

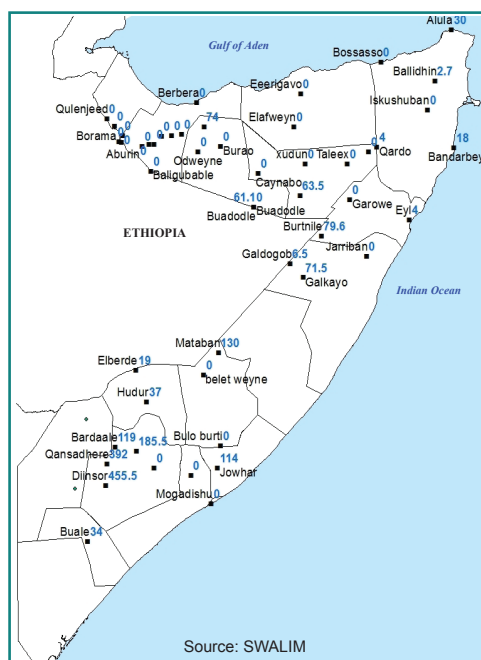
Highlights

Deyr (October –December) season rainfall peaked during November 2017, characterized by heavy precipitation in most parts of the country with many stations recording above average rains. The southern regions were the wettest during the month with various stations recording above average rains while there has been limited rainfall in the North. Some of the stations that recorded significant rainfall in the north include: Alula (30mm), Burtinle (75mm), Lasaanod (63mm), Sheikh (74mm) while in the south in Bay region, Baidoa, Bardaale, Dinsor, and Qansadhere stations recorded 185mm, 119mm, 455mm, 392mm, respectively. The Shabelle River levels have increased considerably but remained below flood risk level. However flash floods affected crops in Jowhar (M.Shabelle).

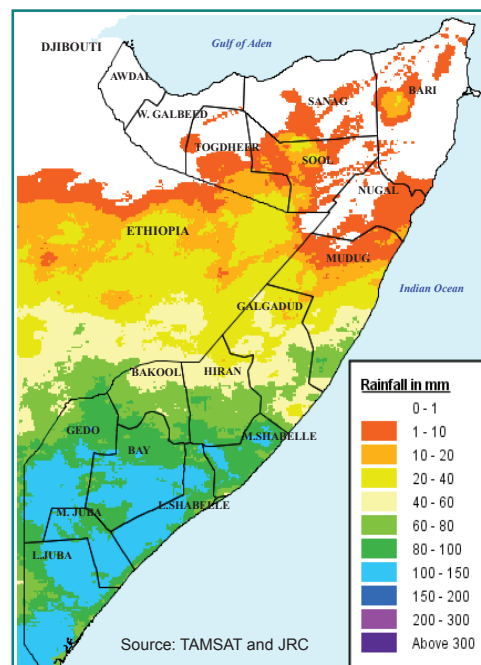
Satellite derived rainfall estimates (RFE) confirm prevalence of improved rains in the south during the month of November, with well distributed rains of over 100mm in L. Shabelle, Juba and South Gedo. The RFE imagery also indicate prevalence of light rains in central regions and limited rainfall in northeast regions (Map 2). The rainfall anomaly map which depicts comparison of current rainfall with long term mean (LTM) above average to average rainfall in most parts of southern and central regions during November 2017 (Map 9). The Normalized Difference Vegetation Index (NDVI) for November 2017 shows significant improvement of vegetation conditions in large areas in the South especially in Hiran, Bay, Bakool and Gedo. However vegetation deficits are still evident in Coastal Deeh of Central and M. Shabelle, Southern Rainfed Agropastoral livelihood zone and Juba pastoral livelihood zone (Map 10).

The Deyr rains have continued to improve rangeland conditions, replenished most of the berkads, natural water catchments, and increased water levels in shallow wells. Livestock body conditions generally show improvement. Better than expected rainfall performance during November has also improved cereal harvest prospects in several of the crop producing agropastoral livelihoods of southern Somalia.

Map 1: Nov 2017 Monthly Rain Gauge Data

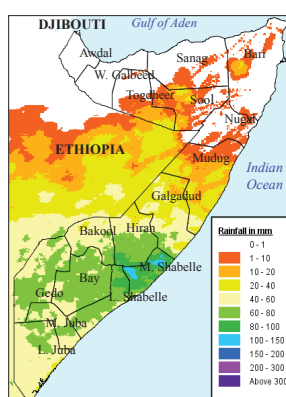


Map 2: Nov 2017 TAMSAT Monthly Rainfall Estimates

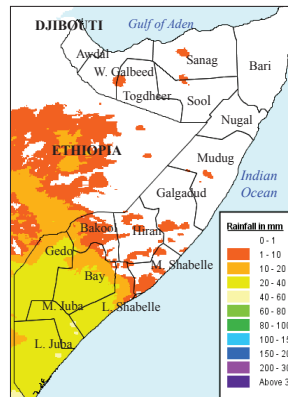


November 2017: Dekadal RFE Progression

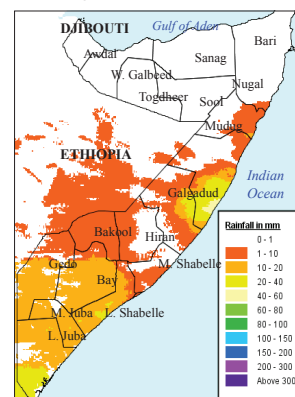
Map 3: 1st Dekad (1-10)



Map 4: 2nd Dekad (11-20)

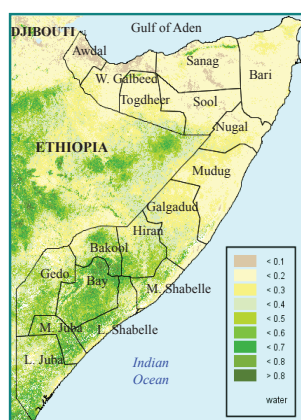


Map 5: 3rd Dekad (21-30)

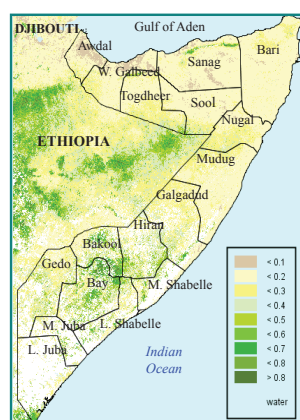


November 2017: Dekadal NDVI Progression

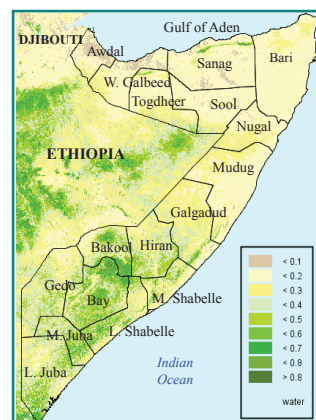
Map 6: 1st Dekad (1-10)



Map 7: 2nd Dekad (11-20)

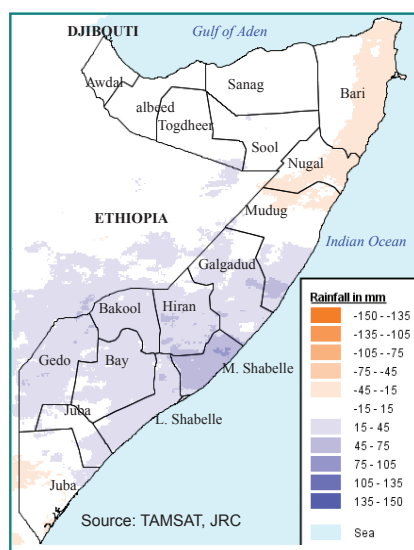


Map 8: 3rd Dekad (21-30)



Monthly rainfall and NDVI performance

Map 9: Nov 2017 Estimated Rainfall Difference (in mm) from short term mean (1999-2016)



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

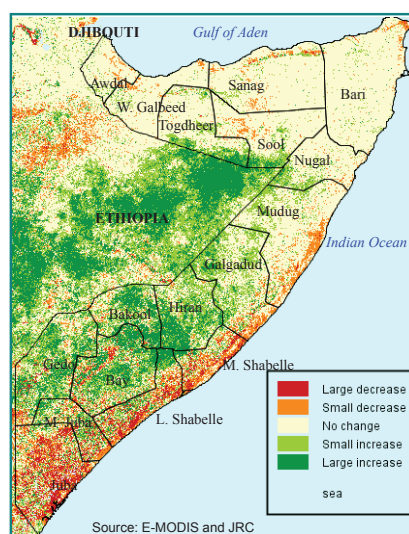


Table 1: Observed rain gauge data compared to long term monthly averages (November 2017)

Northern Regions

Region	Station Name	dek 1	dek 2	dek 3	Nov-17	LTM
Awdal	Borama	0.0	0.0	0.0	0.0	9.0
Awdal	Qulenjeed	0.0	0.0	0.0	0.0	14.0
Bari	Bossasso	0.0	0.0	0.0	0.0	3.0
Bari	Qardo	4.0	0.0	0.0	4.0	5.0
Bari	Dangoroyo	0.0	0.0	0.0	0.0	11.0
Bari	Ballidhin	2.7	0.0	0.0	2.7	9.0
Bari	Alula	21.0	0.0	9.0	30.0	6.0
Bari	Bandarbeyla	18.0	0.0	0.0	18.0	11.0
Bari	Iskushuban	0.0	0.0	0.0	0.0	6.0
Mudug	Galdogob	6.5	0.0	0.0	6.5	19.0
Mudug	Jarriban	0.0	0.0	0.0	0.0	14.0
Mudug	Galkayo	55.5	0.0	16.0	71.5	15.0
Nugaal	Garowe	0.0	0.0	0.0	0.0	11.0
Nugaal	Eyl	2.0	2.0	0.0	4.0	15.0
Nugaal	Burtile	77.3	2.3	0.0	79.6	14.0
Sanaag	Eerigavo	0.0	0.0	0.0	0.0	5.0
Sanaag	Elafweyne	0.0	0.0	0.0	0.0	7.0
Sool	Taleex	0.0	0.0	0.0	0.0	8.0
Sool	Las Aanod	34.5	29.0	0.0	63.5	10.0
Sool	Caynabo	0.0	0.0	0.0	0.0	13.0
Sool	xudun	0.0	0.0	0.0	0.0	9.0
Togdheer	Buadodle	41.1	20.0	0.0	61.1	13.0
Togdheer	Burao	0.0	0.0	0.0	0.0	8.0
Togdheer	Sheikh	0.0	41.0	33.0	74.0	25.0
Togdheer	Odweyne	0.0	0.0	0.0	0.0	11.0
Togdheer	Buadodle	0.0	0.0	0.0	0.0	13.0
Wogooyi Galbeed	Gebilley	0.0	0.0	0.0	0.0	10.0
Wogooyi Galbeed	Malawle	0.0	0.0	0.0	0.0	11.0
Wogooyi Galbeed	Wajaale	0.0	0.0	0.0	0.0	12.0
Wogooyi Galbeed	Hargeisa	0.0	0.0	0.0	0.0	8.0
Wogooyi Galbeed	Darawayne	0.0	0.0	0.0	0.0	11.0
Wogooyi Galbeed	Cadaadley	0.0	0.0	0.0	0.0	12.0
Wogooyi Galbeed	Dilla	0.0	0.0	0.0	0.0	12.0
Wogooyi Galbeed	Aburin	0.0	0.0	0.0	0.0	11.0
Wogooyi Galbeed	Dhubato	0.0	0.0	0.0	0.0	12.0
Wogooyi Galbeed	Baligubable	0.0	0.0	0.0	0.0	13.0
Wogooyi Galbeed	Berbera	0.0	0.0	0.0	0.0	1.0

Southern Regions

Region	Station Name	dek 1	dek 2	dek 3	Nov-17	LTM
Bakool	Elberde	19.0	0.0	0.0	19.0	*
Bakool	Hudur	30.0	0.0	7.0	37.0	*
Banadir	Mogadishu	0.0	0.0	0.0	0.0	*
Bay	Burhakaba	0.0	0.0	0.0	0.0	*
Bay	Wanleweyne	0.0	0.0	0.0	0.0	*
Bay	Baidoa	163.0	10.5	12.0	185.5	89.0
Bay	Bardaale	0.0	39.0	80.0	119.0	63.0
Bay	Diinsor	426.0	15.0	14.5	455.5	98.0
Bay	Qansadhere	376.0	12.0	4.0	392.0	*
Hiraan	Bulo burti	0.0	0.0	0.0	0.0	*
Hiraan	Mataban	95.0	35.0	0.0	130.0	*
Hiraan	belet weyne	0.0	0.0	0.0	0.0	*
Middle juba	Buale	24.5	9.5	0.0	34.0	*
Middle Shabelle	Jowhar	99.0	0.0	15.0	114.0	*

*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 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 FEWSNET.

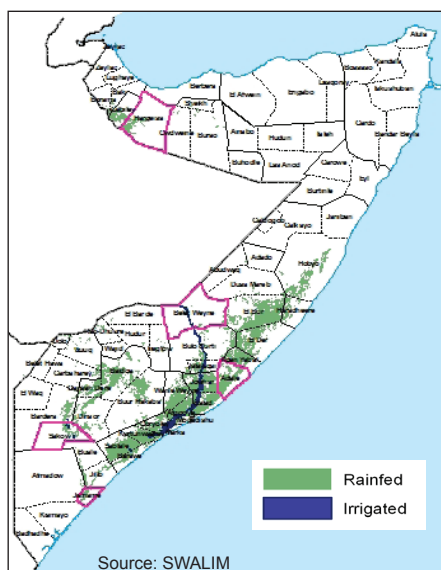
• The seasonal profiles on page 3 and 4 are produced in collaboration with JRC-MARS. For more information visit <http://mars.jrc.europa.eu/mars/About-us/FOODSEC> For more information on NDVI visit <http://earlywarning.usgs.gov/adds> and <http://fsausomali.org/fileadmin/uploads/1308.pdf>

• This report is a compilation of climate data and field reports on Somalia that FSNAU and FEWS NET regularly review for analysis.

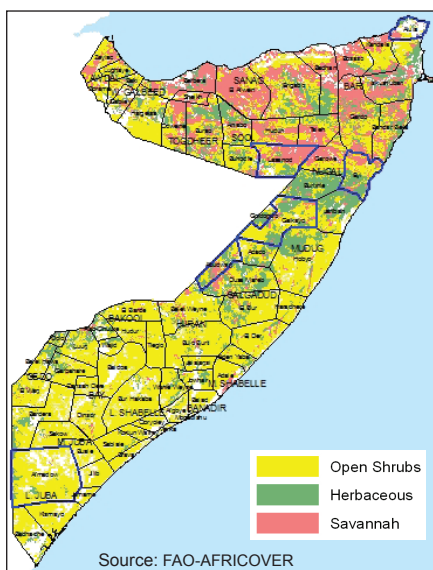
The TAMSAT information is available on <http://www.met.reading.ac.uk/tamsat/about/>

Seasonal rainfall and NDVI trends by region

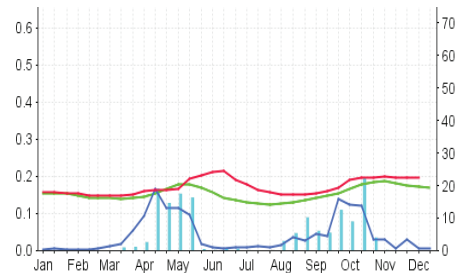
Map 11: Agricultural Areas



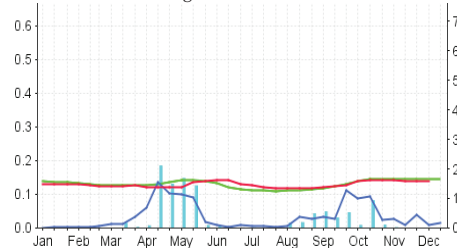
Map 12: Pastoral Areas



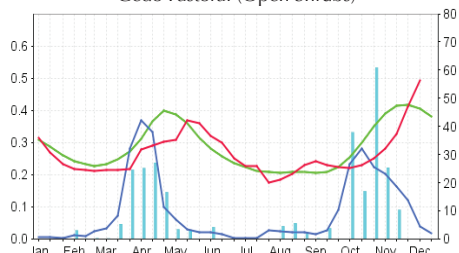
Togdheer Pastoral (Savannah)



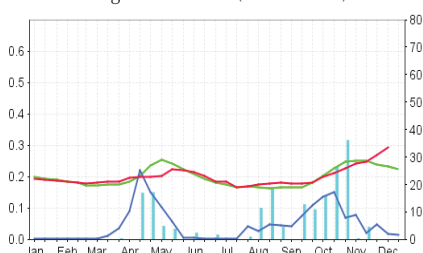
Saanag Pastoral (Savannah)



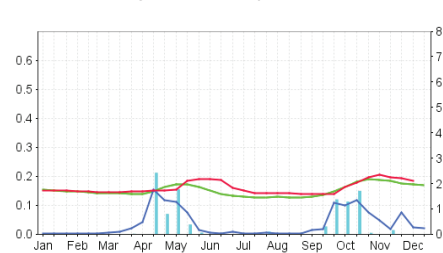
Gedo Pastoral (Open Shrubs)



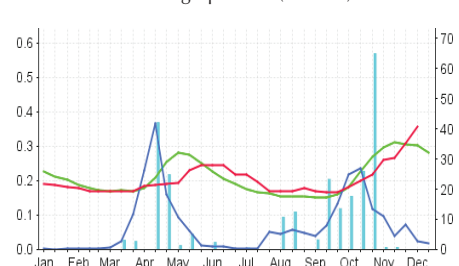
Galgadud Pastoral (Herbaceous)



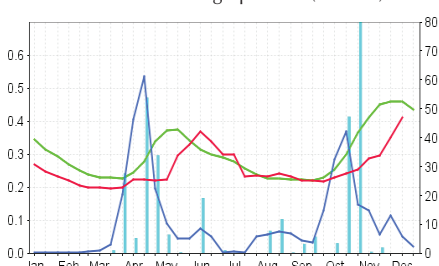
Nugal Pastoral (Open Shrubs)



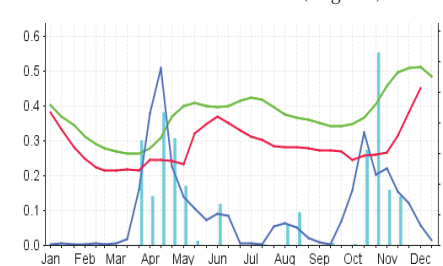
Hiran Agropastoral (Rainfed)



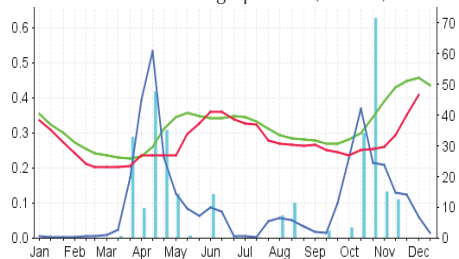
Middle Shabelle Agropastoral (Rainfed)



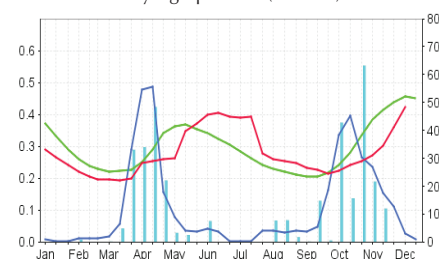
Lower Shabelle Riverine (Irrigated)



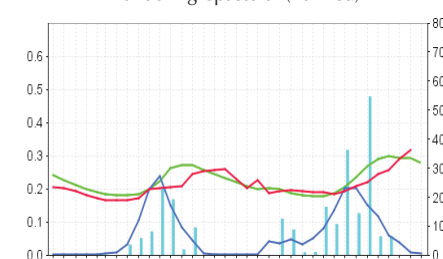
Lower Shabelle Agropastoral (Rainfed)



Bay Agropastoral (Rainfed)



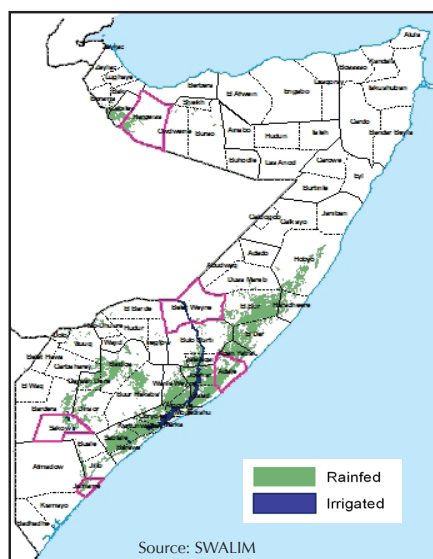
Bakool Agropastoral (Rainfed)



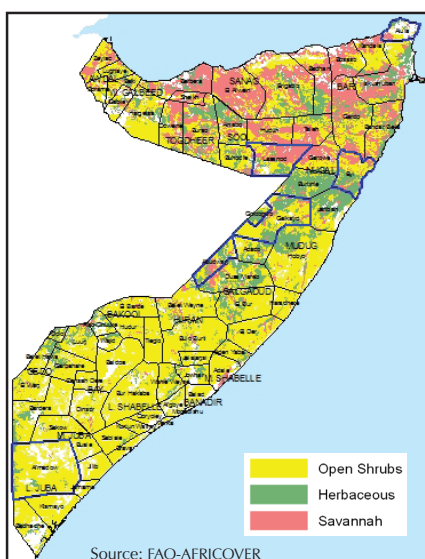
 RFE 2017
  RFE AVG: 2001-2016
  NDVI-C 2017
  NDVI-C LTA MEAN (1999-2016)

Seasonal rainfall and NDVI trends for selected districts

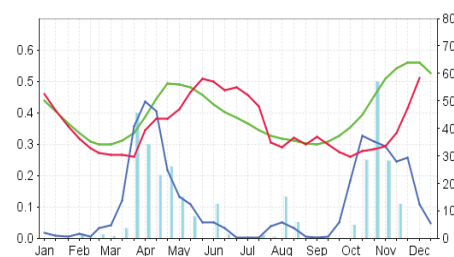
Map 13: Agricultural Areas



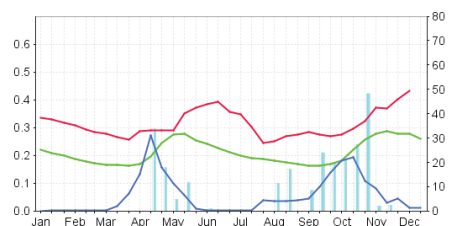
Map 14: Pastoral Areas



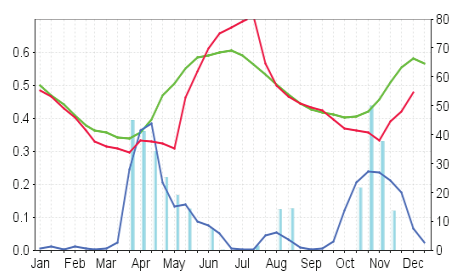
Aimadow Pastoral (Open Shrubs)



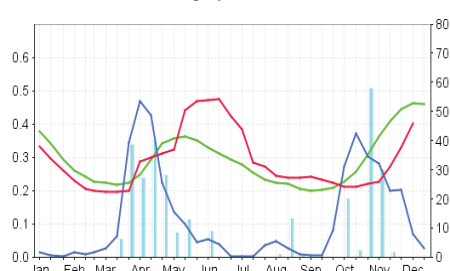
Beletweyn Riverine (Irrigated)



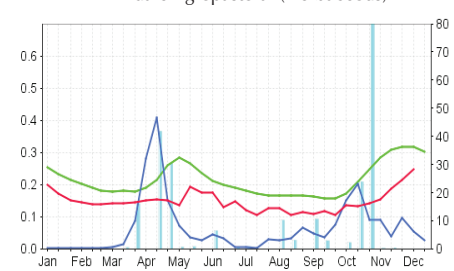
Jamame Riverine (Irrigated)



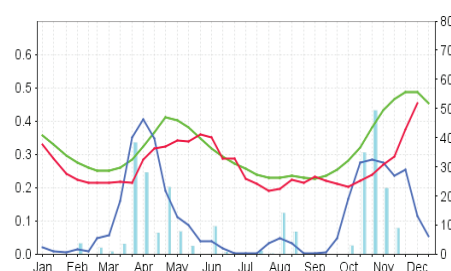
Sakow Agropastoral (Rainfed)



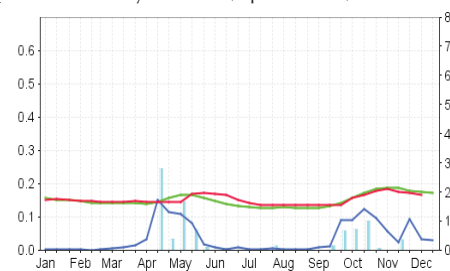
Adale Agropastoral (Herbaceous)



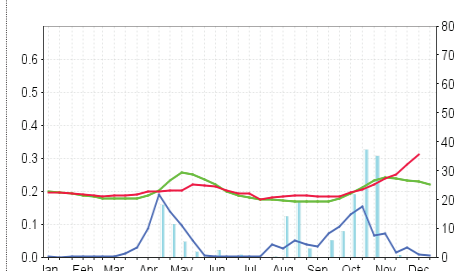
Aimadow Pastoral (Herbaceous)



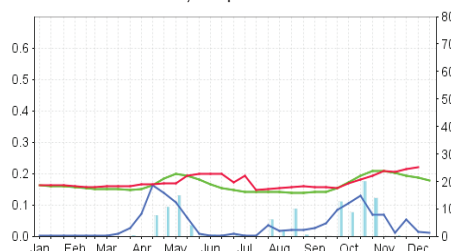
Eyl Pastoral (Open Shrubs)



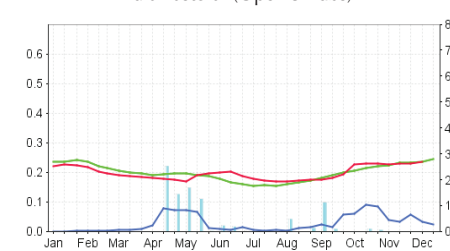
Abudwak Pastoral (Herbaceous)



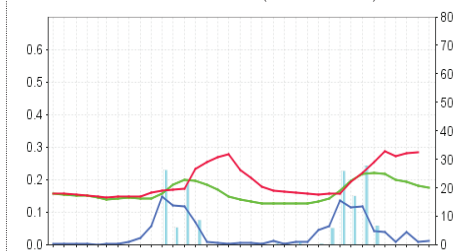
Galkayo Open Shrubs



Alula Pastoral (Open Shrubs)



Lasanod Pastoral (Herbaceous)



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