

Climate Update

Highlights

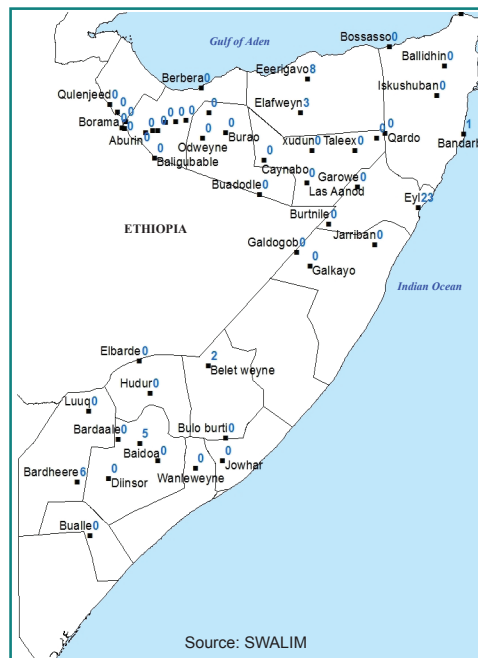
The 2017 *Jilal* (January – March) season has been one of the harshest in Somalia. It has been characterized by higher than normal temperatures in most areas and severe water and pasture shortages. In late March early April, moderate rains were reported in parts of northwest southern Somalia which may indicate early onset of *Gu* (April-June) rains. Some of the stations that received rainfall include Borama (112mm), Qulenjeed (65mm), Erigavo (41mm) and in Baidoa and Bardale in the South which received less than 5mm or rain (Map 1 and Table 1). The Ethiopian highlands have received some moderate to good rains and subsequently improved Juba-Shabelle river water to near average levels.

Satellite-derived rainfall estimates (RFE) for March indicate some rainfall activity in South Gedo, parts of Juba, and Northwest regions (Maps 2-5 and 9). The March 2017 Normalized Difference Vegetation Index (NDVI), indicates modest to large deterioration of vegetation conditions in parts of Bay, Gedo, Shabelle's and Juba's (Maps 6-8 and 10). Field reports indicate severe to extreme pasture and water shortages in the drought affected areas of the Northern Inland Pastoral of Sool, Sanaag, Bari and Nugal regions, East Golis of (Sanag and Bari) and large parts of central and southern regions.

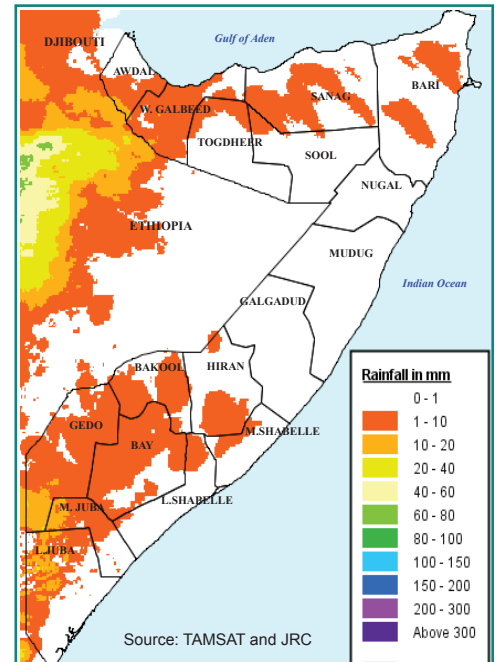
Drought related displacements to urban centers have slowed down land preparation activities in agropastoral areas of Bay, Bakool, Hiraa, Gedo, Middle Juba and riverine areas of Shabelle. However, some farming activities such as land preparation, dry planting and irrigations in riverine areas is on-going in preparation for *Gu* rains.

In drought affected areas in northern and central regions, rural pastoralists have resorted to expensive livestock supplementary feeding mainly cereal and intensive water trucking to mitigate the severe impact of harsh *Jilal*. NOAA-FEWSNET forecast for the March to June 2017 *Gu* rains point to below average rains in large areas of the country, except in far northeastern livelihoods. If the forecast materializes, the already prolonged drought condition could worsen with continued adverse impact on food security and livelihoods in many parts of the country.

Map 1: March 2017 Monthly Rain Gauge Data

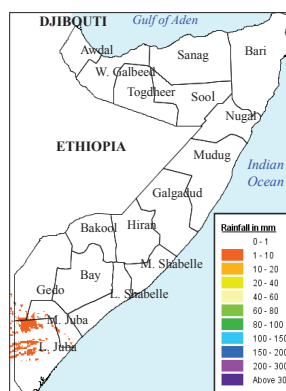


Map 2: March 2017 TAMSAT Monthly Rainfall Estimates

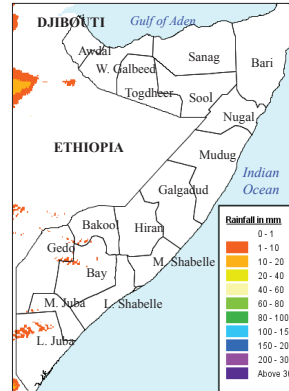


March 2017: Dekadal RFE Progression

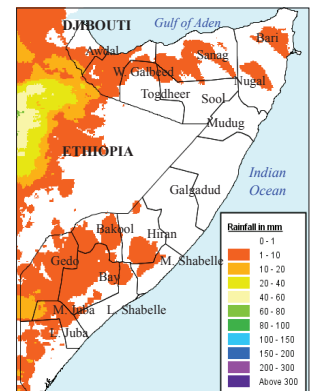
Map 3: 1st Dekad (1-10)



Map 4: 2nd Dekad (11-20)

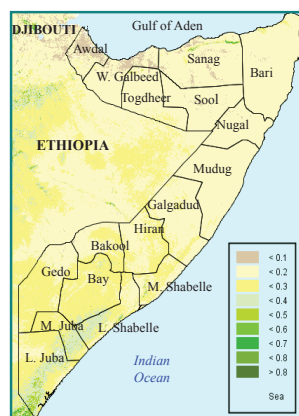


Map 5: 3rd Dekad (21-30)

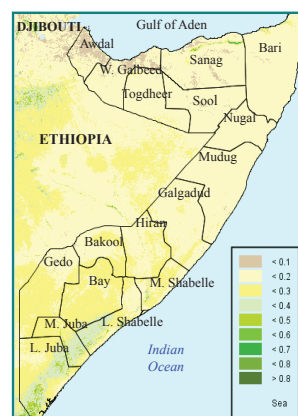


March 2017: Dekadal NDVI Progression

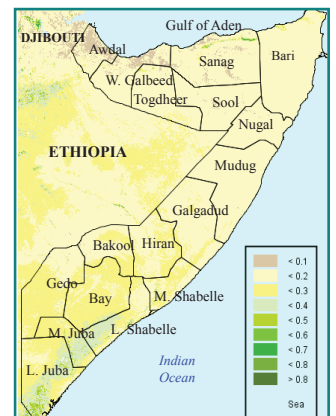
Map 6: 1st Dekad (1-10)



Map 7: 2nd Dekad (11-20)

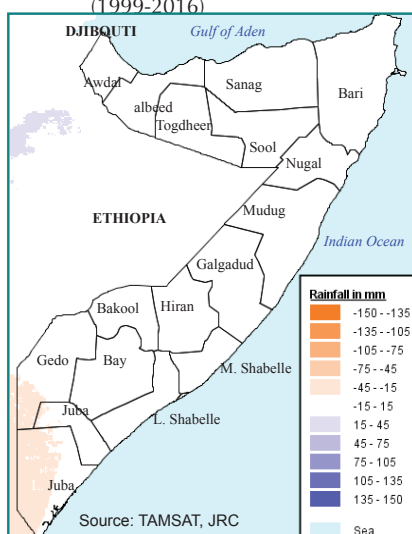


Map 8: 3rd Dekad (21-30)



Monthly rainfall and NDVI performance

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



Map 10: March 2017 NDVI Absolute Difference from Short Term Mean (2001- 2016)

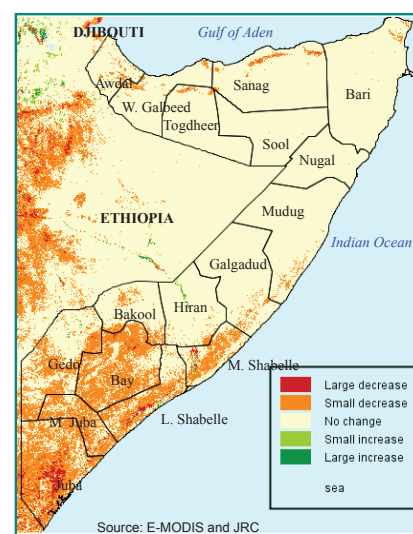


Table 1: Observed rain gauge data compared to long term monthly averages (March 2017)

Northern Regions

Region	Station_Name	dek 1	dek 2	dek 3	Mar-17	LTM
Awdal	Borama	0.0	26.5	85.5	112.0	44.0
Awdal	Qulenjeed	0.0	0.0	65.0	65.0	40.0
Wogooyi Galbeed	Gebilley	0.0	0.0	52.5	52.5	30.0
Wogooyi Galbeed	Malawle	0.0	0.0	0.0	0.0	28.0
Wogooyi Galbeed	Wajaale	0.0	0.0	2.5	2.5	36.0
Wogooyi Galbeed	Hargeisa	0.0	0.0	0.0	23.0	25.0
Wogooyi Galbeed	Darawayne	0.0	0.0	14.0	14.0	25.0
Wogooyi Galbeed	Cadaadley	0.0	0.0	2.5	2.5	22.0
Wogooyi Galbeed	Dilla	0.0	0.0	16.0	16.0	36.0
Wogooyi Galbeed	Aburin	0.0	0.0	32.5	32.5	29.0
Wogooyi Galbeed	Dhubato	0.0	0.0	32.0	32.0	25.0
Wogooyi Galbeed	Baligubable	0.0	0.0	26.5	26.5	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	0.0	0.0	12.0
Sanaag	Eeerigavo	0.0	0.0	41.0	41.0	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	Burtnile	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-17	LTM
Bakool	Hudur	*	*	*		5.0
Bakool	Elbarde	*	*	*		13.0
Banadir	Mogadishu	*	*	*		4.0
Bay	Baidoa	0.0	0.0	2.5	2.5	23.0
Bay	Diinsor	*	*	*		26.0
Bay	Bardaale	*	*	2.0	2.0	17.0
Bay	BurHakaba	*	*	*		9.0
Bay	Wanleweyne	*	*	*		
Gedo	Luuq	*	*	*		18.0
Gedo	Bardheere	*	*	*		27.0
Hiraan	Belet weyne	*	*	*		9.0
Hiraan	Bulo burti	*	*	*		11.0
Hiraan	Mataban	*	*	*		11.0
Lower Shabelle	Balad	*	*	*		10.0
Middle juba	Bualle	*	*	*		14.0
Middle Shabelle	Jowhar	*	*	*		14.0

*indicates missing data

Monthly rainfall and NDVI performance 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 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: 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.devcoast.eu) respectively, while the rain gauge data is collected by FAO-SWALIM and FEWS-NET.

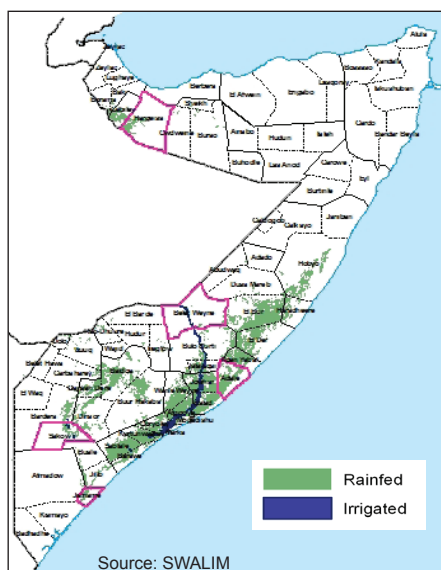
- The seasonal profiles on page 3 and 4 are produced in collaboration with JRC-MARS. For more information visit <http://mars.jrc.europa.eu/mars/About-us/FOODSEC> For more information on NDVI visit <http://earlywarning.usgs.gov/adds> and <http://fsausomali.org/fileadmin/uploads/1308.pdf>

- 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.

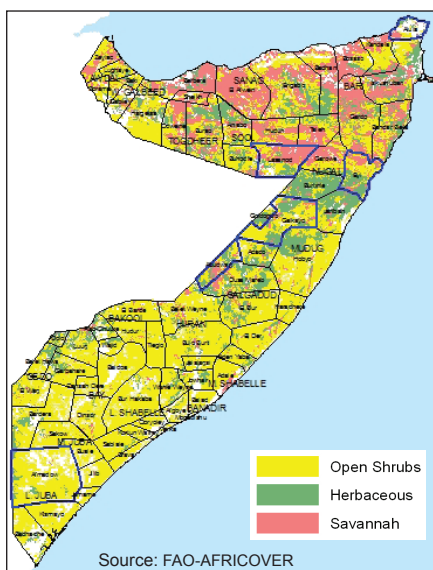
The TAMSAT informatio is available on <http://www.met.reading.ac.uk/tamsat/about/>

Seasonal rainfall and NDVI trends by region

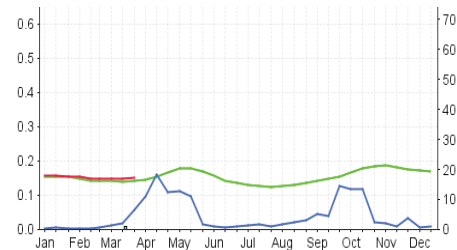
Map 11: Agricultural Areas



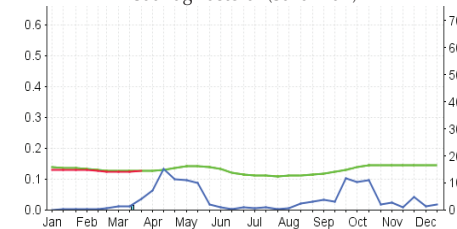
Map 12: Pastoral Areas



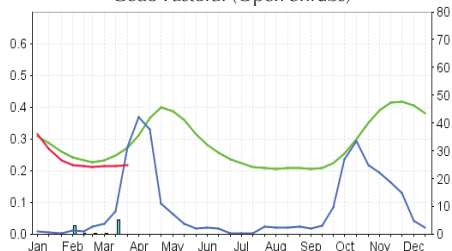
Togdheer Pastoral (Savannah)



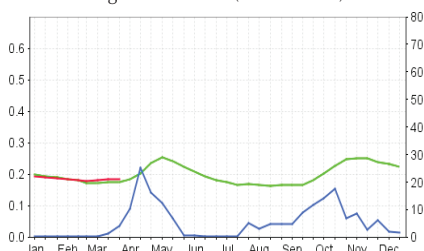
Saanag Pastoral (Savannah)



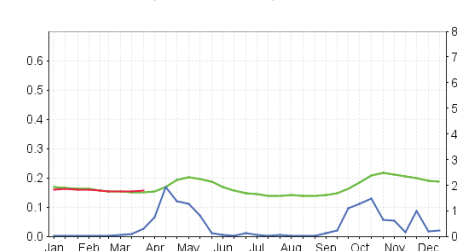
Gedo Pastoral (Open Shrubs)



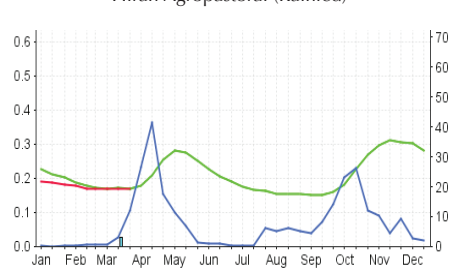
Galgadud Pastoral (Herbaceous)



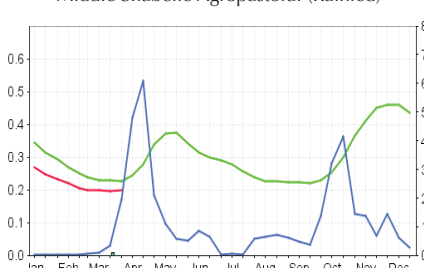
Nugal Pastoral (Open Shrubs)



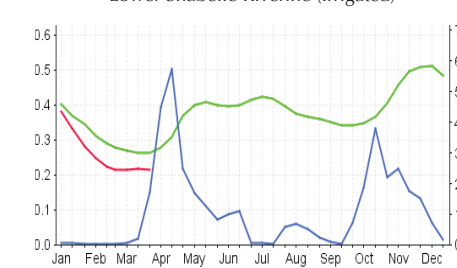
Hiran Agropastoral (Rainfed)



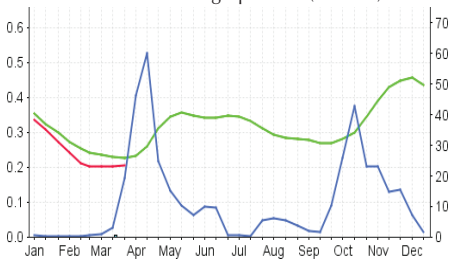
Middle Shabelle Agropastoral (Rainfed)



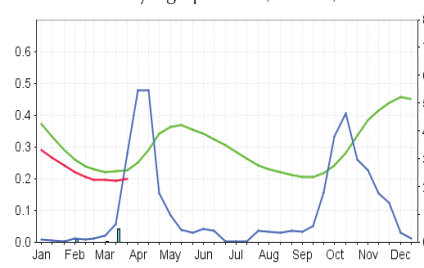
Lower Shabelle Riverine (Irrigated)



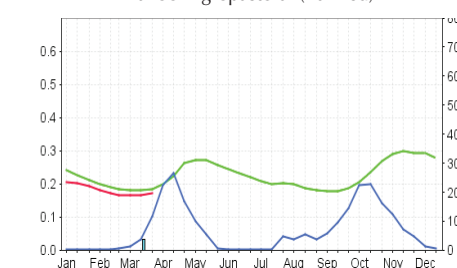
Lower Shabelle Agropastoral (Rainfed)



Bay Agropastoral (Rainfed)



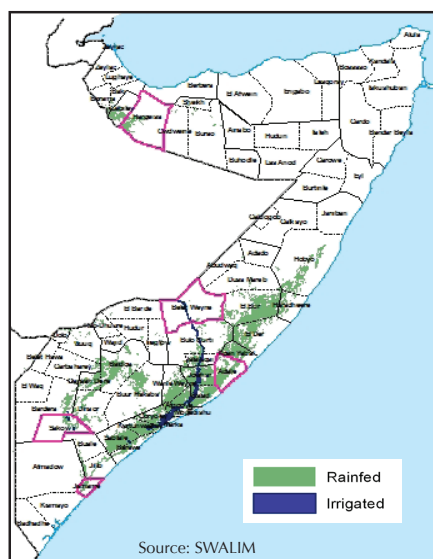
Bakool Agropastoral (Rainfed)



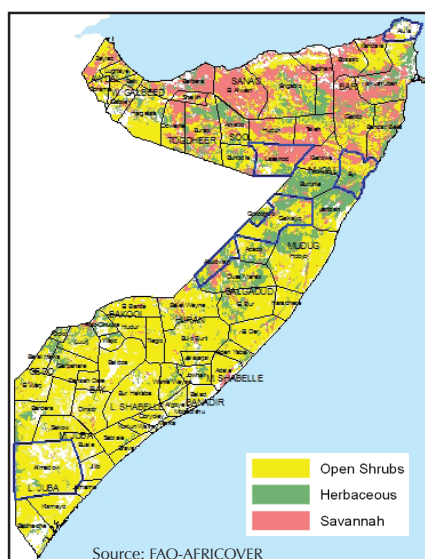
 RFE 2017
  RFE AVG: 2001-2016
  NDVI-C 2017
  NDVI-C LTA MEAN (1999-2016)

Seasonal rainfall and NDVI trends for selected districts

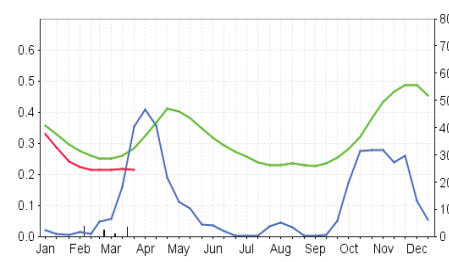
Map 13: Agricultural Areas



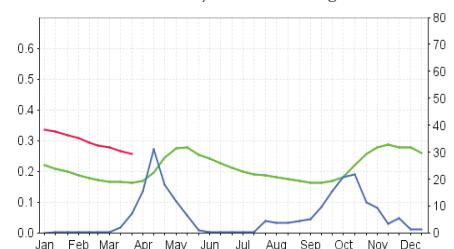
Map 14: Pastoral Areas



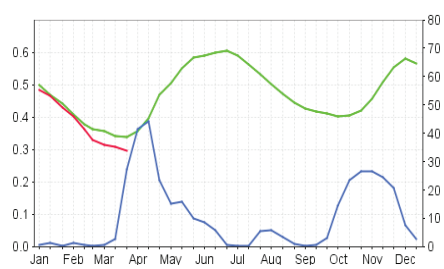
Afmadow Pastoral (Herbaceous)



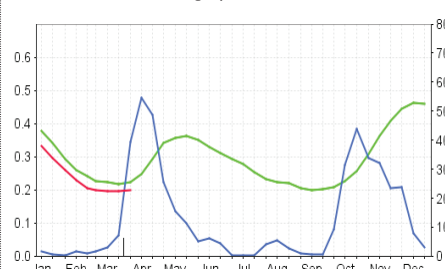
Beletweyn Riverine (Irrigated)



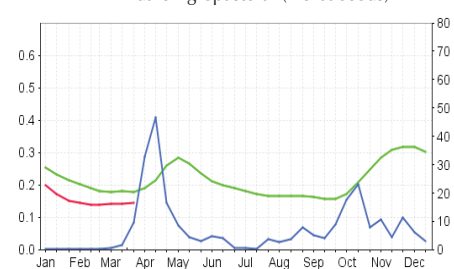
Jamame Riverine (Irrigated)



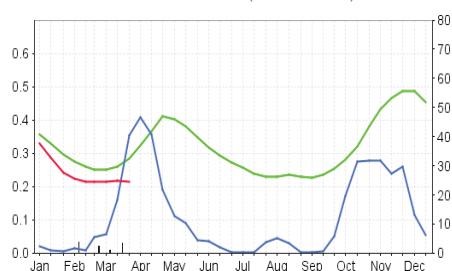
Sakow Agropastoral (Rainfed)



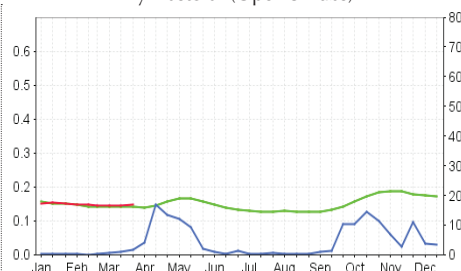
Adale Agropastoral (Herbaceous)



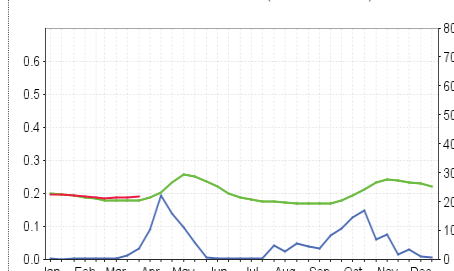
Afmadow Pastoral (Herbaceous)



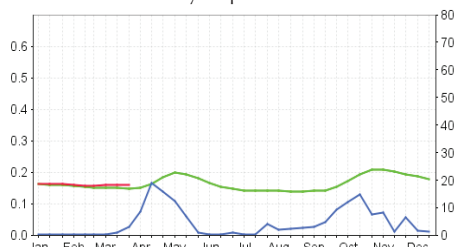
Eyl Pastoral (Open Shrubs)



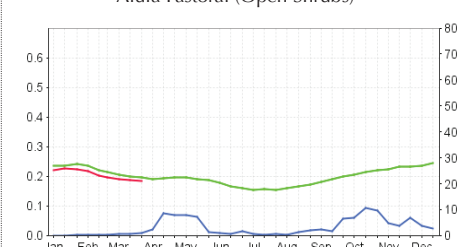
Abudwak Pastoral (Herbaceous)



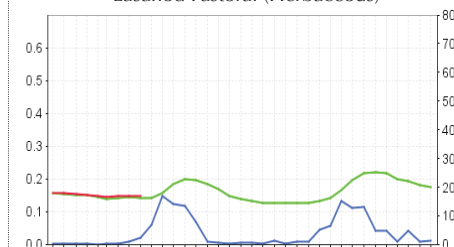
Galkayo Open Shrubs



Alula Pastoral (Open Shrubs)



Lasanod Pastoral (Herbaceous)



 RFE 2017
  RFE AVG: 2001-2016
  NDVI-C 2017
  NDVI-C LTA MEAN (1999-2016)