

Climate Update



FSNAU
Food Security and Nutrition
Analysis Unit - Somalia

February 2016 Monthly Rainfall and NDVI (Issued March 18, 2016)

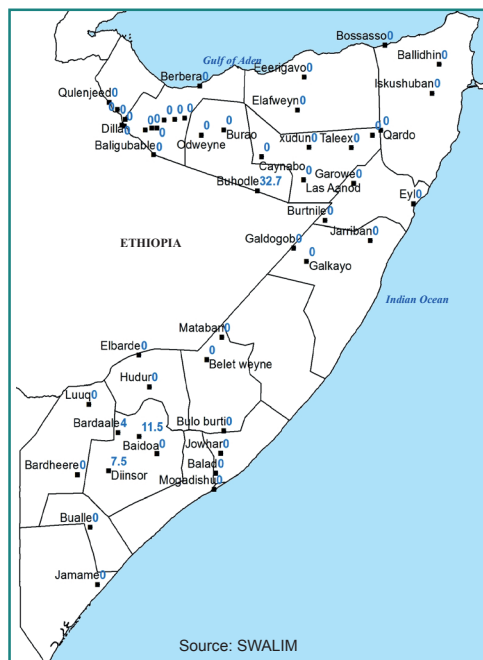
Highlights

Jilaal (January – March) dry season continued to prevail throughout the country marked by dry weather conditions with strong winds and elevated temperatures. No rainfall was recorded in the rain-gauge stations nationwide except for Buhodle, Baidoa and Dinsor stations which recorded 32mm, 11mm, and 7 mm of rain respectively (Map 1 and Table 1). Field reports indicate prevalence of localized showers in Borama and Hargeisa (Northwest), East Golis and Coastal *Deeh* livelihood zones in Bandarbeyla districts (Northeast), Elder and Harardere districts (Central), and Afmadow, Kurtunwarey, Luuq, Bardera districts (South).

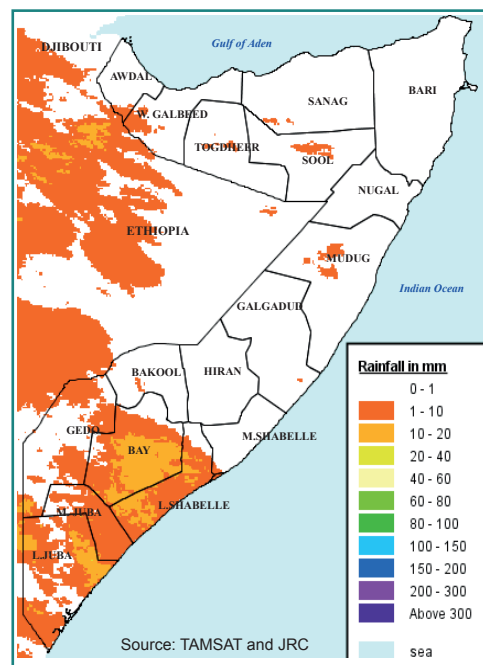
Satellite-derived rainfall estimates (RFE) continue to indicate largely dry weather conditions across Somalia. However, consistent with seasonal trends parts of W. Galbeed, Bay, Lower Shabelle and small pockets in the Jubas received some rainfall during the month. The February 2016 Normalized Difference Vegetation Index (NDVI) confirms continued deterioration of biomass in small to large areas of pastoral livelihoods of Jubas, Gedo as well as parts of Bay and Lower Shabelle agropastoral livelihood zones (Map 6-8 and 10).

Significant degradation of pasture and depressed water conditions has been reported in most parts of the country due to prevailing dry weather conditions and high evaporation rates. Temporary water sources/catchment in traditional grazing areas have mostly been depleted compelling pastoralists to move towards more permanent water sources such as boreholes and rivers. In the drought affected northern parts of the country, emergency water trucking has been reported in Northern Inland Pastoral livelihoods in Qardo and Ishkushuban districts. Harvesting of late planted crop is still on-going in some crop growing areas in the South.

Map 1: February 2016 Monthly Rain Gauge Data

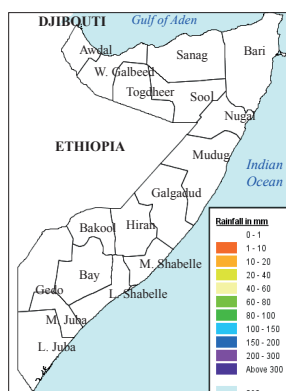


Map 2: February 2016 TAMSAT Monthly Rainfall Estimates

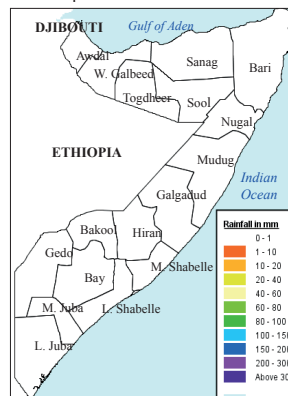


February 2016: TAMSAT Dekadal RFE

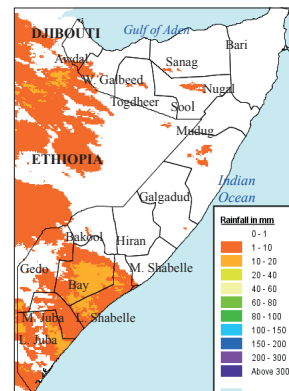
Map 3: 1st Dekad (1-10)



Map 4: 2nd Dekad (11-20)

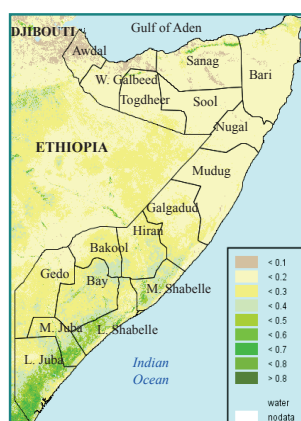


Map 5: 3rd Dekad (21-30)

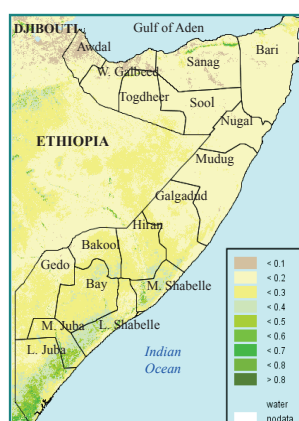


February 2016: E-MODIS Dekadal NDVI Progression

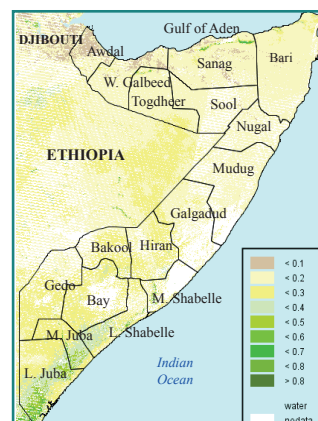
Map 6: 1st Dekad (1-10)



Map 7: 2nd Dekad (11-20)

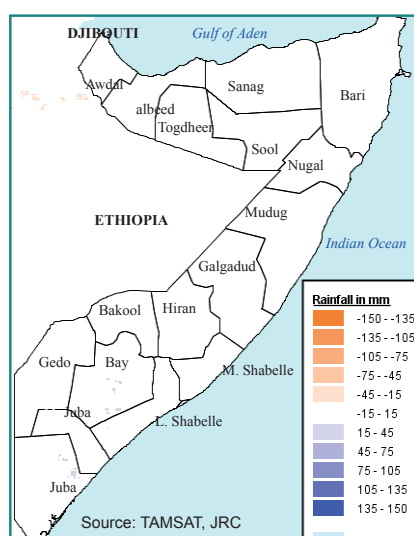


Map 8: 3rd Dekad (21-30)



Monthly rainfall and NDVI performance

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



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

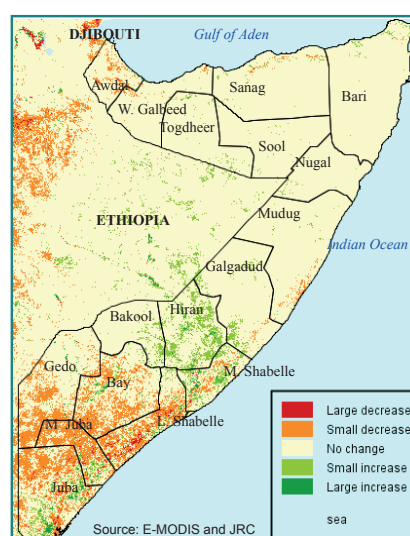


Table 1: Observed rain gauge data compared to long term monthly averages (February 2016)

Northern Regions

Region	Station_Name	dek 1	dek 2	dek 3	Feb-16	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	0.0	0.0	0.0	0.0	0.0
Bari	Bandarbeyla	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	5.0
Nugaal	Burntile	0.0	0.0	0.0	0.0	2.0
Sanaag	Eeerigavo	0.0	0.0	0.0	0.0	48.0
Sanaag	Elafweyn	0.0	0.0	0.0	0.0	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	32.7	32.7	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	Darawayne	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

Southern Regions

Region	Station_Name	dek 1	dek 2	dek 3	Feb-16	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
Bay	Baidoa	0.0	0.0	11.5	11.5	3.0
Bay	Diinsor	0.0	0.0	7.5	7.5	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
Bay	Wanleweyne	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	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 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.

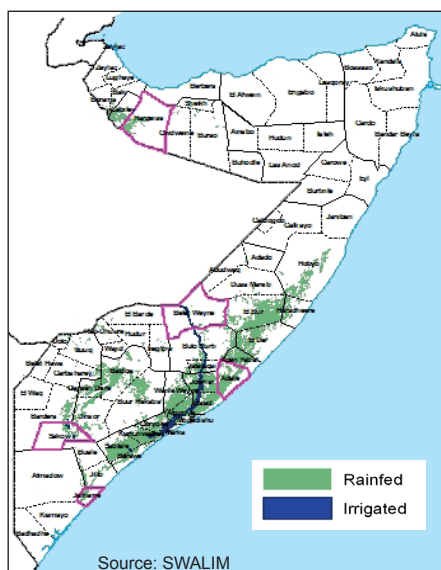
- The seasonal profiles on page 3 and 4 are produced in collaboration with JRC-MARS. For more information visit <http://mars.jrc.europa.eu/mars/About-us/FOODSEC>. For more information on NDVI visit <http://earlywarning.usgs.gov/adds> and <http://fsausomali.org/fileadmin/uploads/1308.pdf>

- 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.

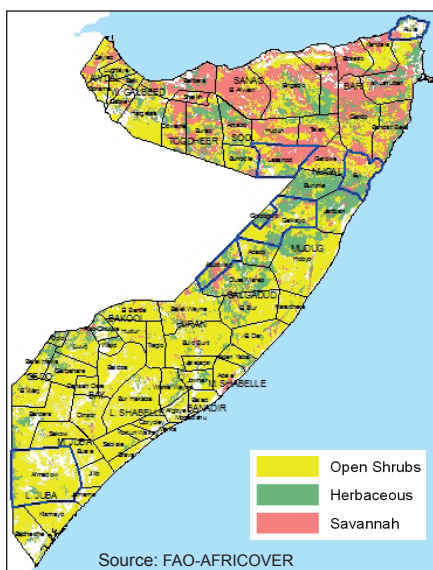
The TAMSAT informatio is available on <http://www.met.reading.ac.uk/tamsat/about/>

Seasonal rainfall and NDVI trends by region

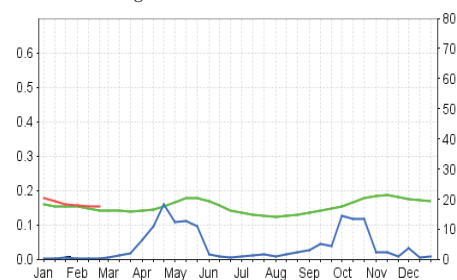
Map 11: Agricultural Areas



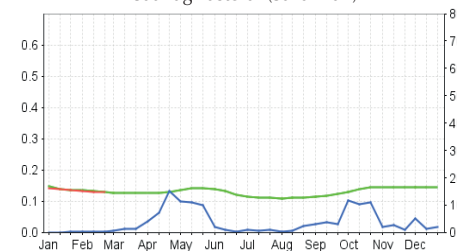
Map 12: Pastoral Areas



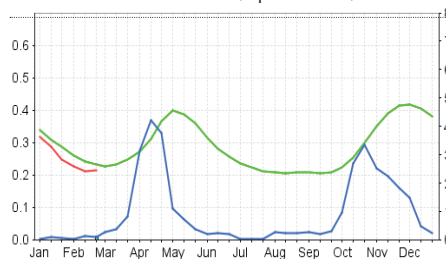
Togdheer Pastoral (Savannah)



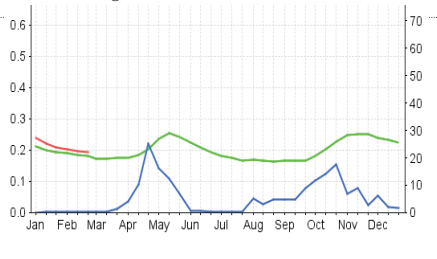
Saanag Pastoral (Savannah)



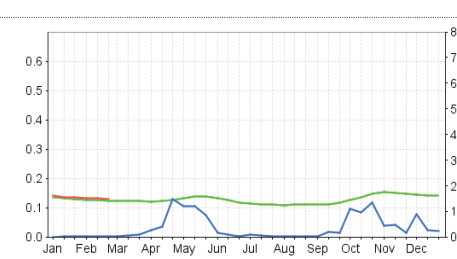
Gedo Pastoral (Open Shrubs)



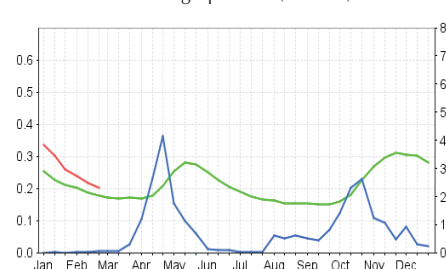
Galgadud Pastoral (Herbaceous)



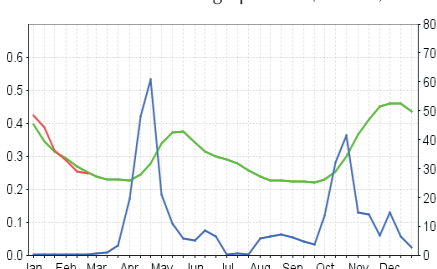
Nugal Pastoral (Savannah)



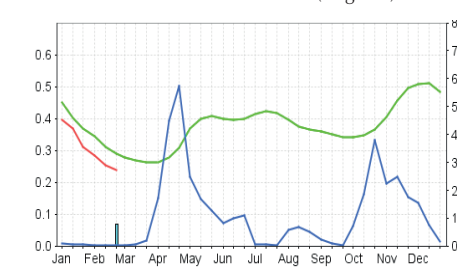
Hiran Agropastoral (Rainfed)



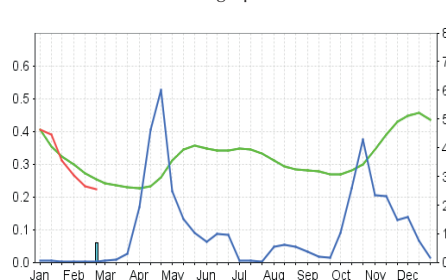
Middle Shabelle Agropastoral (Rainfed)



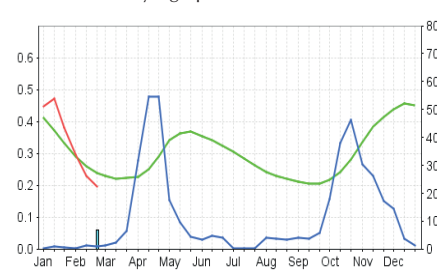
Lower Shabelle Riverine (Irrigated)



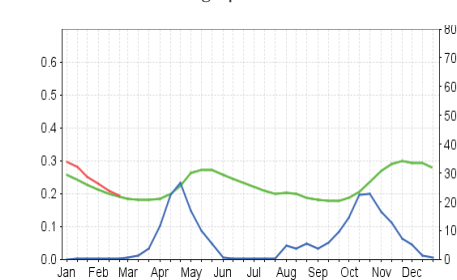
Lower Shabelle Agropastoral (Rainfed)



Bay Agropastoral (Rainfed)



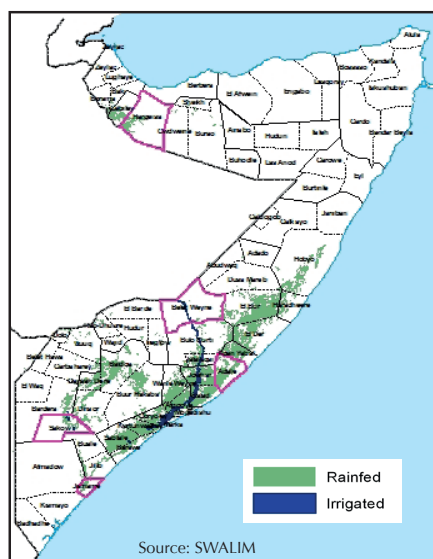
Bakool Agropastoral (Rainfed)



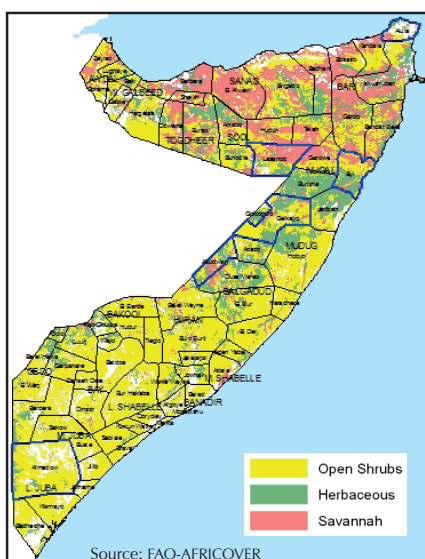
RFE 2016 RFE AVG: 2001-2015 NDVI-C 2016 NDVI-C LTA MEAN (1999-2015)

Seasonal rainfall and NDVI trends for selected districts

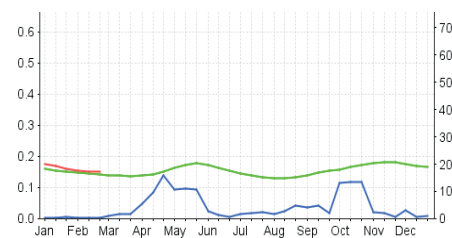
Map 13: Agricultural Areas



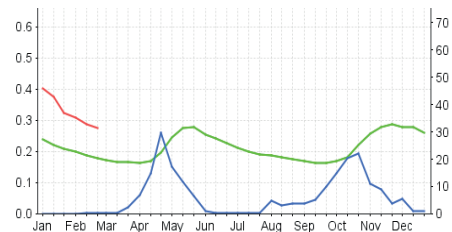
Map 14: Pastoral Areas



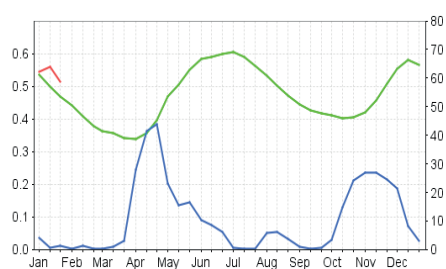
Odweine Pastoral (Herbaceous)



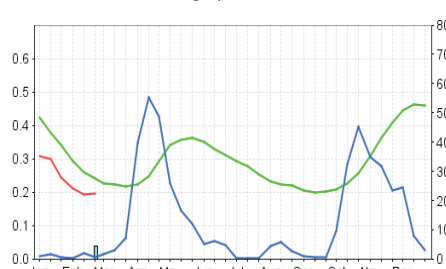
Beletweyn Riverine (Irrigated)



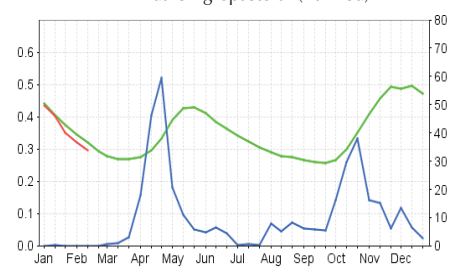
Jamame Riverine (Irrigated)



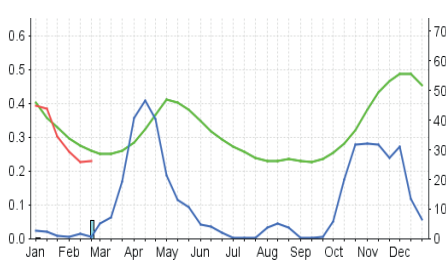
Sakow Agropastoral (Rainfed)



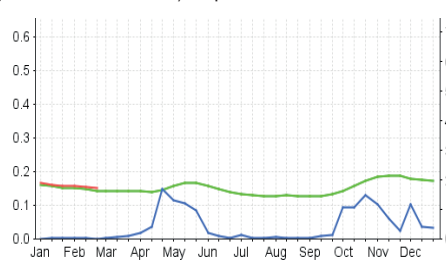
Adale Agropastoral (Rainfed)



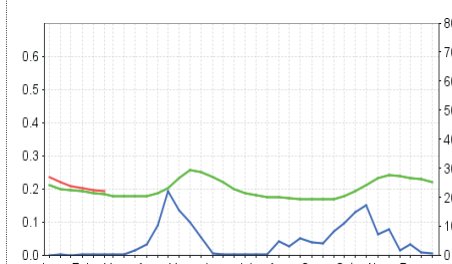
Afmadow Pastoral (Herbaceous)



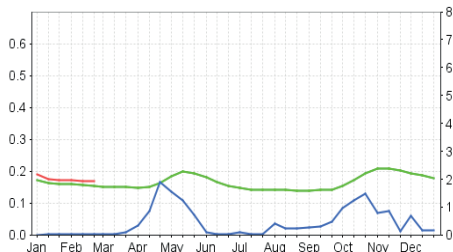
Eyl Open Shrublands



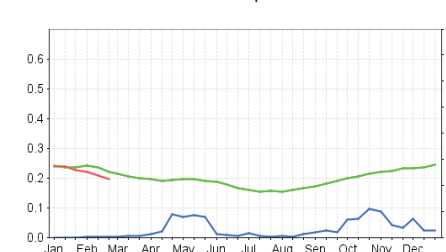
Abudwak Pastoral (Herbaceous)



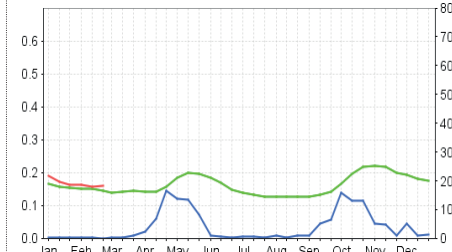
Galkayo Open Shrublands



Alula Pastoral (Open Shrublands)



Lasanod Pastoral (Herbaceous)



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