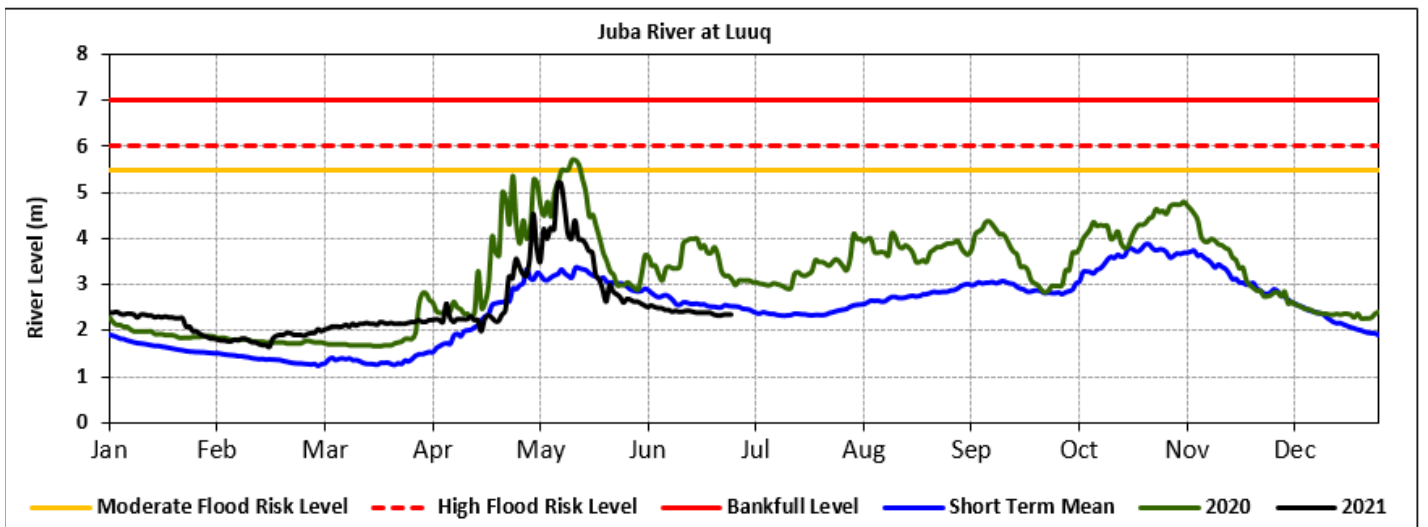


Figure 5: Observed river levels at Luuq, Gedo Region

Annex I—2021 Gu Rainfall Performance

Somaliland Gu 2021 Rainfall							
Station	Region	Mar-21	Apr-21	May-21	Mar-May 2021	LTA Mar- May	Percent of Normal (%)
Quljeed	Awdal	0.0	0.0	101.0	101.0	216.1	46.7
Borama	Awdal	0.0	68.0	97.0	165.0	205.8	80.2
Amoud	Awdal	0.0	45.0	101.0	146.0	199.9	73.0
Gebilley	W.Galbeed	0.0	47.5	54.0	101.5	141.5	71.7
Dilla	W.Galbeed	0.0	93.0	100.0	193.0	160.3	120.4
Geerisa	Awdal	0.0	55.0	115.0	170.0	166.4	102.2
Baki	Awdal	0.0	62.0	152.0	214.0	182.0	117.6
Allabaday	W.Galbeed	0.0	89.0	25.0	114.0	132.8	85.8
Aburin	W.Galbeed	0.0	57.0	33.5	90.5	156.4	57.9
Malolwe	W.Galbeed	0.0	87.0	115.0	202.0	165.7	121.9
Hargeisa	W.Galbeed	0.0	108.0	83.5	191.5	172.5	111.0
Daranweyne	W.Galbeed	0.0	22.0	78.0	100.0	172.4	58.0
Dhubbato	W.Galbeed	0.0	137.5	89.0	226.5	176.8	128.1
Cadaadley	W.Galbeed	0.0	73.5	106.0	179.5	185.5	96.8
Odweyne	Togdheer	0.0	58.0	85.0	143.0	188.4	75.9
Burao	Togdheer	0.0	56.0	47.0	103.0	114.4	90.1
Beer	Togdheer	0.0	0.0	81.0	81.0	100.2	80.8
Balidhiig	Togdheer	0.0	121.0	110.0	231.0	98.9	233.5
Caynabo	Sool	0.0	73.0	193.0	266.0	81.5	326.2
Elafweyn	Sanaag	0.0	91.5	45.5	137.0	114.7	119.5
Erigavo	Sanaag	0.0	20.0	96.0	116.0	118.6	97.8
Baran_SL	Sanaag	0.0	47.0	26.0	73.0	59.0	123.7
Dahar	Sanaag	0.0	112.0	38.5	150.5	62.2	241.9
Sheikh	Togdheer	0.0	119.5	122.5	242.0	186.1	130.0
Puntland Gu 2021 Rainfall							
Station	Region	Mar-21	Apr-21	May-21	Mar-May 2021	LTA Mar- May	Percent of Normal (%)
Callula	Bari	0.0	0.0	0.0	0.0	3.7	0.0
Baran_PL	Sanag	0.0	80.0	96.0	176.0	59.0	298.2
Bossasso	Bari	0.0	0.0	0.0	0.0	4.1	0.0
Taleex	Sool	0.0	6.0	71.6	77.6	71.1	109.2
Las Aanod	Sool	0.0	114.5	54.0	168.5	69.5	242.4
Qardo	Bari	0.0	15.0	13.4	28.4	62.5	45.4
Dangoroyo	Bari	0.0	82.0	0.0	82.0	74.7	109.7
Balli Dhiddin	Bari	0.0	25.1	55.2	80.3	26.4	304.0
Bandar Beyla	Bari	0.0	5.0	8.0	13.0	65.5	19.8
Buuhoodle_PL	Togdheer	0.0	55.2	154.3	209.5	93.9	223.0
Iskushuban	Bari	0.0	0.0	21.0	21.0	46.1	45.6
Garowe	Nugaal	0.0	18.5	54.6	73.1	76.1	96.1
Eyl	Nugaal	7.0	40.0	8.0	55.0	87.8	62.6
Burntile	Nugaal	10.0	71.0	32.0	113.0	80.8	139.9
Galdogob	Mudug	0.0	37.4	110.8	148.2	87.7	169.1
Jarriban	Mudug	0.0	0.0	0.0	0.0	85.6	0.0
Galkayo	Mudug	0.0	10.0	57.0	67.0	91.7	73.0
Xasbahale	Nugaal	0.0	24.0	12.0	36.0	75.1	47.9
South and Central Gu 2021 Rainfall							
Station	Region	Mar-21	Apr-21	May-21	Mar-May 2021	LTA Mar- May	Percent of Normal (%)
Huduur	Bakool	0.0	95.5	9.0	104.5	182.6	57.2
Ceel Berde	Bakool	0.0	149.0	15.0	164.0	226.3	72.5
Baidoa	Bay	10.5	63.0	95.5	169.0	281.4	60.1
Diinsor	Bay	0.0	173.0	105.1	278.1	238.1	116.8
Bardaale	Bay	13.0	99.5	61.0	173.5	248.1	69.9
Bur Hakaba	Bay	0.0	58.0	48.0	106.0	339.8	31.2
Luuq	Gedo	0.0	53.1	64.0	117.1	153.1	76.5
Bardheere	Gedo	22.0	0.0	84.0	106.0	214.6	49.4
Belet weyne	Hiraan	4.5	90.5	68.5	163.5	167.0	97.9
Bulo burti	Hiraan	0.0	89.5	126.0	215.5	144.4	149.3
Mataban	Hiraan	0.0	45.0	0.0	45.0	146.0	30.8
Mogadishu	Banadir	0.0	49.5	0.0	49.5	141.3	35.0
Buulle	Middle juba	0.0	29.5	30.0	59.5	231.9	25.7
Jowhar	Middle Shabe	0.0	2.0	182.0	184.0	212.3	86.7
Jamame	Lower Juba	0.0	70.0	19.0	89.0	218.7	40.7
Wanle Weyne	Bay	0.0	67.5	24.7	92.2	227.5	40.5

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