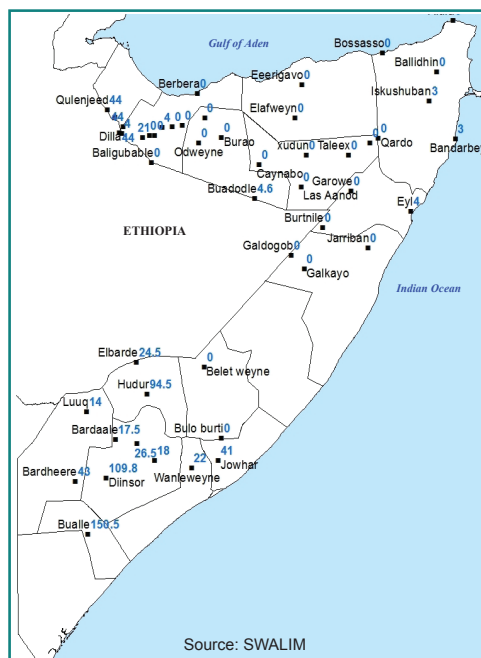


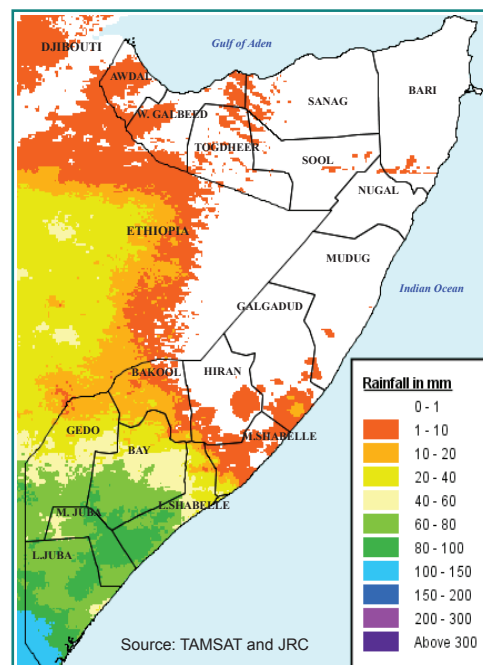
Highlights

Generally, the month of November was marked by cessation of rains in the north while in the south, the intensity of the 2016 *Deyr* rains (October-December 2016) reduced substantially. Overall, the *Deyr* rains were largely below average throughout much of Somalia. In the second and third dekad of November, the rains were enhanced in most of southern regions. However, many stations recorded below average rains. Field reports indicates prevalence of moderate rains in parts of Awdal and W.Galbeed regions of northwest. Stations in the north that recorded significant rains in November included Gebiley and Dilla which recorded 44mm of rains each, while in the South Buale, Dinsor and Hudur recorded 150mm, 109mm and 94mm of rains respectively (Table 1, Map 1).

Map 1: Nov 2016 Monthly Rain Gauge Data



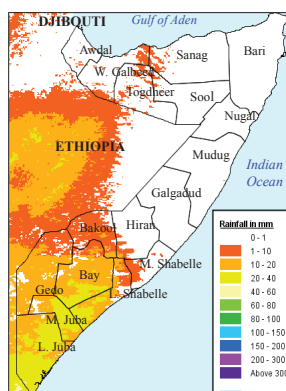
Map 2: Nov 2016 TAMSAT Monthly Rainfall Estimates



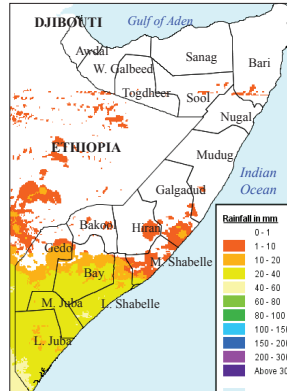
November 2016: Dekadal RFE Progression

Rainfall estimates (RFE) derived from Tropical Applications of Meteorology using SATellite (TAMSAT) confirms prevalence of light rains in the south and cessation of rains in the north and parts of Shabelle (Maps 3-5). Normalized Difference Vegetation Index (NDVI) indicates that vegetation conditions remained considerably below average in large parts of Somalia, with high vegetation deficits prevalent in southern Somalia. However, near average vegetation conditions are observed in W. Galbeed agro pastoral, Hawd and West Golis pastoral areas of Awdal and W. Galbeed regions (Maps 6-8 and 10).

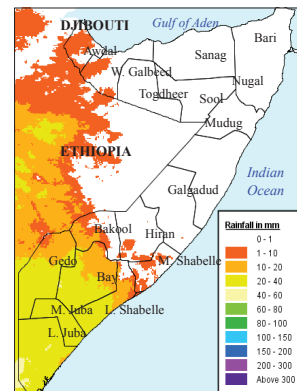
Map 3: 1st Dekad (1-10)



Map 4: 2nd Dekad (11-20)



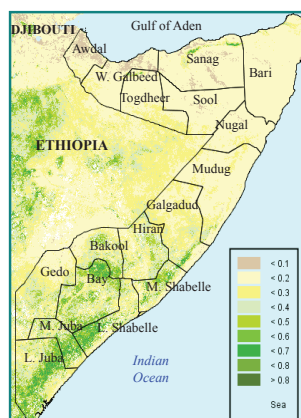
Map 5: 3rd Dekad (21-30)



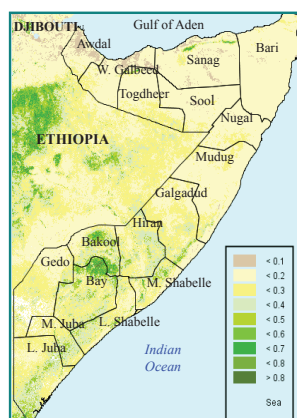
November 2016: Dekadal NDVI Progression

As a result of below average to poor Karan (July-September) and *Deyr* rains, pasture and water condition are largely below average to poor in most livelihoods of the country. The areas mostly affected include Bari, Nugal, Sanaag and Sool regions of north, large parts of Mudug, Gal-gadud (Central), Hiran, Middle Shabelle, Bakool, Gedo, Middle and Lower Juba in southern regions. Notwithstanding the recently enhanced rains in the south in November, as a result of the delayed onset of *Deyr* rainfall coupled with poor intensity and distribution, crop production prospects still remain bleak.

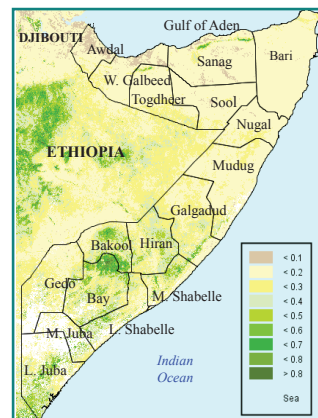
Map 6: 1st Dekad (1-10)



Map 7: 2nd Dekad (11-20)

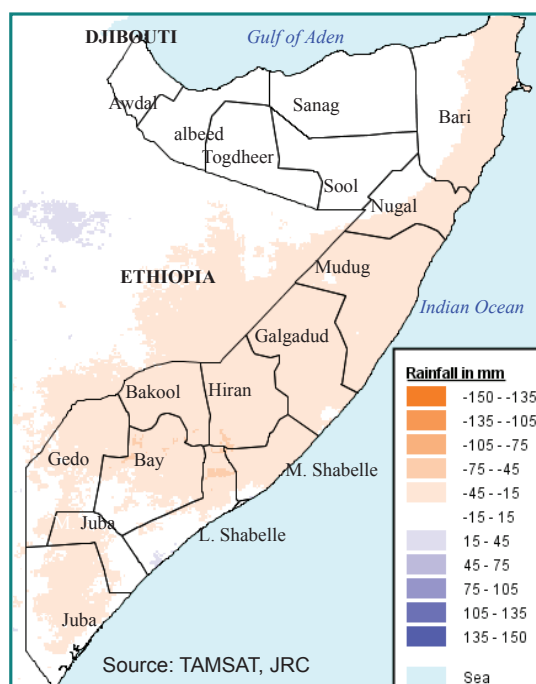


Map 8: 3rd Dekad (21-30)



Monthly rainfall and NDVI performance

Map 9: Nov 2016 TAMSAT Rainfall Difference from short term mean (1999-2015)



Map 10: Nov 2016 NDVI Absolute Difference from Short Term Mean (2001- 2015)

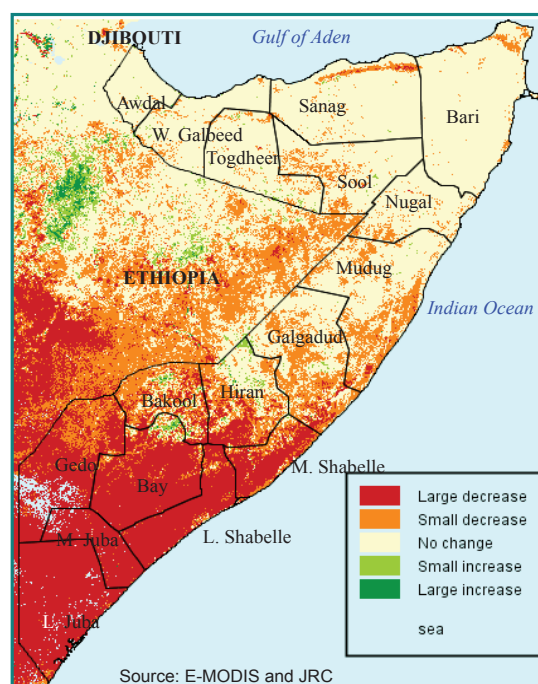


Table 1: Observed rain gauge data compared to long term monthly averages (November 2016)

Northern Regions

Region	Station_Name	dek 1	dek 2	dek 3	Nov-16	LTM
Awdal	Borama	0.0	0.0	7.5	7.5	9.0
Awdal	Qulenjeed	0.0	0.0	4.0	4.0	14.0
Bari	Bossasso	0.0	0.0	0.0	0.0	3.0
Bari	Qardo	0.0	0.0	0.0	0.0	5.0
Bari	Dangoroyo	0.0	0.0	0.0	0.0	11.0
Bari	Ballidhin	0.0	0.0	0.0	0.0	9.0
Bari	Alula	0.0	0.0	0.0	0.0	6.0
Bari	Bandarbeyla	0.0	0.0	3.0	3.0	11.0
Bari	Iskushuban	0.0	0.0	3.0	3.0	6.0
Mudug	Galdogob	0.0	0.0	0.0	0.0	19.0
Mudug	Jarriban	0.0	0.0	0.0	0.0	14.0
Mudug	Galkayo	0.0	0.0	0.0	0.0	15.0
Nugaal	Garowe	0.0	0.0	0.0	0.0	11.0
Nugaal	Eyl	0.0	0.0	4.0	4.0	15.0
Nugaal	Burtille	0.0	0.0	0.0	0.0	14.0
Sanaag	Eerigavo	0.0	0.0	0.0	0.0	5.0
Sanaag	Elafweyn	0.0	0.0	0.0	0.0	7.0
Sool	Caynabo	0.0	0.0	0.0	0.0	13.0
Sool	xudun	0.0	0.0	0.0	0.0	9.0
Sool	Taleex	0.0	0.0	0.0	0.0	8.0
Sool	Las Aanod	0.0	0.0	0.0	0.0	10.0
Togdheer	Burao	0.0	0.0	0.0	0.0	8.0
Togdheer	Sheikh	0.0	0.0	0.0	0.0	25.0
Togdheer	Odweyne	0.0	0.0	0.0	0.0	11.0
Togdheer	Buadodde	0.0	0.0	4.6	4.6	13.0
Wogooyi Galbeed	Gebilley	0.0	0.0	44.0	44.0	10.0
Wogooyi Galbeed	Malawle	0.0	0.0	0.0	0.0	11.0
Wogooyi Galbeed	Wajaale	0.0	0.0	4.0	4.0	12.0
Wogooyi Galbeed	Hargeisa	0.0	0.0	0.0	0.0	8.0
Wogooyi Galbeed	Darawayne	0.0	0.0	4.0	4.0	11.0
Wogooyi Galbeed	Cadaadley	0.0	0.0	0.0	0.0	12.0
Wogooyi Galbeed	Dilla	0.0	0.0	44.0	44.0	12.0
Wogooyi Galbeed	Aburin	0.0	0.0	21.0	21.0	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-16	LTM
Bakool	Hudur	35.5	0.0	59.0	94.5	12.0
Bakool	Elbarde	0.0	0.0	24.5	24.5	38.0
Bay	Baidoa	5.5	9.5	11.5	26.5	89.0
Bay	Diinsor	60.1	31.9	17.8	109.8	98.0
Bay	Bardaale	7.0	2.5	8.0	17.5	63.0
Bay	Burhakaba	8.0	0.0	10.0	18.0	57.0
Bay	Wanleweyne	5.0	7.0	10.0	22.0	
Gedo	Luuq	0.0	0.0	14.0	14.0	48.0
Gedo	Bardheere	16.5	0.0	26.5	43.0	116.0
Hiraan	Belet weyne	0.0	0.0	0.0	0.0	41.0
Hiraan	Bulo burti	0.0	0.0	0.0	0.0	61.0
Middle juba	Buulle	15.5	76.0	59.0	150.5	79.0
Middle Shabelle	Jowhar	21.0	8.0	12.0	41.0	75.0

*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.

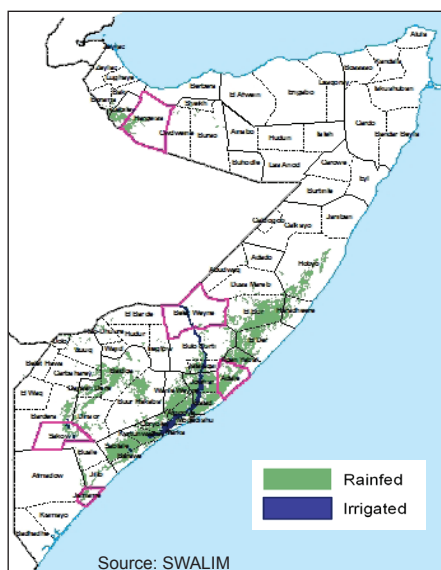
- The seasonal profiles on page 3 and 4 are produced in collaboration with JRC-MARS. For more information visit <http://mars.jrc.europa.eu/mars/About-us/FOODSEC> For more information on NDVI visit <http://earlywarning.usgs.gov/adds> and <http://fsausomali.org/fileadmin/uploads/1308.pdf>

- 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.

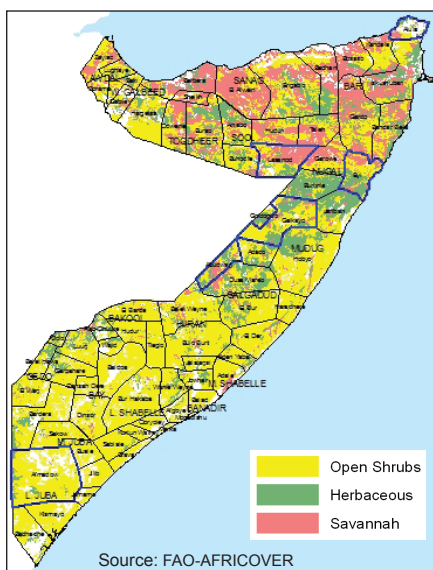
The TAMSAT informatio is available on <http://www.met.reading.ac.uk/tamsat/about/>

Seasonal rainfall and NDVI trends by region

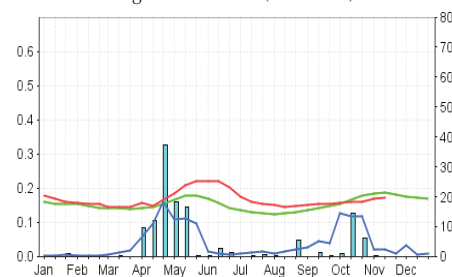
Map 11: Agricultural Areas



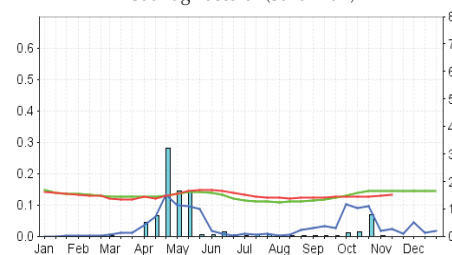
Map 12: Pastoral Areas



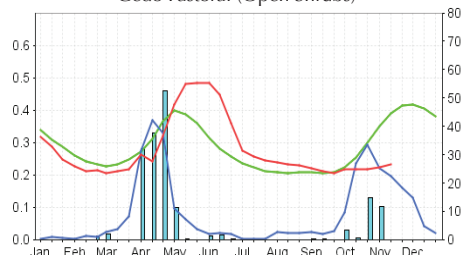
Togdheer Pastoral (Savannah)



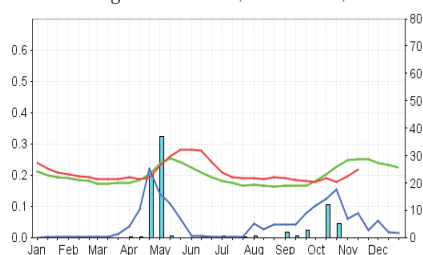
Saanag Pastoral (Savannah)



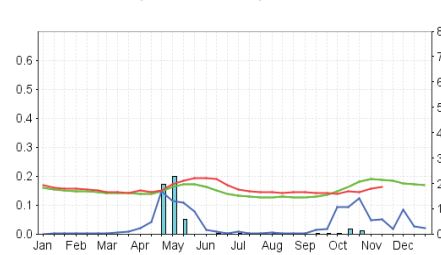
Gedo Pastoral (Open Shrubs)



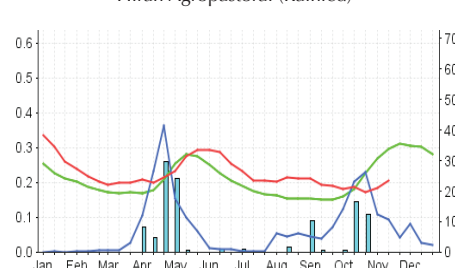
Galgadud Pastoral (Herbaceous)



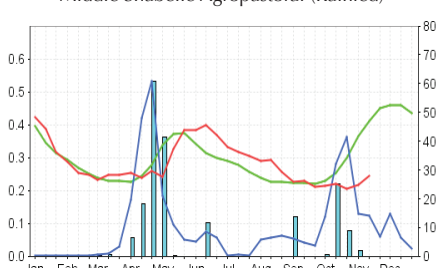
Nugal Pastoral (Open Shrubs)



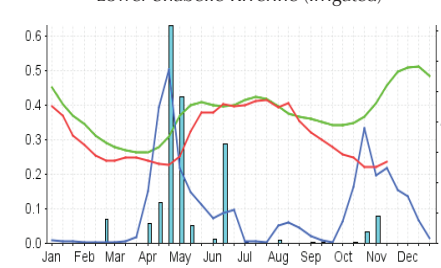
Hiran Agropastoral (Rainfed)



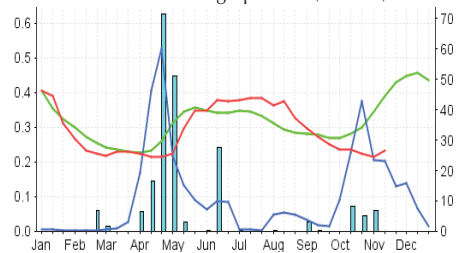
Middle Shabelle Agropastoral (Rainfed)



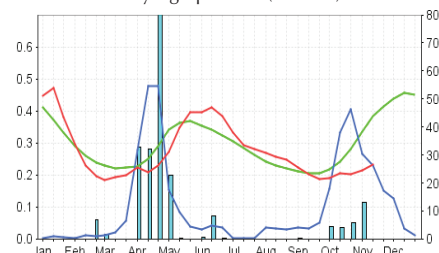
Lower Shabelle Riverine (Irrigated)



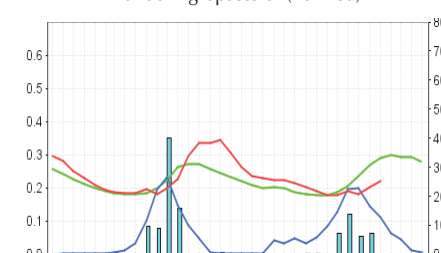
Lower Shabelle Agropastoral (Rainfed)



Bay Agropastoral (Rainfed)



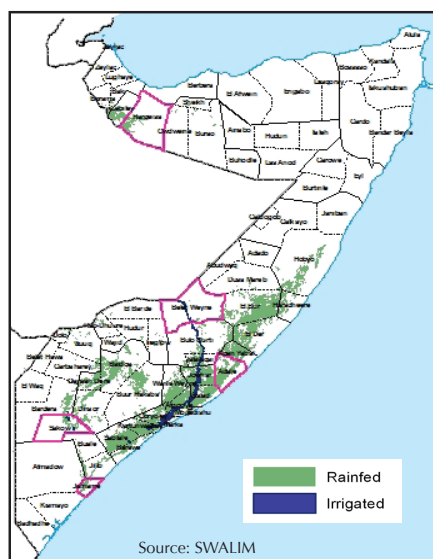
Bakool Agropastoral (Rainfed)



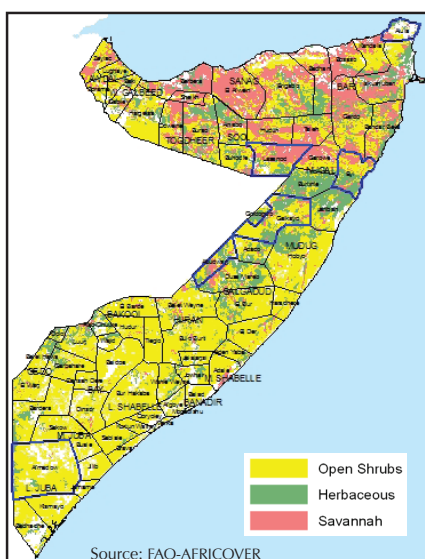
RFE 2016 RFE AVG: 2001-2015 NDVI-C 2016 NDVI-C LTA MEAN (1999-2015)

Seasonal rainfall and NDVI trends for selected districts

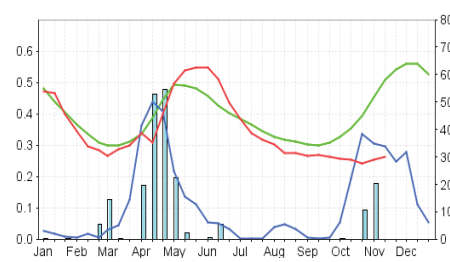
Map 13: Agricultural Areas



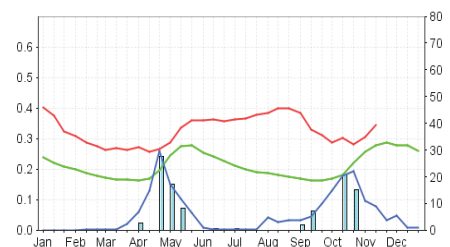
Map 14: Pastoral Areas



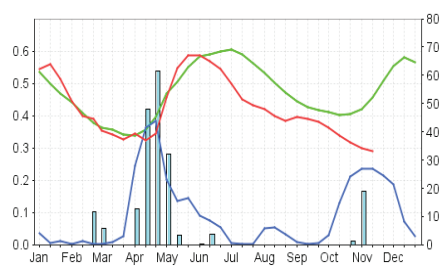
Aimadow Pastoral (Open Shrubs)



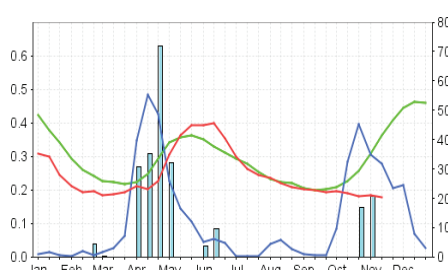
Beletweyn Riverine (Irrigated)



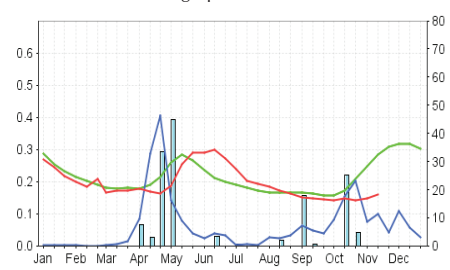
Jamame Riverine (Irrigated)



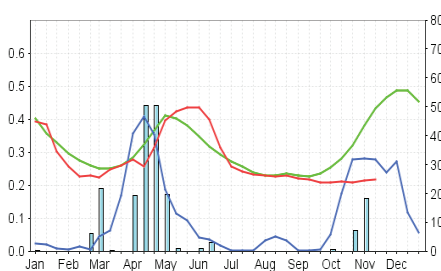
Sakow Agropastoral (Rainfed)



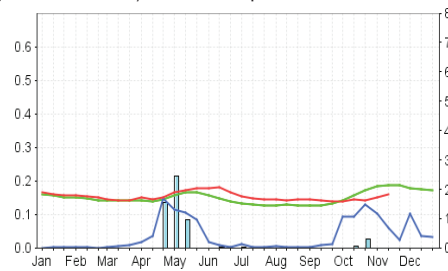
Adale Agropastoral (Herbaceous)



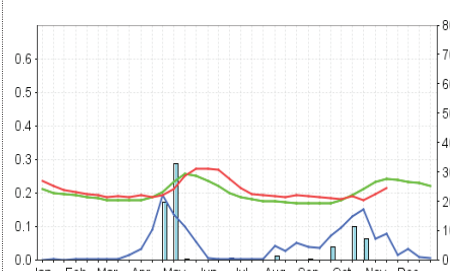
Aimadow Pastoral (Herbaceous)



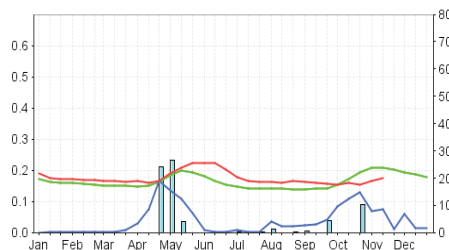
Eyl Pastoral (Open Shrubs)



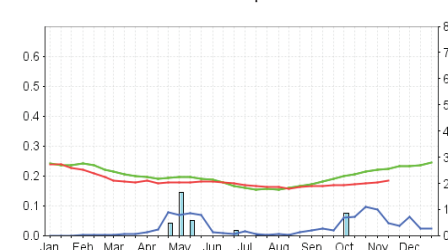
Abudwak Pastoral (Herbaceous)



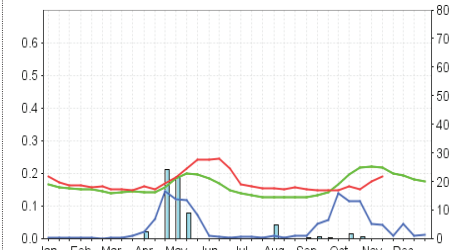
Galkayo Open Shrubs



Alula Pastoral (Open Shrubs)



Lasanod Pastoral (Herbaceous)



RFE 2016 RFE AVG: 2001-2015 NDVI-C 2016 NDVI-C LTA MEAN (1999-2015)