

## Highlights

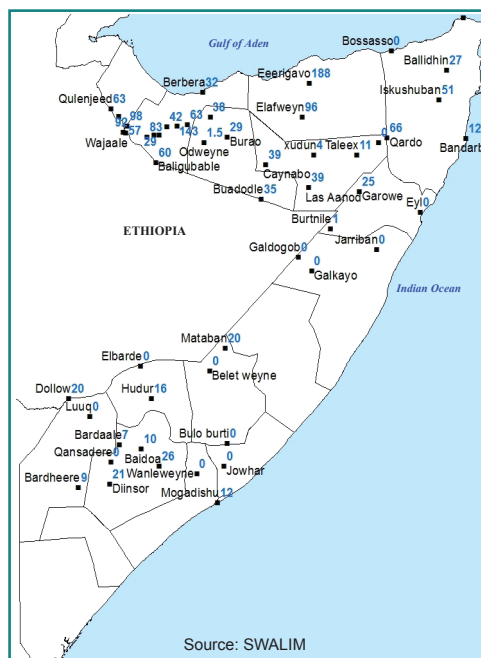
*Karan* rains persisted in the Northwest regions, while *Hagaa* showers were confined in the coastal regions of Shebelle's, Juba's and parts of Bay. Northeastern regions also received moderate to heavy rainfall during the first two dekads of September whereas Central regions remained largely dry. Field reports indicate localized rainfall in Bakool, Gedo and Hirán.

The rain gauge stations that recorded above average rains include: Borama (82mm), Gebiley (92mm), Dhubato (143mm), Erigavo (188mm), Elafweyn (96mm), Qardo (66mm) and Ishkushuban (51mm) [Table 1 and Map 1]. The Shabelle River level has increased considerably in September but remained below flood risk level.

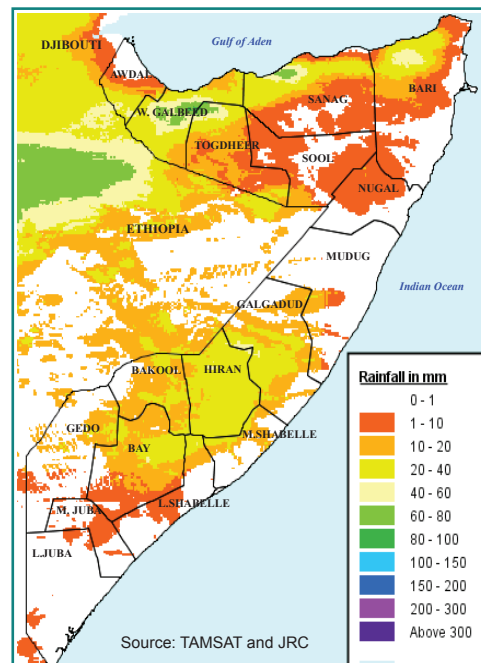
Satellite derived rainfall estimates (RFE) indicate prevalence of *Karan* rains in Northwest and unseasonal rains in the south as well as in Northeast (Map 2-5). The Normalized Difference Vegetation Index (NDVI) for September 2017 suggests deterioration of vegetation conditions in large areas of the country. The NDVI profiles (Page 3 and 4) mostly show negative trends especially in the month of September across the country. Areas with large vegetation deficits include small pockets in pastoral livelihood of Northwest and central (Sool, Sanaag, Mudug and Galgaduud), Maize agropastoral livelihood zone of Lower Shabelle and Middle Shabelle, small to large areas in Bay/Bakool agropastoral and large areas in pastoral livelihoods of Lower Juba. Additionally, field reports in Central indicate distressed browse conditions due to persistent drought conditions.

The *Karan* rains in September have largely benefitted present sorghum and maize crops, improved pasture, browse regeneration and replenished water sources in most of the agropastoral areas in Northwest (W.Galbeed and Awdal regions). Additionally, in the South, rains in September have slightly improved pasture and replenished some traditional water catchments, further improving prospects or early planting of crops in riverine and agropastoral livelihoods. Reported ongoing agricultural activities in the South include land preparation, de-silting of irrigation canals and solidification of river embankments, and flooding of *Desheks* in preparation for Deyr (October-December) season planting. In Central livestock and water conditions are extremely poor leading to drought related livestock deaths in parts of *Hawd* Livelihood zone (Dhusamareb, Abudwak), *Addun* (Adado) and coastal livelihoods of Hobyo district.

Map 1: Sept 2017 Monthly Rain Gauge Data

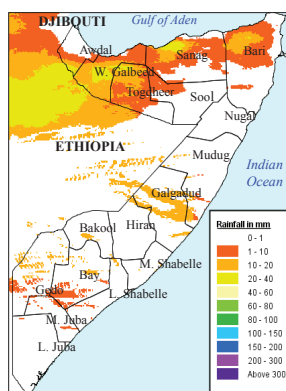


Map 2: Sept 2017 TAMSAT Monthly Rainfall Estimates

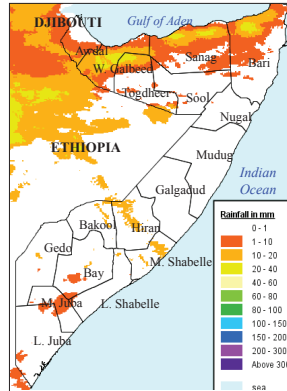


## September 2017: Dekadal RFE Progression

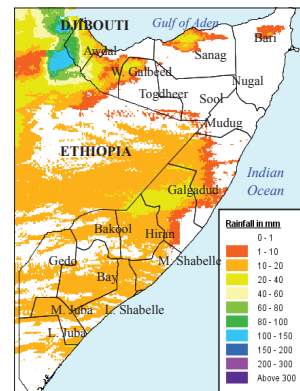
Map 3: 1st Dekad (1-10)



Map 4: 2nd Dekad (11-20)

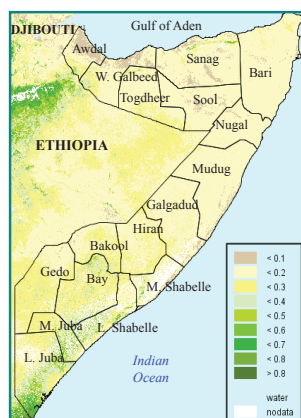


Map 5: 3rd Dekad (21-30)

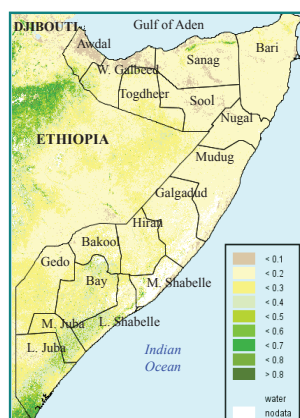


## September 2017: Dekadal NDVI Progression

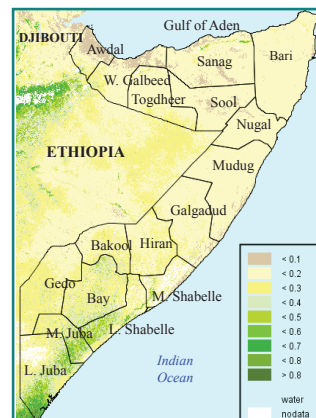
Map 6: 1st Dekad (1-10)



Map 7: 2nd Dekad (11-20)

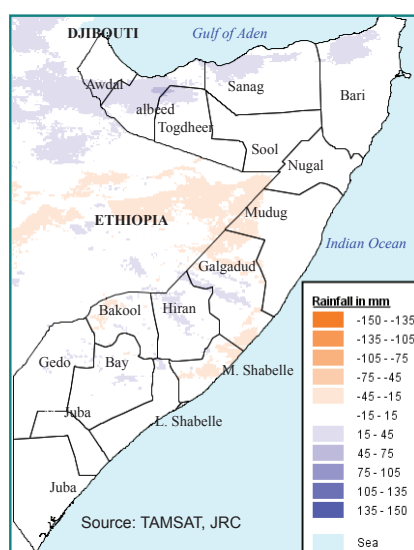


Map 8: 3rd Dekad (21-30)



# Monthly rainfall and NDVI performance

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



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

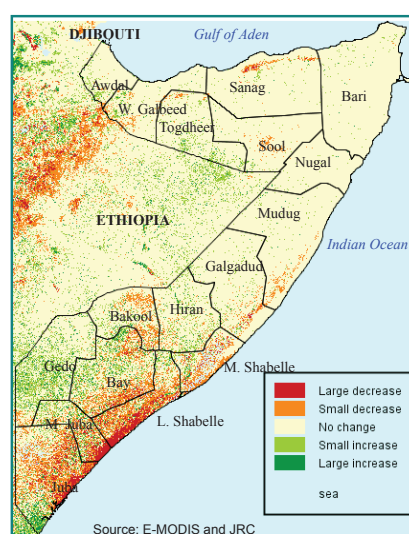


Table 1: Observed rain gauge data compared to long term monthly averages (September 2017)

## Northern Regions

Region	Station Name	dek 1	dek 2	dek 3	Sep-17	LTM
Awdal	Borama	39.5	25.5	18.0	83.0	80.0
Awdal	Qulenjeed	35.0	23.0	5.0	63.0	76.0
Wogooyi Galbeed	Gebilley	43.0	45.0	4.0	92.0	59.0
Wogooyi Galbeed	Malawle	0.0	30.0	15.0	45.0	66.0
Wogooyi Galbeed	Wajaale	40.0	11.0	6.0	57.0	70.0
Wogooyi Galbeed	Hargeisa	20.0	0.0	9.0	29.0	65.0
Wogooyi Galbeed	Darawayne	29.0	13.0	0.0	42.0	59.0
Wogooyi Galbeed	Cadaadley	38.0	0.0	25.0	63.0	49.0
Wogooyi Galbeed	Dilla	85.0	3.0	10.0	98.0	73.0
Wogooyi Galbeed	Aburin	60.0	5.0	18.0	83.0	67.0
Wogooyi Galbeed	Dhubato	60.0	49.0	34.0	143.0	56.0
Wogooyi Galbeed	Baligubable	25.0	35.0	0.0	60.0	65.0
Wogooyi Galbeed	Berbera	0.0	0.0	32.0	32.0	3.0
Togdheer	Burao	15.0	0.0	14.0	29.0	27.0
Togdheer	Sheikh	0.0	19.0	19.0	38.0	74.0
Togdheer	Odweyne	0.0	0.0	1.5	1.5	51.0
Togdheer	Buadodde	0.0	2.0	33.0	35.0	31.0
Sanaag	Eeerigavo	103.0	36.0	49.0	188.0	80.0
Sanaag	Elafweyn	30.0	41.0	25.0	96.0	37.0
Sool	Caynabo	0.0	0.0	39.0	39.0	33.0
Sool	xudun	0.0	4.0	0.0	4.0	23.0
Sool	Taleex	0.0	5.5	5.5	11.0	19.0
Sool	Las Aanod	0.0	0.0	39.0	39.0	15.0
Bari	Bossasso	0.0	0.0	0.0	0.0	1.0
Bari	Qardo	5.0	12.0	49.0	66.0	8.0
Bari	Dangoroyo	0.0	0.0	0.0	0.0	9.0
Bari	Ballidhin	8.5	17.5	1.0	27.0	9.0
Bari	Alula	0.0	0.0	0.0	0.0	0.0
Bari	Bandarbeyla	0.0	0.0	12.0	12.0	9.0
Bari	Iskushuban	21.0	7.0	23.0	51.0	7.0
Nugaal	Garowe	0.0	6.5	18.5	25.0	17.0
Nugaal	Eyl	0.0	0.0	0.0	0.0	2.0
Nugaal	Burtnile	0.5	0.0	0.5	1.0	17.0
Mudug	Galdogob	0.0	0.0	0.0	0.0	10.0
Mudug	Jarriban	0.0	0.0	0.0	0.0	11.0
Mudug	Galkayo	0.0	0.0	0.0	0.0	4.0

## Southern Regions

Region	Station Name	dek 1	dek 2	dek 3	Sep-17	LTM
Bakool	Hudur	0.0	0.0	16.0	16.0	8.0
Bakool	Elbarde	0.0	0.0	0.0	0.0	35.0
Bay	Baidoa	0.0	0.0	10.0	10.0	13.0
Bay	Diinsor	0.0	0.0	21.0	21.0	11.0
Bay	Bardaale	0.0	0.0	7.0	7.0	12.0
Bay	Burhakaba	0.0	0.0	26.0	26.0	18.0
Bay	Wanleweyne	0.0	0.0	0.0	0.0	*
Gedo	Luuq	0.0	0.0	0.0	0.0	3.0
Gedo	Bardheere	0.0	9.0	0.0	9.0	8.0
Hiraan	Belet weyne	0.0	0.0	0.0	0.0	13.0
Hiraan	Bulo burti	0.0	0.0	0.0	0.0	8.0
Hiraan	Mataban	0.0	0.0	20.0	20.0	12.0
Banadir	Mogadishu	0.0	0.0	12.0	12.0	17.0
Middle Shabelle	Jowhar	0.0	0.0	0.0	0.0	6.0
Gedo	Dollow	0.0	0.0	20.0	20.0	*
Bay	Qansadere	0.0	0.0	0.0	0.0	*

\*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](mailto: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.

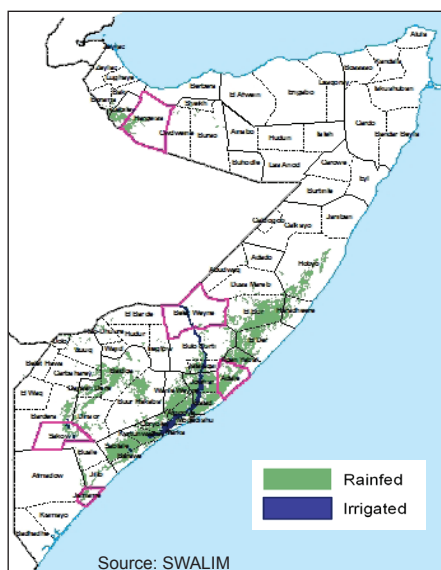
- Current Rainfall Estimates and NDVI data are derived from NOAA/CPC and DEVCOCAST ([www.devcoast.eu](http://www.devcoast.eu)) respectively, while the rain gauge data is collected by FAO-SWALIM and FEWSNET.

- 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>

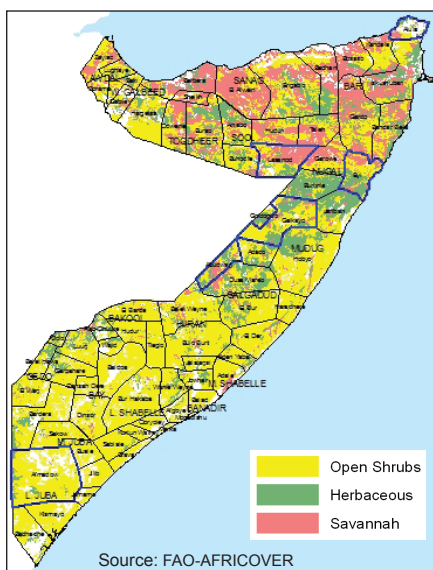
- This report is a compilation of climate data and field reports on Somalia that FSNau and FEWS NET regularly review for analysis. The TAMSAT information is available on <http://www.met.reading.ac.uk/tamsat/about/>

## Seasonal rainfall and NDVI trends by region

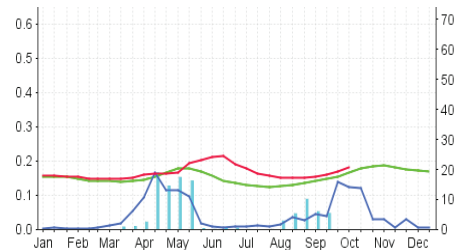
Map 11: Agricultural Areas



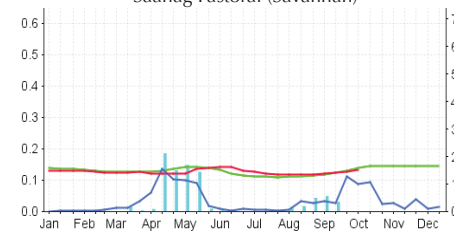
Map 12: Pastoral Areas



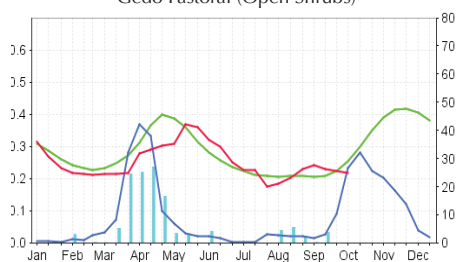
Togdheer Pastoral (Savannah)



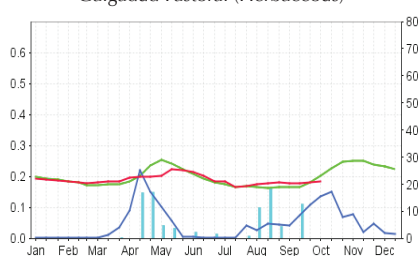
Saanag Pastoral (Savannah)



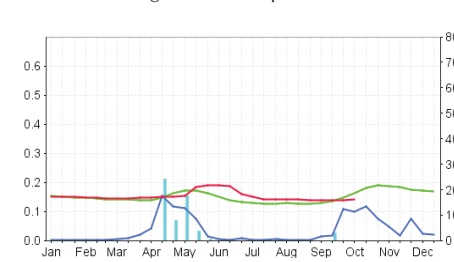
Gedo Pastoral (Open Shrubs)



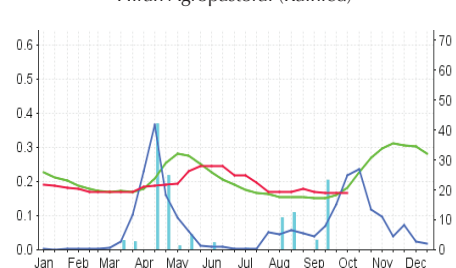
Galgadud Pastoral (Herbaceous)



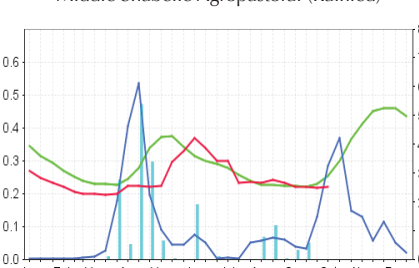
Nugal Pastoral (Open Shrubs)



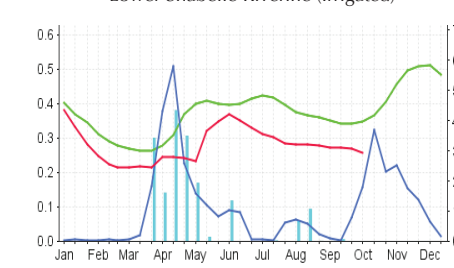
Hiran Agropastoral (Rainfed)



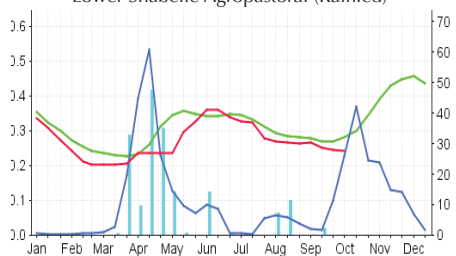
Middle Shabelle Agropastoral (Rainfed)



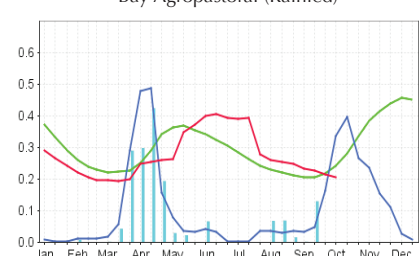
Lower Shabelle Riverine (Irrigated)



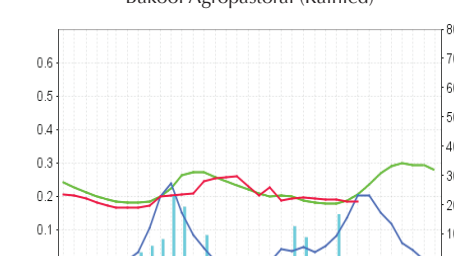
Lower Shabelle Agropastoral (Rainfed)



Bay Agropastoral (Rainfed)



Bakool Agropastoral (Rainfed)

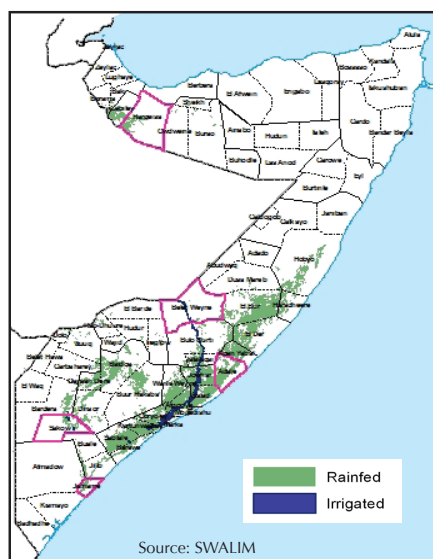


 RFE 2017 
  RFE AVG: 2001-2016 
  NDVI-C 2017 
  NDVI-C LTA MEAN (1999-2016)

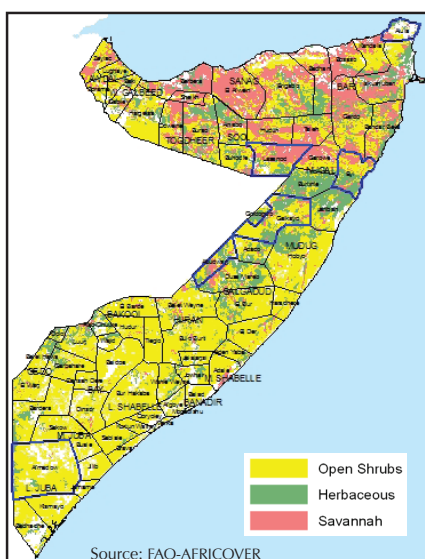


## Seasonal rainfall and NDVI trends for selected districts

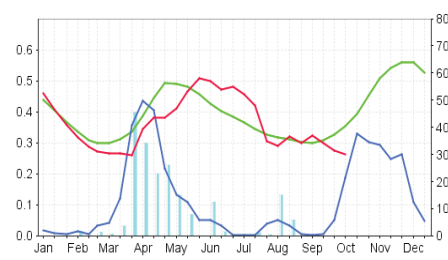
Map 13: Agricultural Areas



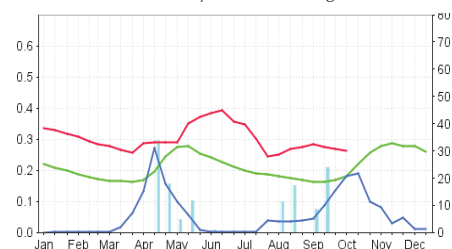
Map 14: Pastoral Areas



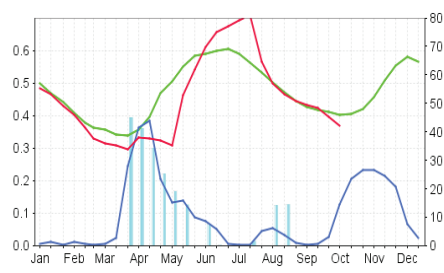
Aimadow Pastoral (Open Shrubs)



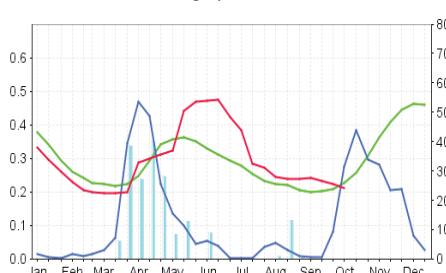
Beletweyn Riverine (Irrigated)



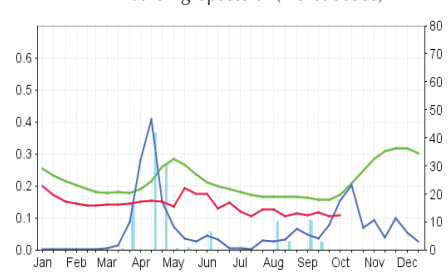
Jamame Riverine (Irrigated)



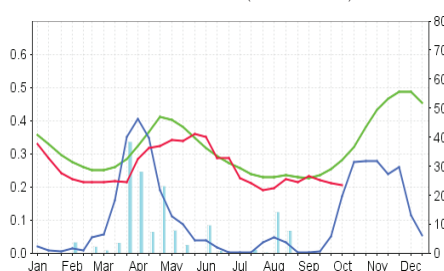
Sakow Agropastoral (Rainfed)



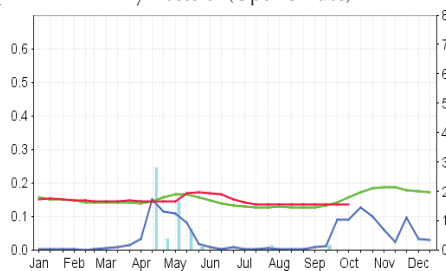
Adale Agropastoral (Herbaceous)



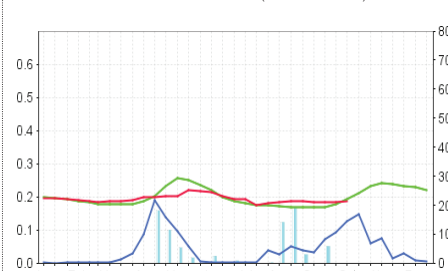
Aimadow Pastoral (Herbaceous)



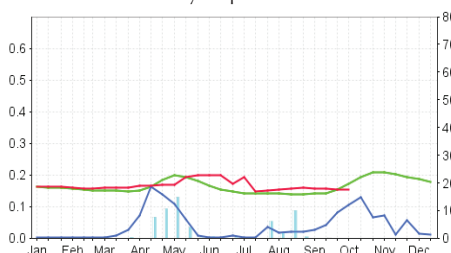
Eyl Pastoral (Open Shrubs)



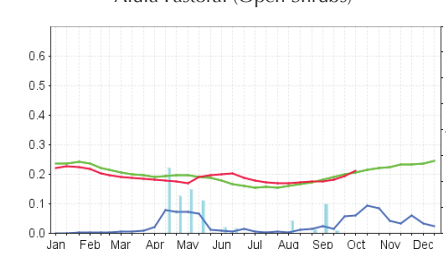
Abudwak Pastoral (Herbaceous)



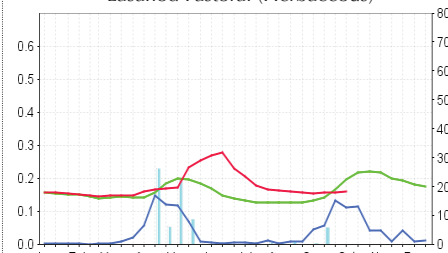
Galkayo Open Shrubs



Alula Pastoral (Open Shrubs)



Lasanod Pastoral (Herbaceous)



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