

Climate Update



Food and Agriculture
Organization of the
United Nations

FSNAU
Food Security and Nutrition
Analysis Unit - Somalia

SWALIM

March 2019 Monthly Rainfall and Vegetation Cover (Issued April 23, 2019)

Highlights

March was the last month of the dry (*Jilaal*) season. High temperatures, dry weather conditions and dry winds persisted in most parts of the country throughout the month. Most parts of Somalia did not receive rainfall during March. However there were localized pockets of rainfall in the northern regions as recorded in the 3rd dekad in Qulenjeed (14.5mm), Wajaale (6mm), Erigavo (4.5mm) stations. Similarly rainfall was recorded in some parts of the southern regions such as Jowhar (16mm), Baidoa (8mm) and Bardaale (2.5mm), parts of Gedo, Middle and Lower Juba in the 3rd dekad as evident on Map 1 and table 1.

Although localized light to moderate showers fell in a few pockets of Gedo, Shabelle, Awdal and Woqooyi Galbeed regions, there was little impact in reversing the accelerated depletion of rangeland and the water resources.

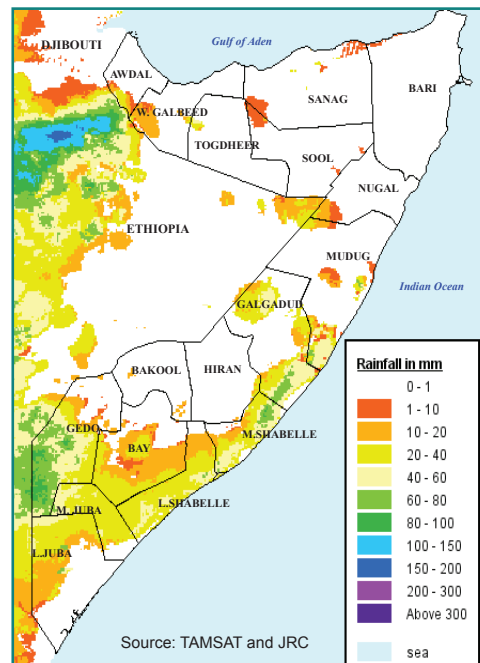
Satellite derived rainfall estimates (RFE) confirm the prevalence of dry weather conditions across the country during the month of March as evidenced on Maps 2-5. Vegetation cover measured through Normalized Difference Vegetation Index (NDVI) for March indicates continued deterioration of pasture and vegetation cover across the country. In most parts of the country, depletion of pasture resources led to competition over grazing areas and increased livestock migration in most parts of the country in search of water and pasture.

Serious water scarcity and earlier than normal water trucking persisted in most regions of the country with water prices soaring up in this harsh *Jilaal* period, particularly rain deficit areas in the north, central and parts of the southern regions.

Map 1: March 2019 Monthly Rainfall Station Data (in mm)

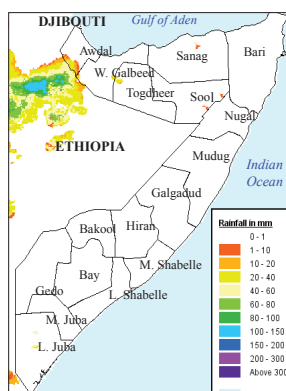


Map 2: March 2019 Monthly Rainfall Satellite Data (in mm)

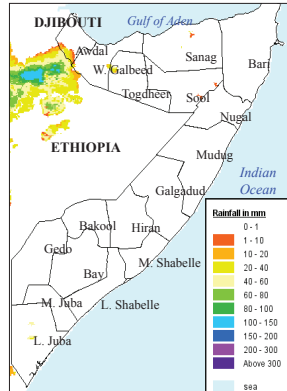


March 2019: Dekadal Rainfall (RFE) Progression

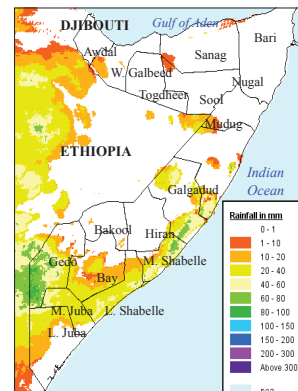
Map 3: 1st Dekad (1-10)



Map 4: 2nd Dekad (11-20)

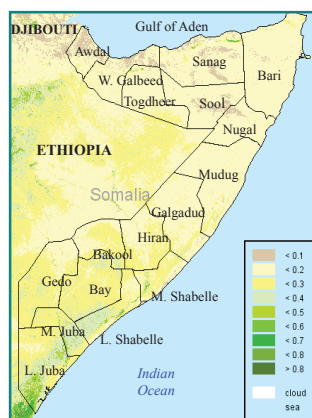


Map 5: 3rd Dekad (21-30)

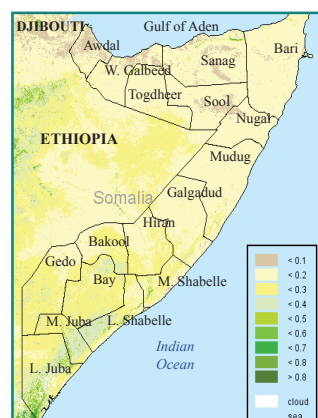


March 2018: Dekadal Vegetation Cover (NDVI) Progression

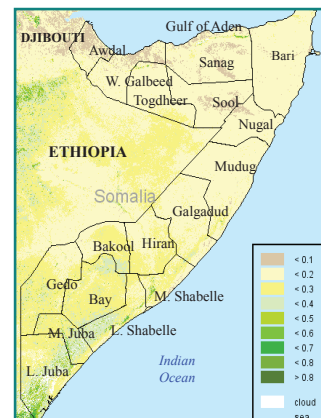
Map 6: 1st Dekad (1-10)



Map 7: 2nd Dekad (11-20)

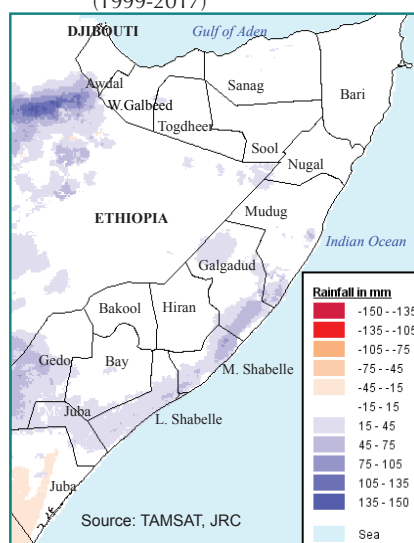


Map 8: 3rd Dekad (21-30)



Monthly rainfall and Vegetation Cover performance

Map 9: March 2019 TAMSAT Rainfall Difference from Short Term Average (1999-2017)



Map 10: March 2019 NDVI Absolute Difference from Short Term Average (2001- 2017)

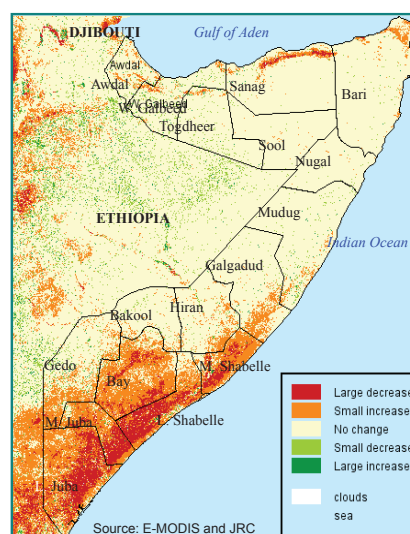


Table 1: Observed rain gauge data for March 2019 compared to short term monthly averages (STA)

Northern Regions

Region	Station Name	dek 1	dek 2	dek 3	Mar-19	STA
Awdal	Borama	0.0	0.0	0.0	0.0	44.0
Awdal	Qulenjeed	14.5	0.0	0.0	14.5	40.0
Wogooyi Galbeed	Gebilley	0.0	0.0	0.0	0.0	30.0
Wogooyi Galbeed	Malawle	0.0	0.0	0.0	0.0	28.0
Wogooyi Galbeed	Wajaale	6.0	0.0	0.0	6.0	36.0
Wogooyi Galbeed	Hargeisa	0.0	0.0	0.0	0.0	25.0
Wogooyi Galbeed	Daraweyne	0.0	0.0	0.0	0.0	25.0
Wogooyi Galbeed	Cadaadley	0.0	0.0	0.0	0.0	22.0
Wogooyi Galbeed	Dilla	1.0	0.0	0.0	1.0	36.0
Wogooyi Galbeed	Aburin	0.0	0.0	0.0	0.0	29.0
Wogooyi Galbeed	Dhubato	0.0	0.0	0.0	0.0	25.0
Wogooyi Galbeed	Baligubable	0.0	0.0	0.0	0.0	30.0
Wogooyi Galbeed	Berbera	0.0	0.0	0.0	0.0	0.0
Togdheer	Burao	0.0	0.0	0.0	0.0	5.0
Togdheer	Sheikh	0.0	0.0	0.0	0.0	33.0
Togdheer	Odweyne	0.0	0.0	0.0	0.0	21.0
Togdheer	Buadodde	0.0	0.0	3.0	3.0	12.0
Sanaag	Eeerigavo	4.5	0.0	0.0	4.5	22.0
Sanaag	Elafweyn	0.0	0.0	0.0	0.0	12.0
Sool	Caynabo	0.0	0.0	0.0	0.0	12.0
Sool	xudun	0.0	0.0	0.0	0.0	8.0
Sool	Taleex	0.0	0.0	0.0	0.0	7.0
Sool	Las Aanod	0.0	0.0	0.0	0.0	4.0
Bari	Bossasso	0.0	0.0	0.0	0.0	0.0
Bari	Qardo	0.0	0.0	0.0	0.0	7.0
Bari	Dangoroyo	0.0	0.0	0.0	0.0	6.0
Bari	Ballidhin	0.0	0.0	0.0	0.0	5.0
Bari	Alula	0.0	0.0	0.0	0.0	0.0
Bari	Bandarbeyla	0.0	0.0	0.0	0.0	5.0
Bari	Iskushuban	0.0	0.0	0.0	0.0	3.0
Nugaal	Garowe	0.0	0.0	0.0	0.0	7.0
Nugaal	Eyl	0.0	0.0	0.0	0.0	5.0
Nugaal	Burtile	0.0	0.0	0.0	0.0	7.0
Mudug	Galdogob	0.0	0.0	0.0	0.0	4.0
Mudug	Jarriban	0.0	0.0	0.0	0.0	6.0
Mudug	Galkayo	0.0	0.0	0.0	0.0	5.0

Southern Regions

Region	Station Name	dek 1	dek 2	dek 3	Mar-19	STA
Bakool	Hudur	0.0	0.0	0.0	0.0	5.0
Bakool	Elbarde	0.0	0.0	0.0	0.0	13.0
Bay	Baidoa	0.0	0.0	8.0	8.0	23.0
Bay	Diinsor	0.0	0.0	0.0	0.0	26.0
Bay	Bardaale	0.0	0.0	2.5	2.5	17.0
Bay	Burhakaba	0.0	0.0	0.0	0.0	9.0
Bay	Wanleweyne	0.0	0.0	0.0	0.0	0.0
Gedo	Luuq	0.0	0.0	0.0	0.0	1.0
Gedo	Bardheere	0.0	0.0	0.0	0.0	27.0
Hiraan	Belet weyne	0.0	0.0	0.0	0.0	9.0
Hiraan	Bulo burti	0.0	0.0	0.0	0.0	11.0
Hiraan	Mataban	0.0	0.0	0.0	0.0	11.0
Middle juba	Bualle	0.0	0.0	0.0	0.0	1.0
Middle juba	Sakow	0.0	0.0	0.0	0.0	0.0
Banadir	Mogadishu	0.0	0.0	0.0	0.0	4.0
Middle Shabelle	Jowhar	0.0	0.0	16.0	16.0	14.0

*indicates missing data

Monthly rainfall and NDVI performance maps

The Mapped NDVI and RFE above represent the differences from Short 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 Commission. 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: fsnau@fao.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 DEVCOCAT (www.devcocat.eu) respectively, while the rain gauge data is collected by FAO-SWALIM and FEWSNET.

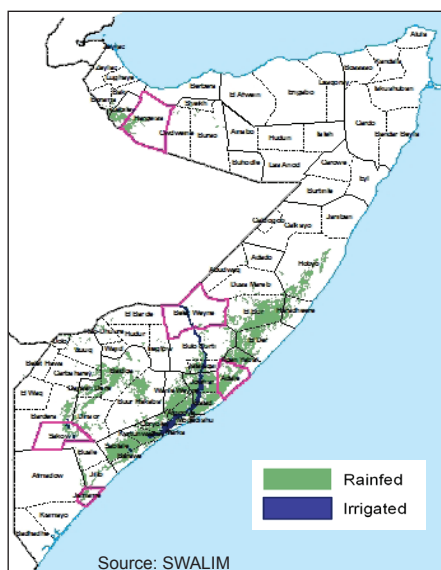
- The seasonal profiles on page 3 and 4 are produced in collaboration with JRC-MARS. For more information visit <http://mars.jrc.europa.eu/mars/About-us/FOODSEC> For more information on NDVI visit <http://earlywarning.usgs.gov/adds> and <http://fsausomali.org/fileadmin/uploads/1308.pdf>

- 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.

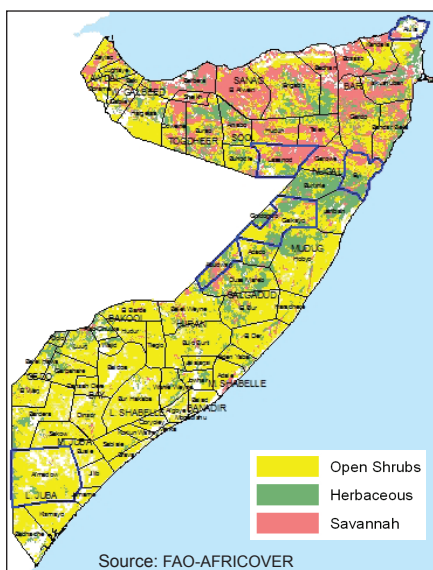
The TAMSAT information is available on <http://www.met.reading.ac.uk/tamsat/about/>

Seasonal rainfall and Vegetation Cover trends by region

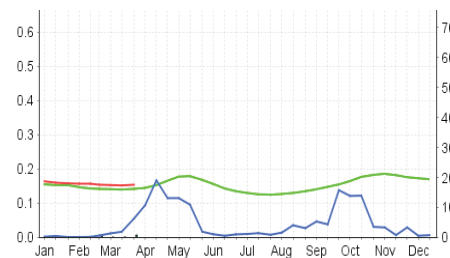
Map 11: Agricultural Areas



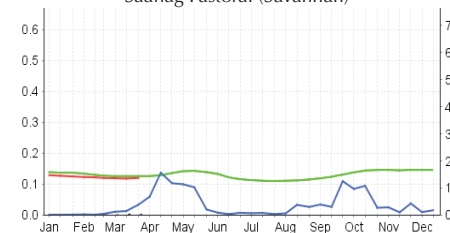
Map 12: Pastoral Areas



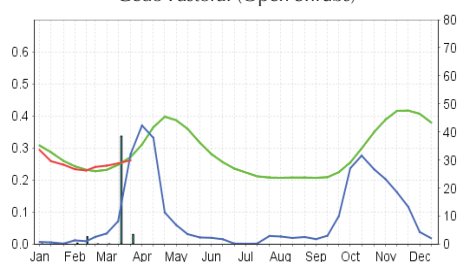
Togdheer Pastoral (Savannah)



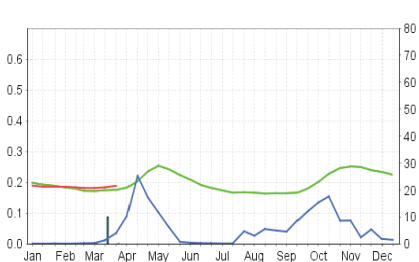
Saanag Pastoral (Savannah)



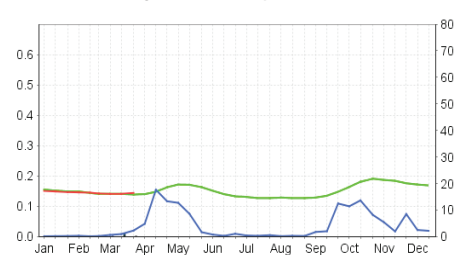
Gedo Pastoral (Open Shrubs)



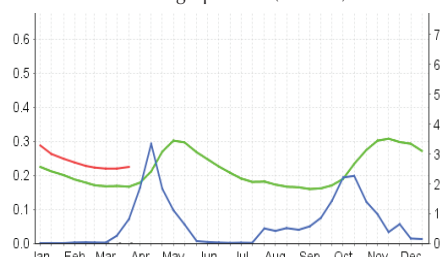
Galgadud Pastoral (Herbaceous)



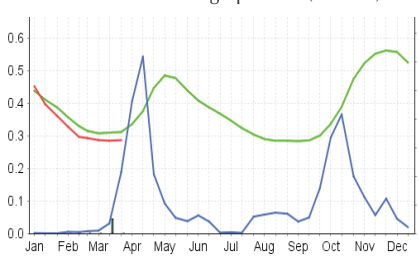
Nugal Pastoral (Open Shrubs)



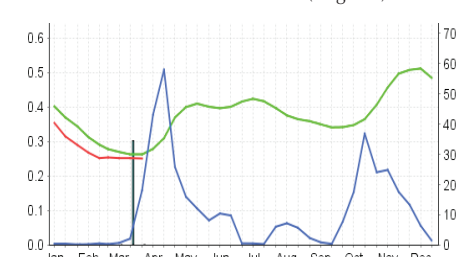
Hiran Agropastoral (Rainfed)



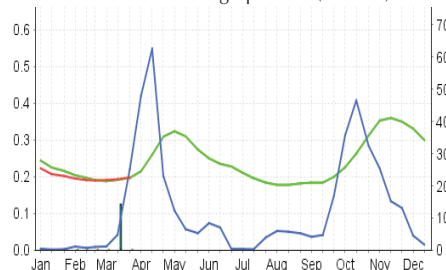
Middle Shabelle Agropastoral (Rainfed)



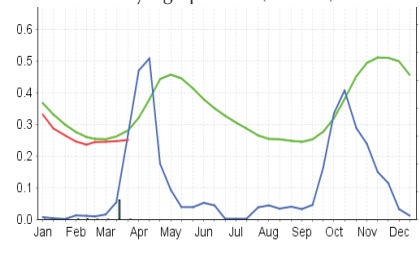
Lower Shabelle Riverine (Irrigated)



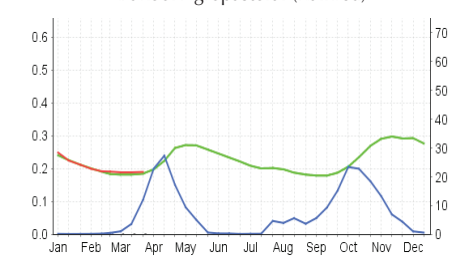
Lower Shabelle Agropastoral (Rainfed)



Bay Agropastoral (Rainfed)



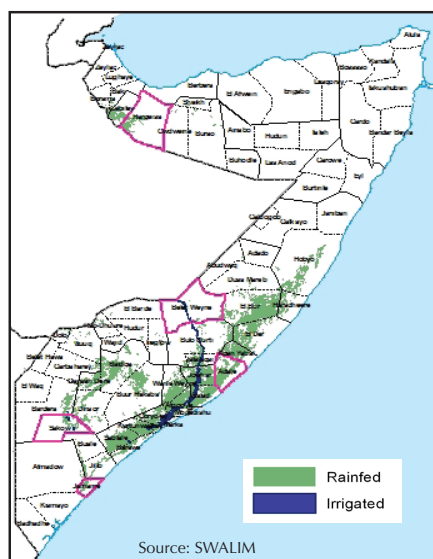
Bakool Agropastoral (Rainfed)



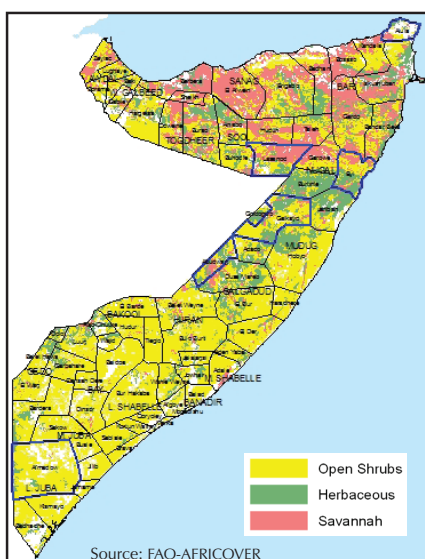
RFE 2019 RFE STA: 2001-2018 NDVI-C 2019 NDVI-C STA (1999-2018)

Seasonal rainfall and Vegetation Cover trends for selected districts

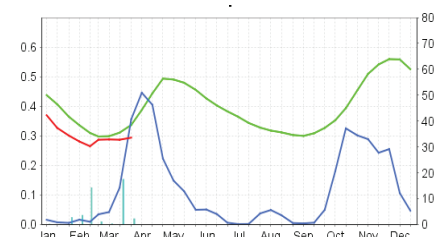
Map 13: Agricultural Areas



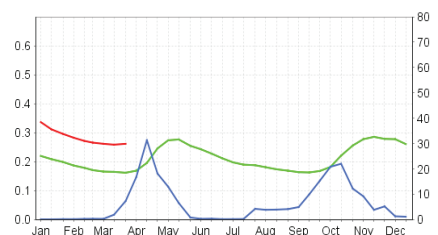
Map 14: Pastoral Areas



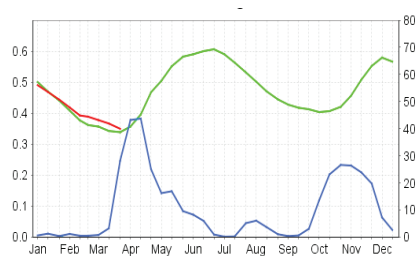
Afmadow Pastoral (Open Shrubs)



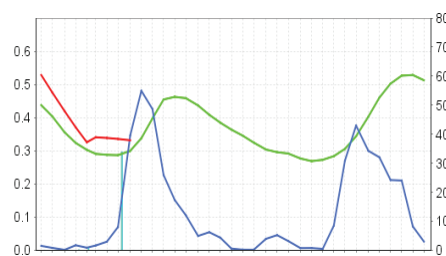
Beletweyn Riverine (Irrigated)



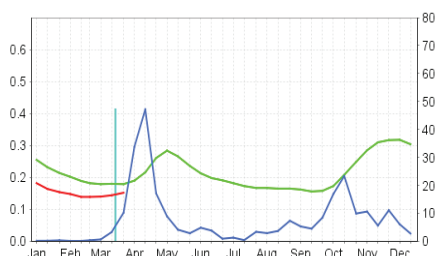
Jamame Riverine (Irrigated)



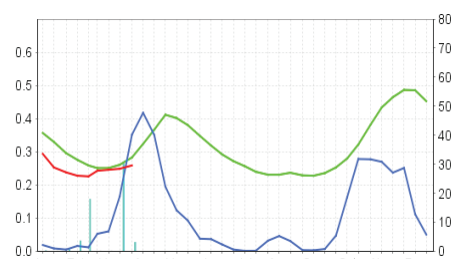
Sakow Agropastoral (Rainfed)



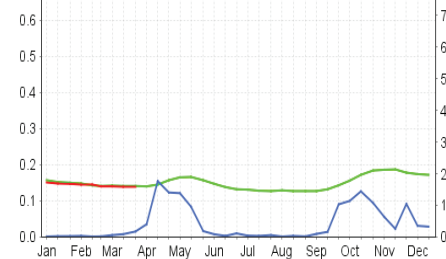
Adale Agropastoral (Herbaceous)



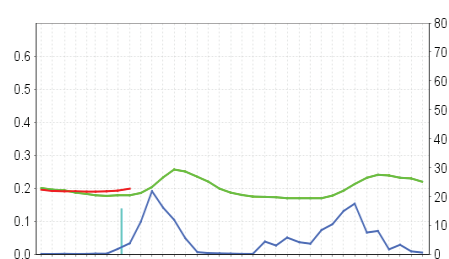
Afmadow Pastoral (Open Shrubs)



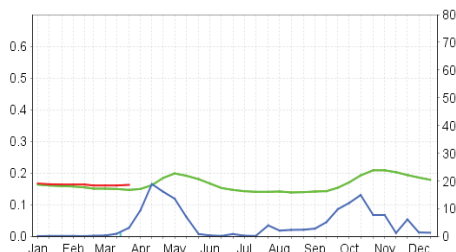
Eyl Pastoral (Open Shrubs)



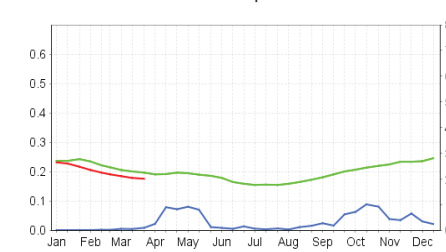
Abudwak Pastoral (Herbaceous)



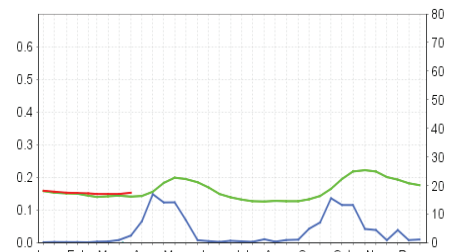
Galkayo Open Shrubs



Alula Pastoral (Open Shrubs)



Lasanod Pastoral (Herbaceous)



RFE 2019 RFE STA: 2001-2018 NDVI-C 2019 NDVI-C STA (1999-2018)