# **Climate** Update





Sept 2020 Monthly Rainfall and Vegetation Cover (NDVI) (Issued Oct 31, 2020)

# Highlights

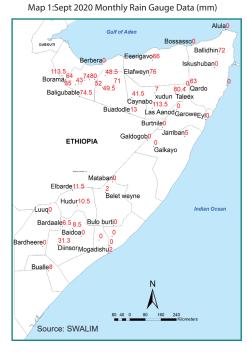
September usually marks the end of Hagaa/Karaan (July - September), a rainy season in northwestern Somalia and a typically dry and windy season across the rest of the country. This season however, light to moderate rains were received across most northern parts of the country during September 2020, with the exception of areas along northeastern coastal areas that received little to no rainfall, while most parts of the southern regions remaining dry. The monthly rainfall totals for September were below average in most parts of Galgadud, Hiran, Middle Shabelle and parts of Bakool, Bay and Gedo regions.

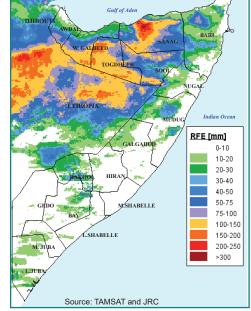
Most of the rainfall received in September was recorded in the third dekad as shown in Satellite derived rainfall estimates (RFE); -Maps 2-5 and Map 9). Some rain gauge stations in northwest regions (Borama, Wajaale, Hargeisa, Aburiin and Lasanod) recorded over 100 mm of rainfall, as shown in Map 1 and Table 1.

Vegetation cover, measured through the Normalized Difference Vegetation Index (NDVI), indicated a deterioration of browsing conditions or vegetation cover in several regions of southern Somalia. However, dry pasture for livestock is available across most parts of the country. Rainfall in September helped to replenish some water catchment areas in the north. This in turn, improved browsing conditions for livestock. There have been no abnormal livestock migration reported in any part of the country. Livestock body conditions across the country remain average (PET score of 3). However, in some areas like the northeast, where there were below average 2020 Gu (April-June) rains, livestock body conditions of small ruminants has started to deteriorate. Medium kidding and calving was reported for small ruminants, while low kidding and calving was reported for the large ruminants.

In riverine livelihoods of Middle and Lower Shabelle and Middle Juba, harvest of off-season crops planted during the 2020 Gu season is ongoing with Maize and Cowpea being the main crops harvested. Land preparation and dry planting for the 2020 Deyr (October-December) season has been reported in parts of Bay, Bakool and parts of Lower Shabelle regions.

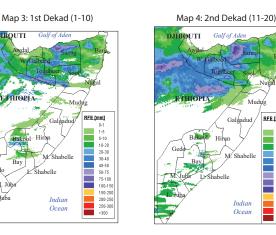
Desert Locust infestation which was mostly confined in northern and central regions since the beginning of 2020 has now expanded further to southern regions, and is causing significant damages both to Deyr season crops and pasture in Mudug, Galgadud, Hiran and Middle Shabelle regions. Early germinated cowpea and sorghum at seedling stages have been damaged in Cowpea Belt districts of Hobyo, Hara-dhere, Ceeldheer. Ceel-buur districts in Central. Adend Yabaal of Middle Shabelle and Mahaas/Belet-wein in Hiraan region have been affected. Similarly significant pasture has been damaged in Aden Yabaal (Middle Shabelle) and Mahaas sub settlement of Belet-wein.





Map 2: Sept 2020 Monthly Rainfall Estimates (mm)

### Sept 2020: Dekadal Rainfall Estimates (RFE) Progression



Map 6: 1st Dekad (1-10)

Gulf of Ader

Galga

Hirat

helle

Ocean

Bakod

W. Galbe

Bari

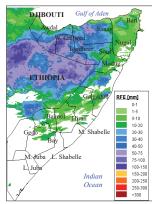
< 0.6 < 0.7 < 0.8 > 0.8

Mudug

DIBOUTI

ETHIOPIA

Map 5: 3rd Dekad (21-30)



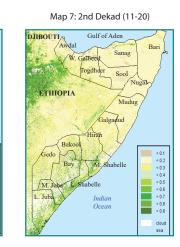
Sept 2020: Dekadal Vegetation Cover (NDVI) Progression

RFE [mm]

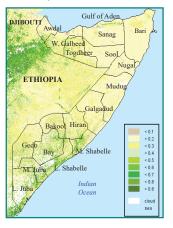
20-30 30-40 40-50

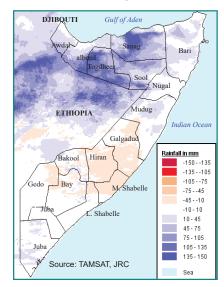
50-75

75-100

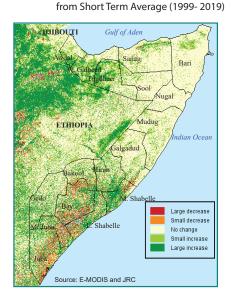


Map 8: 3rd Dekad (21-30)





Map 9: Sept 2020 Rainfall Difference from Short Term Average (2001-2019)



Map 10: Sept 2020 NDVI Absolute Difference

Table 1: Observed rain gauge data compared to Short term averages - STA (Sept 2020)Northern RegionsSouthern Regions

Station Name	Region	dek 1	dek 2	dek 3	Sep-20	STA
Borama	Awdal	66.5	31.0	16.0	113.5	80.0
Gebilley	Wogooyi Galbeed	11.5	19.0	4.5	35.0	59.0
Malawle	Wogooyi Galbeed	0.0	35.0	8.0	43.0	66.0
Wajaale	Wogooyi Galbeed	45.0	58.5	10.0	113.5	70.0
Hargeisa	Wogooyi Galbeed	45.0	59.5	11.0	115.5	65.0
Daraweyne	Wogooyi Galbeed	10.5	56.0	7.5	74.0	59.0
Cadaadley	Wogooyi Galbeed	5.5	19.0	27.5	52.0	49.0
Dilla	Wogooyi Galbeed	27.0	29.0	8.0	64.0	73.0
Aburin	Wogooyi Galbeed	53.5	21.0	39.0	113.5	67.0
Dhubato	Wogooyi Galbeed	0.0	45.0	35.0	80.0	56.0
Baligubable	Wogooyi Galbeed	1.0	40.0	33.5	74.5	65.0
Berbera	Wogooyi Galbeed	0.0	0.0	0.0	0.0	3.0
Burao	Togdheer	0.0	46.0	25.0	71.0	27.0
Sheikh	Togdheer	9.0	10.5	29.0	48.5	74.0
Odweyne	Togdheer	3.5	10.0	36.0	49.5	60.4
Buadodle	Togdheer	0.0	0.0	13.0	13.0	31.0
Eeerigavo	Sanaag	36.0	30.0	0.0	66.0	80.0
Elafweyn	Sanaag	16.0	60.0	0.0	76.0	37.0
Caynabo	Sool	14.0	24.5	3.0	41.5	33.0
Xudun	Sool	0.0	7.0	0.0	7.0	23.0
Taleex	Sool	21.9	3.2	55.3	80.4	19.0
Las Aanod	Sool	11.0	3.5	99.0	113.5	15.0
Bossasso	Bari	0.0	0.0	0.0	0.0	1.0
Qardo	Bari	15.0	39.0	9.0	63.0	8.0
Dangoroyo	Bari	0.0	0.0	0.0	0.0	9.0
Ballidhin	Bari	49.5	16.7	5.8	72.0	9.0
Alula	Bari	0.0	0.0	0.0	0.0	0.0
Bandarbeyla	Bari	0.0	0.0	0.0	0.0	9.0
Iskushuban	Bari	0.0	0.0	0.0	0.0	7.0
Garowe	Nugaal	0.0	0.0	0.0	0.0	17.0
Eyl	Nugaal	0.0	0.0	0.0	0.0	2.0
Burtnile	Nugaal	0.0	0.0	0.0	0.0	17.0
Galdogob	Mudug	0.0	0.0	0.0	0.0	10.0
Jarriban	Mudug	0.0	0.0	5.0	5.0	11.0
Galkayo	Mudug	0.0	0.0	0.0	0.0	4.0

Station Name	Region	dek 1	dek 2	dek 3	Sep-20	STA
Hudur	Bakool	0.0	0.0	10.5	10.5	8.0
Elbarde	Bakool	0.0	0.0	11.5	11.5	35.0
Baidoa	Bay	0.0	6.5	2.0	8.5	13.0
Diinsor	Bay	9.8	13.2	8.3	31.3	11.0
Bardaale	Bay	3.5	0.0	3.0	6.5	12.0
BurHakaba	Bay	0.0	0.0	0.0	0.0	18.0
Luuq	Gedo	0.0	0.0	0.0	0.0	3.0
Bardheere	Gedo	0.0	0.0	0.0	0.0	8.0
Belet weyne	Hiraan	0.0	0.0	2.0	2.0	13.0
Bulo burti	Hiraan	0.0	0.0	0.0	0.0	8.0
Mataban	Hiraan	0.0	0.0	0.0	0.0	12.0
Balad	Lower Shabelle	0.0	0.0	0.0	0.0	15.0
Wanleweyne	Lower Shabelle	0.0	0.0	0.0	0.0	12.0
Mogadishu	Banadir	0.0	0.0	2.0	2.0	17.0
Bualle	Middle juba	0.0	5.0	3.0	8.0	9.5
Jowhar	Middle Shabelle	0.0	0.0	0.0	0.0	6.0
*indicates missing data						

Monthly rainfall and NDVI perfomance maps

The Mapped NDVI and RFE above represent the differences from Long Term Mean.E-MODIS NDVI is presented as absolute difference from Long Term Mean for the same period (current - long term mean), while TAMSAT-RFE is presented as the relative difference from Long Term Mean (Current\*100)/LTM.

### Seasonal Trend Graph

The maps and graphs on pages 3 and 4 are produced in collaboration with the FOODSEC Action of the Joint Research Centre of the European Commision. The graphs present seasonal trends of crop specific NDVI (Normalised Difference Vegetation Index) as lines and rainfall values (RFE) as bars for each of the delineated land cover and administrative units (regions and districts). For more information or request on available data, please send an email to: data@ fsnau.org.

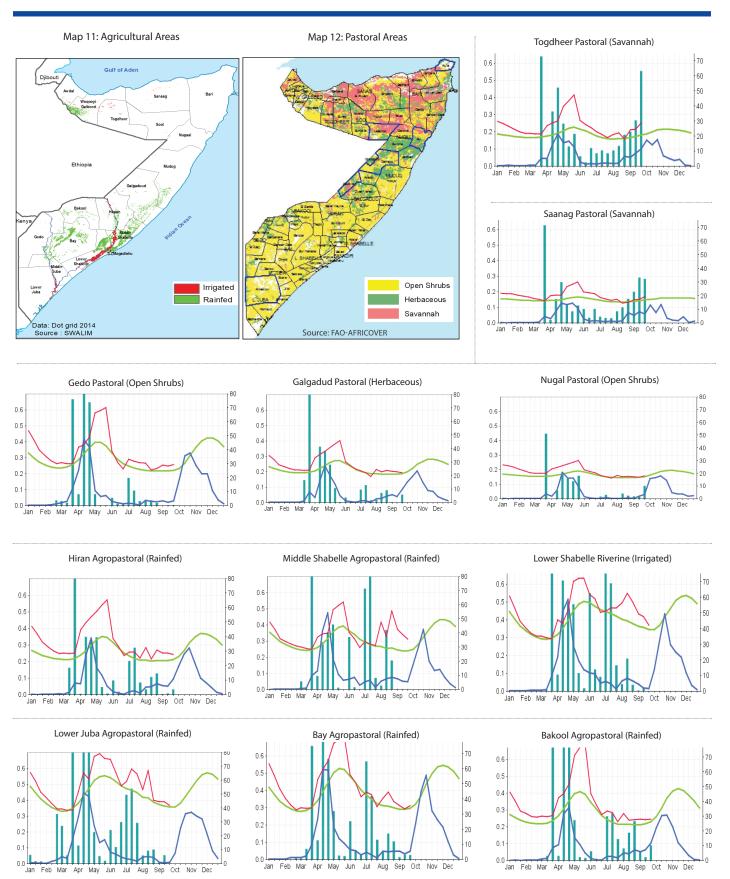
Primary data sources are NOAA/USGS, European Centre for Medium- range Weather Forecast (ECMWF), MARS-JRC, FSNAU and SWALIM. Maps and graphs on this bulletin are produced from four sources.

 Current Rainfall Estimates and NDVI data are derived from NOAA/CPC and DEVCOCAST (www.devcocast.eu) respectively, while the rain gauge data is collected by FAO-SWALIM and FEWSNET.

The seasonal profiles on page 3 and 4 are produced in collaboration with JRC-MARS. For more information visit http://mars.jrc.europa.eu/mars/About-us/FOODSEC For more information on NDVI visit http://earlywarning.usgs.gov/adds and http://fsausomali.org/ fileadmin/uploads/1308.pdf

This report is a compilation of climate data and field reports on Somalia that FSNAU and FEWS NET regularly review for analysis. For more information on data sources, please refer to page 2.

The TAMSAT informatio is available on http://www.met.reading.ac.uk/tamsat/about/



RFE 2020 RFE STA (2001-2019) NDVI 2020 NDVI STA (1999-2019)

## Seasonal rainfall and NDVI trends for selected districts

