Climate Update

FSNAU
Food Security and Nutrition Analysis Unit - Somalia

April 2018 Monthly Rainfall and NDVI (Issued May 24, 2018)

Highlights

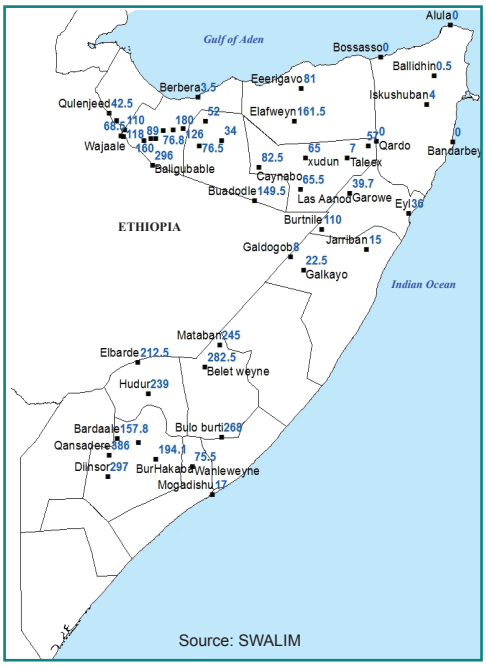
April 2018 was marked by well above average rains across the country, with the exception of some parts of Bari, Sanaag, Sool and Nugal. Most of the rain gauge stations recorded avereage to well above average rains. Some of the stations that received significant rains include: Hargeisa (160mm), Baligubable (296mm) Buhodle (150mm), Elafweyn (161mm), Erigavo (81mm) Lasaanod (65mm), Burtinle (110mm), Hudur (239mm), Bay (230mm), Qansadere (386mm), Beletweyn (282mm), Buloburti (268mm), Mataban (245mm). Qardo, Bandarbeyla, and Iskushuban in Bari and Galdogob in Mudug station recorded less than 10mm well below average.

Heavy rainfall in April in Somalia and Ethiopian highlands has led to rapid upsurge of river levels causing heavy flooding along the Shabelle river in Hiran and Shabelles and along the Juba river in Gedo and the Juba regions. Riverine and flash floods have led to displacements, inundation of crops and damages to infrastructure. Affected areas include 23 districts in 10 regions including; Beletwyne, Jowhar, Badhera and Luuq.

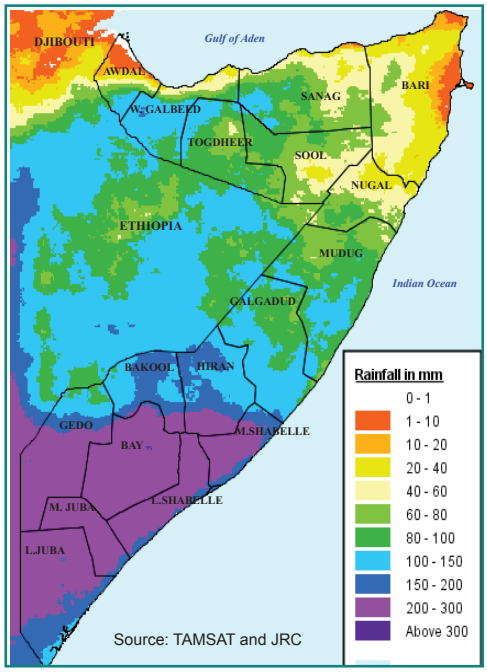
Satellite derived rainfall estimates (RFE) confirm the prevalence of wet conditions across the country during the month of April (Map 2-5,9), with most regions in southern parts of the country receiving more than 100mm cumulative rainfall Vegetation cover measured through the Normalized Difference Vegetation Index (NDVI) for April indicates rapid increase in vegetation biomass due to the favorable rains. Nevertheless localized areas in Bari, Sanaag, Shabele's, Juba's, Bay-Bakool and Gedo still show some deficits. Further improvements of vegetation are expected throughout the country in May.

The *Gu* (April-June) rains have benefitted most pastoral areas by improving pasture and browse regeneration and replenishment of water sources countrywide. The Gu rains have also supported increased sorghum and maize cultivation. Livestock body condition shows improvement from previous jilaal (dry) season. Planting and re-planting consisted the main activities in agricultural areas. However, ongoing floods have inundated crop farms in riverine and low lying areas and this may reduce and or delay crop production in the affected areas.

Map 1: April 2018 Monthly Rain Gauge Data

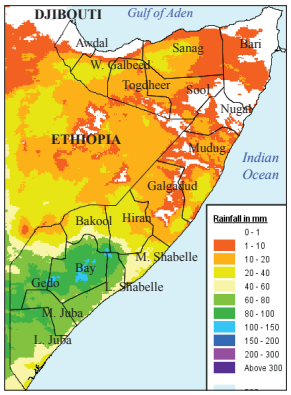


Map 2: April 2018 Monthly Rainfall Estimates (TAMSAT)

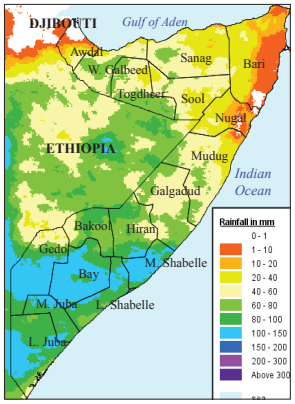


April 2018: Dekadal Rainfall (RFE) Progression

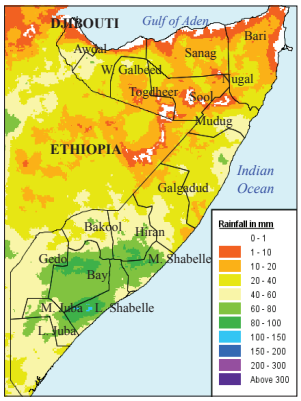
Map 3: 1st Dekad (1-10)



Map 4: 2nd Dekad (11-20)

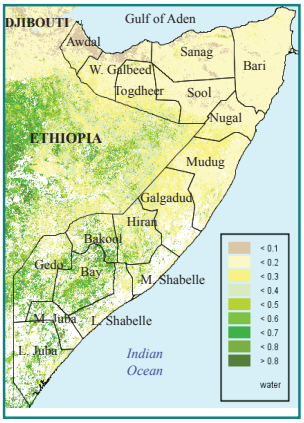


Map 5: 3rd Dekad (21-30)

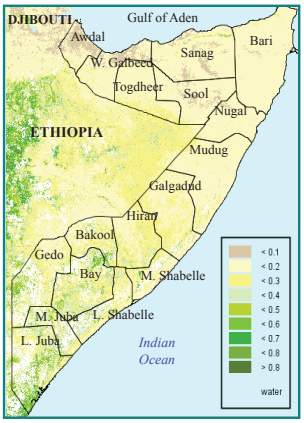


April 2018: Dekadal Vegetation Cover (NDVI) Progression

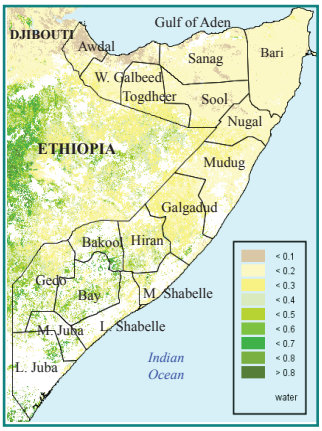
Map 6: 1st Dekad (1-10)



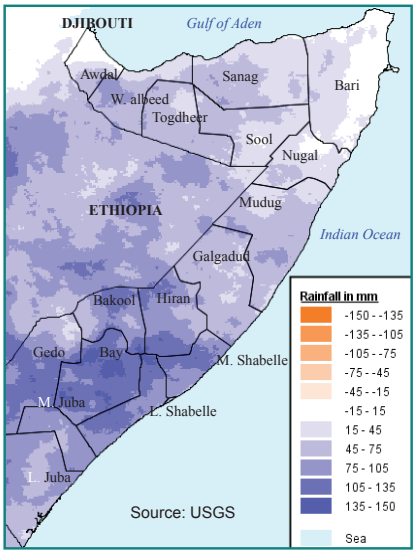
Map 7: 2nd Dekad (11-20)



Map 8: 3rd Dekad (21-30)



Map 9: April 2018 Estimated Rainfall Difference (in mm) From Short Term Mean (1999-2017)



Map 10: April 2018 Vegetation Cover (NDVI) Absolute Difference from Short Term Mean (2001- 2017)

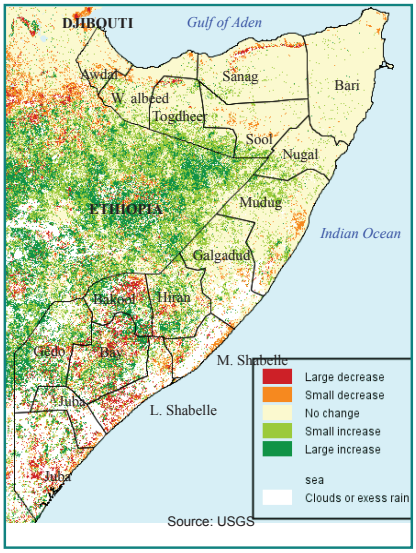


Table 1: Observed rain gauge data compared to long term monthly averages (April 2018)

Northern Regions

Region	Station Name	dek 1	dek 2	dek 3	Apr-18	Apr LTM	Apr as % of LTM
Awdal	Borama	55.0	17.5	0.0	72.5	104.0	70%
Awdal	Qulenjeed	42.5	0.0	0.0	42.5	84.0	51%
Wogooyi Galbeed	Gebilley	20.0	30.5	18.0	68.5	58.0	118%
Wogooyi Galbeed	Malawle	101.0	0.0	0.0	101.0	79.0	128%
Wogooyi Galbeed	Wajaale	27.5	90.5	0.0	118.0	71.0	166%
Wogooyi Galbeed	Hargeisa	91.0	51.0	18.0	160.0	85.0	188%
Wogooyi Galbeed	Daraweyne	50.3	8.5	18.0	76.8	71.0	108%
Wogooyi Galbeed	Cadaadley	68.0	48.0	10.0	126.0	60.0	210%
Wogooyi Galbeed	Dilla	32.0	63.0	15.0	110.0	75.0	147%
Wogooyi Galbeed	Aburin	89.0	0.0	0.0	89.0	77.0	116%
Wogooyi Galbeed	Dhubato	120.0	25.0	35.0	180.0	68.0	265%
Wogooyi Galbeed	Baligubable	156.0	140.0	0.0	296.0	76.0	389%
Wogooyi Galbeed	Berbera	1.5	2.0	0.0	3.5	0.0	
Togdheer	Burao	5.0	29.0	0.0	34.0	47.0	72%
Togdheer	Sheikh	16.0	21.0	15.0	52.0	79.0	66%
Togdheer	Odweyne	6.5	70.0	0.0	76.5	60.0	128%
Togdheer	Buadodle	3.6	104.6	41.3	149.5	50.0	299%
Sanaag	Eeerigavo	6.0	23.0	52.0	81.0	39.0	208%
Sanaag	Elafweyn	47.5	62.0	52.0	161.5	34.0	475%
Sool	Caynabo	25.0	26.5	31.0	82.5	49.0	168%
Sool	xudun	0.0	63.0	2.0	65.0	28.0	232%
Sool	Taleex	0.0	7.0	0.0	7.0	27.0	26%
Sool	Las Aanod	2.0	12.0	51.5	65.5	14.0	468%
Bari	Bossasso	0.0	0.0	0.0	0.0	4.0	0%
Bari	Qardo	0.0	0.0	0.0	0.0	26.0	0%
Bari	Dangoroyo	0.0	26.0	31.0	57.0	23.0	248%
Bari	Ballidhin	0.0	0.5	0.0	0.5	14.0	4%
Bari	Alula	0.0	0.0	0.0	0.0	3.0	0%
Bari	Bandarbeyla	0.0	0.0	0.0	0.0	30.0	0%
Bari	Iskushuban	0.0	0.0	4.0	4.0	22.0	18%
Nugaal	Garowe	6.2	27.5	6.0	39.7	30.0	132%
Nugaal	Eyl	26.0	10.0	0.0	36.0	27.0	133%
Nugaal	Burtnile	25.5	84.5	0.0	110.0	34.0	324%
Mudug	Galdogob	1.0	4.0	3.0	8.0	44.0	18%
Mudug	Jarriban	8.0	0.0	7.0	15.0	31.0	48%
Mudug	Galkayo	13.0	9.5	0.0	22.5	37.0	61%

Southern Regions

Region	Station Name	Region	dek 1	dek 2	dek 3	Apr 18	Apr LTM	Apr as % of LTM
Bakool	Hudur	Bakool	85.0	103.0	51.0	239.0	107.0	223%
Bakool	Elbarde	Bakool	94.5	55.0	63.0	212.5	129.0	165%
Bay	Baidoa	Bay	151.0	61.5	18	230.5	165.0	140%
Bay	Diinsor	Bay	78.0		219.0	297.0	136.0	218%
Bay	Bardaale	Bay	21.3	86.5	50	157.8	142.0	111%
Bay	Qansadere		103	64.0	219.0	386.0		
Bay	BurHakaba	Bay	71.0	92.1	31.0	194.1	202.0	96%
Bay	Wanleweyne	Bay	0.0	28.5	47.0	75.5		
Hiraan	Belet weyne	Hiraan	35.5	79.5	167.5	282.5	72.0	392%
Hiraan	Bulo burti	Hiraan	20.0	122.5	125.5	268.0	70.0	383%
Hiraan	Mataban	Hiraan	80.0	165.0	0.0	245.0	89.0	275%
Banadir	Mogadishu	Banadir	0.0	5.0	12.0	17.0	60.0	28%

*indicates missing data

Monthly rainfall and NDVI perfomance 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.

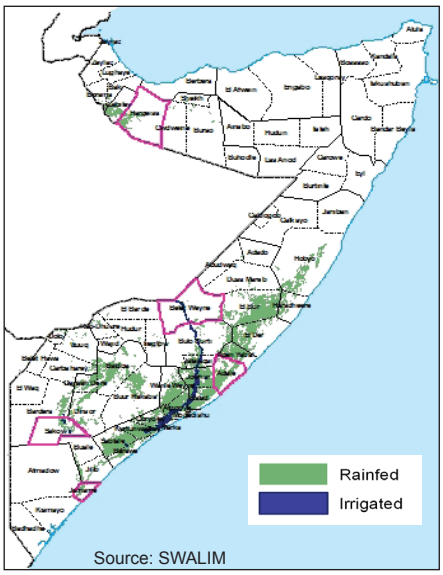
Seasonal Trend Graph

The maps and graphs on pages 3 and 4 are produced in collaboration with the Joint Research Centre of the European Commision. 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.

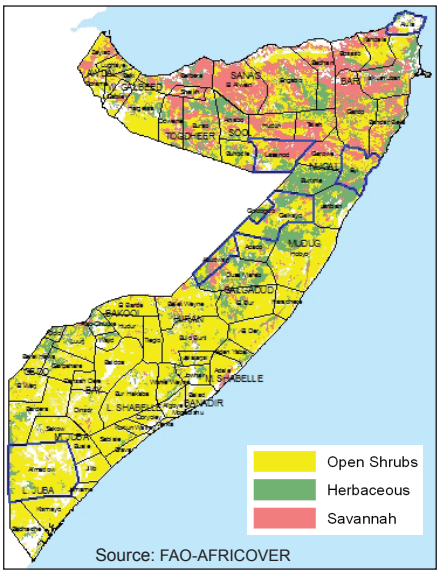
Primary data sources are NOAA/USGS, European Centre for Medium- range Weather Forecast (ECMWF), MARS-JRC, FSNAU and SWALIM. Maps and graphs on this bulletin are produced from four sources.

- Current Rainfall Estimates and NDVI data are derived from NOAA/CPC and DEVCOCAST (www.devcocast.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 informatio is available on http://www.met.reading.ac.uk/tamsat/about/

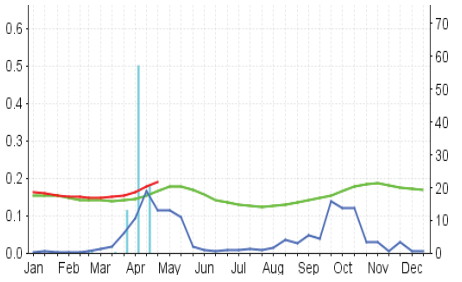
Map 12: Agricultural Areas



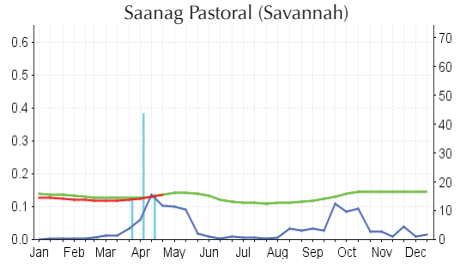
Map 13: Pastoral Areas



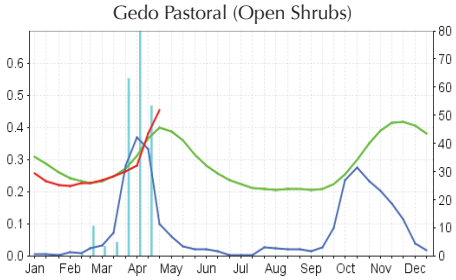
Togdheer Pastoral (Savannah)



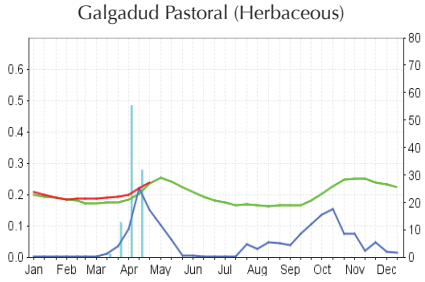
Saanag Pastoral (Savannah)



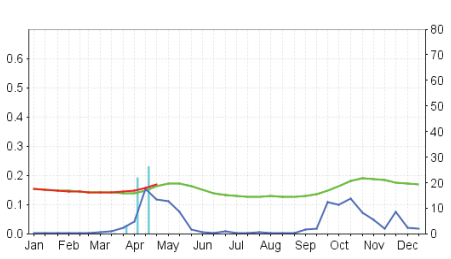
Gedo Pastoral (Open Shrubs)



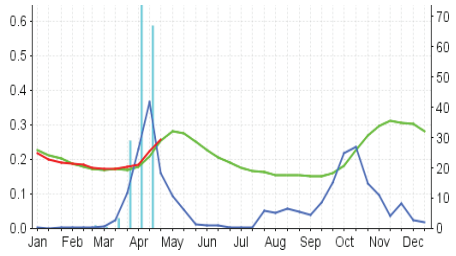
Galgadud Pastoral (Herbaceous)



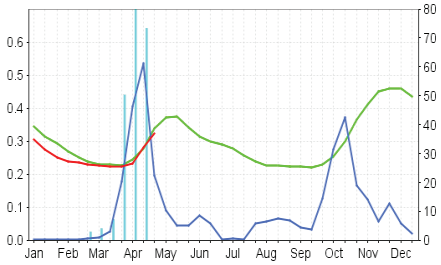
Nugal Pastoral (Open Shrubs)



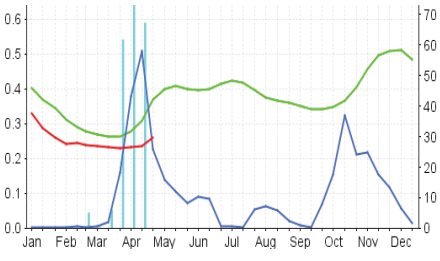
Hiran Agropastoral (Rainfed)



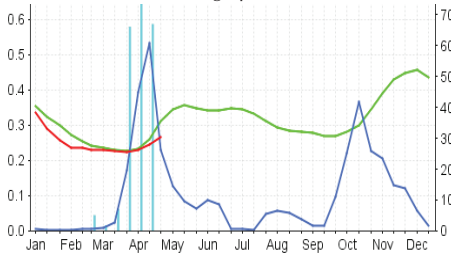
Middle Shabelle Agropastoral (Rainfed)



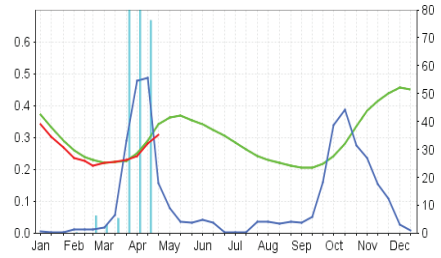
Lower Shabelle Riverine (Irrigated)



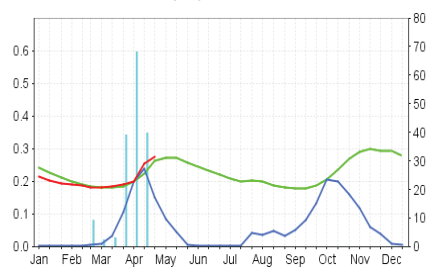
Lower Shabelle Agropastoral (Rainfed)



Bay Agropastoral (Rainfed)

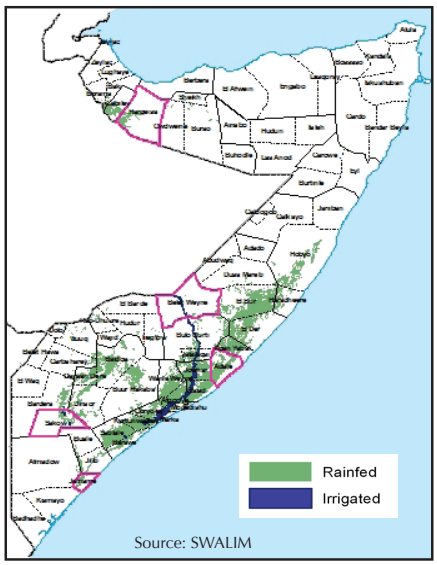


Bakool Agropastoral (Rainfed)

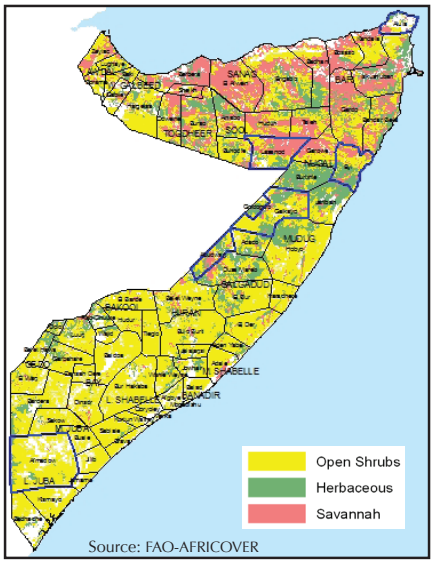


RFE 2018 RFE AVG: 2001-2017 NDVI-C 2018 NDVI-C LTA MEAN (1999-2017)

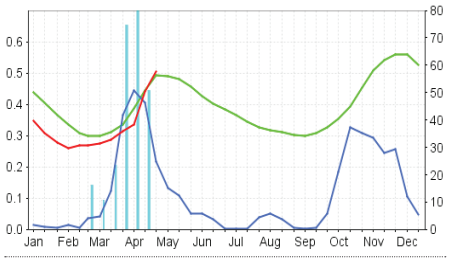
Map 14: Agricultural Areas



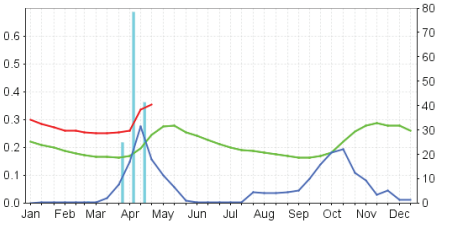
Map 15: Pastoral Areas



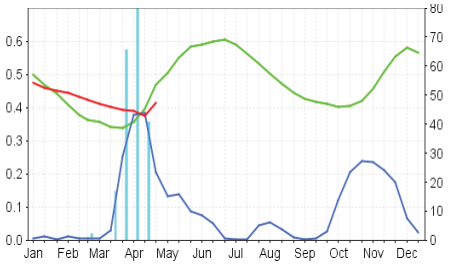
Afmadow Pastoral (Open Shrubs)



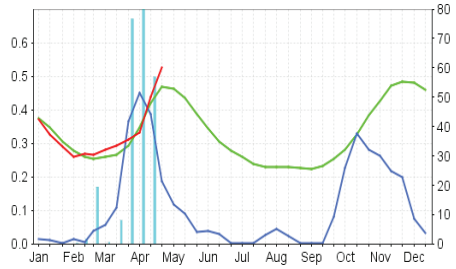
Beletweyn Riverine (Irrigated)



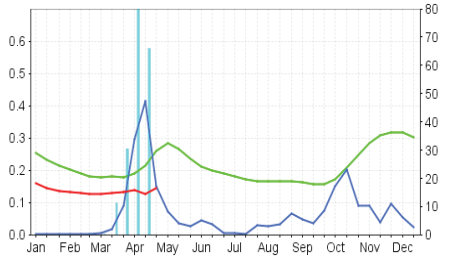
Jamame Riverine (Irrigated)



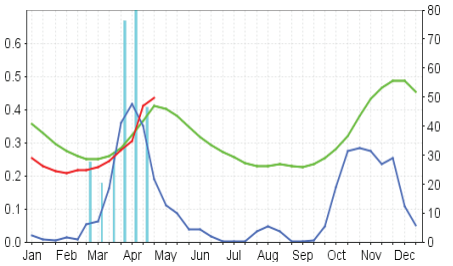
Sakow Agropastoral (Herbaceous)



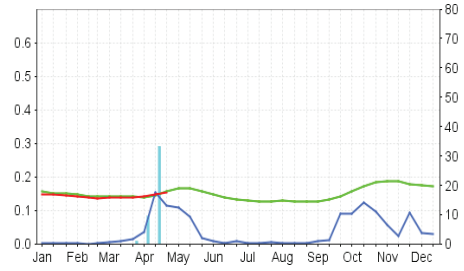
Adale Agropastoral (Herbaceous)



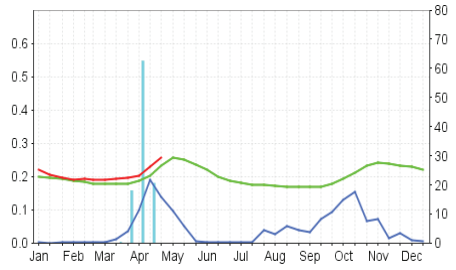
Afmadow Pastoral (Herbaceous)



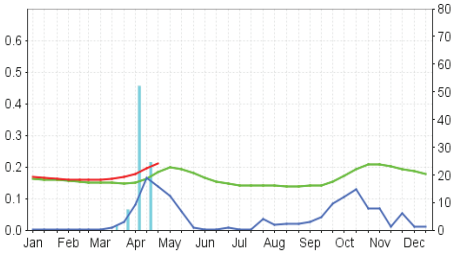
Eyl Pastoral (Open Shrubs)



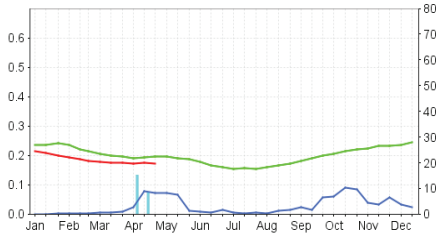
Abudwak Pastoral (Herbaceous)



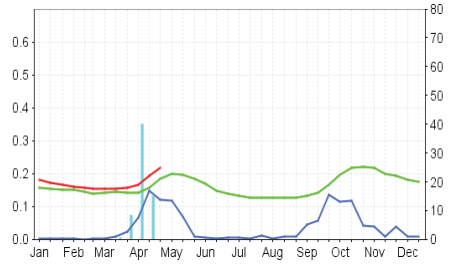
Galkayo Open Shrubs



Alula Pastoral (Open Shrubs)



Lasanod Pastoral (Herbaceous)



RFE 2018 RFE AVG: 2001-2017 NDVI-C 2018 NDVI-C LTA MEAN (1999-2017)