# Climate Update



February 2017 Monthly Rainfall and NDVI (Issued March 20, 2017)

# Highlights

In the month of February Dry and hash Jillal (January – March), seasonal weather condition persisted in large areas of the country save for a few localized areas in the North and South that have received light rains. Some of the rain gauge stations that recorded rainfall include; Eyl 23mm, Alula 10mm, while Bandarbeyla, Beletweyn, Bardera, Elafweyn and Erigabo recorded less than 10mm of rain (Map 1 and Table 1). Field reports indicate prevalence of localized small amounts of rainfall in Awdal, Bakool, Gedo, Shabele's and lower L. Juba. River levels in Juba and Shebelle have started to increase slightly but are mostly below the long term mean (LTM).

Satellite-derived rainfall estimates (RFE) continue to indicate largely dry weather conditions across Somalia, consistent with seasonal patterns. Exeptions are some rainfall activity in South Gedo and Awdal region (Maps 2-5 and 9). The February 2017 Normalized Difference Vegetation Index (NDVI) which is a measure of vegetation cover indicates modest to large deterioration in vegetation conditions in small to large areas in Bay, Gedo, Shabelle's, Juba's and parts of Galmudug and Hiran regions (Maps 6-8 and 10). Field reports indicate continued prevalence of severe to extreme pasture and water deficits in the drought affected areas of the Northern Inland Pastoral (Sool, Sanaag, Bari and Nugal regions) East Golis (Sanag and Bari) and large parts of Addun in Central regions.

Due to unrelenting drought conditions in northern and central regions, surface water sources have completely dried up while borehole yields have drastically declined due to overuse. Water trucking is rampant in most pastoral livelihoods across the country at high prices. Humanitarian actors are intervening by proving free water trucking for poor households. A further deterioration in the vegetation condition is expected to continue until the establishement of the Gu rains by mid April. The localized Shabelle (Southern Inland rains in Pastoral, Sorghum High Potential) have partially replenished some surface water catchments. Ongoing agricultural activity comprises small scale land preparation in rain fed areas and desilting of canals in the irrigated areas.





Map 2: Feb 2017 TAMSAT Monthly Rainfall Estimates

February 2016: Dekadal RFE Progression



Map 6: 1st Dekad (1-10)

Gulf of Ader

ogdhe

Sanag

Mudua

shabell

Indian

Ocean

< 0.1 < 0.2 < 0.3 < 0.4 < 0.5 < 0.6 < 0.7 < 0.8 > 0.8

DJIBOUTI/

**ETHIOPIA** 

Gedo

M.

L. Juba

Bakop

Bay





Map 5: 3rd Dekad (21-30)



February 2017: Dekadal NDVI Progression





Map 8: 3rd Dekad (21-30)





Map 9: Feb 2017 TAMSAT Rainfall Difference from short term mean (1999-2016)



 Table 1: Observed rain gauge data compared to long term monthly averages (February 2017)

 Northern Regions

 Southern Regions

Region	Station_Name	dek 1	dek 2	dek 3	Feb-17	LTM
Awdal	Borama	0.0	0.0	0.0	0.0	21.0
Awdal	Qulenjeed	0.0	0.0	0.0	0.0	19.0
Bari	Bossasso	0.0	0.0	0.0	0.0	0.0
Bari	Qardo	0.0	0.0	0.0	0.0	1.0
Bari	Dangoroyo	0.0	0.0	0.0	0.0	2.0
Bari	Ballidhin	0.0	0.0	0.0	0.0	1.0
Bari	Alula	10.0	0.0	0.0	10.0	0.0
Bari	Bandarbeyla	1.0	0.0	0.0	1.0	1.0
Bari	Iskushuban	0.0	0.0	0.0	0.0	0.0
Mudug	Galdogob	0.0	0.0	0.0	0.0	2.0
Mudug	Jarriban	0.0	0.0	0.0	0.0	2.0
Mudug	Galkayo	0.0	0.0	0.0	0.0	0.0
Nugaal	Garowe	0.0	0.0	0.0	0.0	3.0
Nugaal	Eyl	23.0	0.0	0.0	23.0	5.0
Nugaal	Burtnile	0.0	0.0	0.0	0.0	2.0
Sanaag	Eeerigavo	5.0	0.0	0.0	5.0	48.0
Sanaag	Elafweyn	3.0	0.0	0.0	3.0	4.0
Sool	Caynabo	0.0	0.0	0.0	0.0	4.0
Sool	xudun	0.0	0.0	0.0	0.0	3.0
Sool	Taleex	0.0	0.0	0.0	0.0	3.0
Sool	Las Aanod	0.0	0.0	0.0	0.0	1.0
Togdheer	Burao	0.0	0.0	0.0	0.0	4.0
Togdheer	Sheikh	0.0	0.0	0.0	0.0	13.0
Togdheer	Odweyne	0.0	0.0	0.0	0.0	8.0
Togdheer	Buadodle	0.0	0.0	0.0	0.0	4.0
Wogooyi Galbeed	Gebilley	0.0	0.0	0.0	0.0	6.0
Wogooyi Galbeed	Malawle	0.0	0.0	0.0	0.0	11.0
Wogooyi Galbeed	Wajaale	0.0	0.0	0.0	0.0	11.0
Wogooyi Galbeed	Hargeisa	0.0	0.0	0.0	0.0	11.0
Wogooyi Galbeed	Daraweyne	0.0	0.0	0.0	0.0	10.0
Wogooyi Galbeed	Cadaadley	0.0	0.0	0.0	0.0	9.0
Wogooyi Galbeed	Dilla	0.0	0.0	0.0	0.0	14.0
Wogooyi Galbeed	Aburin	0.0	0.0	0.0	0.0	12.0
Wogooyi Galbeed	Dhubato	0.0	0.0	0.0	0.0	9.0
Wogooyi Galbeed	Baligubable	0.0	0.0	0.0	0.0	11.0
Wogooyi Galbeed	Berbera	0.0	0.0	0.0	0.0	0.0

Region	Station Name	dek 1	dek 2	dek 3	Feb-17	LTM
Bakool	 Hudur	0.0	0.0	0.0	0.0	0.0
Bakool	Elbarde	0.0	0.0	0.0	0.0	2.0
Вау	Baidoa	0.0	0.0	0.0	0.0	3.0
Bay	Diinsor	0.0	0.0	0.0	0.0	0.0
Bay	Bardaale	0.0	0.0	0.0	0.0	2.0
Bay	BurHakaba	0.0	0.0	0.0	0.0	4.0
Вау	Wanleweyne	0.0	0.0	0.0	0.0	*
Gedo	Luuq	0.0	0.0	0.0	0.0	1.0
Gedo	Bardheere	3.0	0.0	0.0	3.0	6.0
Hiraan	Belet weyne	0.0	0.0	0.0	0.0	0.0
Hiraan	Bulo burti	0.0	0.0	0.0	0.0	3.0
Hiraan	Mataban	0.0	0.0	0.0	0.0	1.0
Lower Shabelle	Balad	0.0	0.0	0.0	0.0	1.0
Banadir	Mogadishu	0.0	0.0	0.0	0.0	2.0
Middle juba	Bualle	0.0	0.0	0.0	0.0	3.0
Middle Shabelle	Jowhar	0.0	0.0	0.0	0.0	1.0
Lower Juba	Jamame	0.0	0.0	0.0	0.0	3.0

\*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 FEWS-NET.

 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/

## Seasonal rainfall and NDVI trends by region



### Seasonal rainfall and NDVI trends for selected districts

