Climate Update

March

FSNAU
Food Security and Nutrition Analysis Unit - Somalia

FEWS NET FAMINE EARLY WARNING SYSTEMS NETWORK

JRC EUROPEAN COMMISSION

SWALIM

Monthly Rainfall and NDVI, Issued April 19th, 2013

Highlights

The *Gu* rains (April – June) commenced earlier (2nd and 3rd dekads of March) than usual in many parts of the country. Most stations in northwestern and northeastern parts of the country recorded above average rainfall compared to the long term average values for the month of March (Map 1 and Table 1). Field reports also confirm an early start of rainfall activities in most livelihoods. Satellite derived (TAMSAT) Rainfall Estimates (RFE) also indicate rainfall occurrence in March with a gradual increase from the third dekad of March (Maps 2-5). Torrential rains during the 3rd dekad of March led to flash floods in Wanlaweyne district of Lower Shabelle leading to loss of property, damage to infrastructure and displacement of populations. According to field reports, flash floods also occurred in Hudun (Sool) and Dharoor valleys (Sanaag) due to heavy rains.

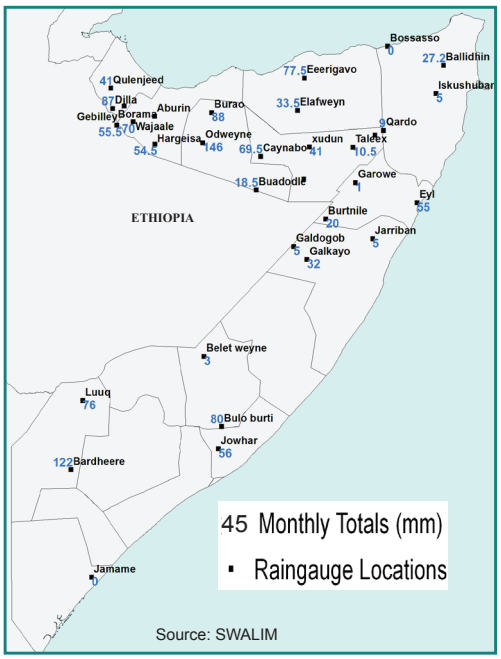
Normalized Difference Vegetation Index (NDVI) for March, 2013 shows average to above average vegetation conditions across the country, with significant improvement when compared to the previous month (Maps 6-8). Small to large increase of vegetation is evident in large areas of Gedo, Bay, Bakool, Galgadud and small areas across most other regions. However, small decrease of vegetation is evident in pockets of West-Golis of Awdal, W.Galbeed and Togdheer, East-Golis of Sanaag and agropastoral areas of Shabelle and Bay. Small to large decrease in vegetation vigour is depicted in large areas of the Juba regions (Map 10).

Early start of *Gu* rains provided much needed relief from the *Jilaal* season (Jan-Mar) dry conditions greatly improving pasture and surface water availability. Nevertheless, poor pasture is still prevalent in Sanag. Improving livestock body conditions are reported in most pastoral livelihoods, apart from Guban livelihood zone in Zeylac district (Awdal region), where livestock condition remains poor due to consecutive seasons of poor rainfall. Off-season cereal harvest was collected in riverine livelihood of Gedo region while land tillage and sowing is ongoing in most agricultural livelihoods of the country.

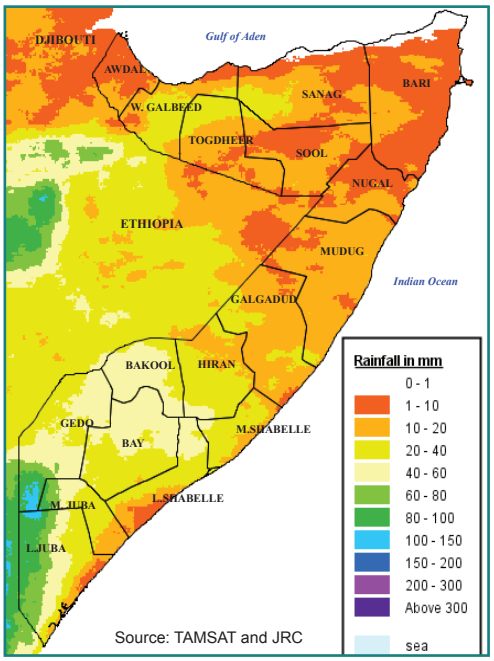
This report is a compilation of climate data and field reports on Somalia that FSNAU and FEWS NET regularly review for analysis. For more information on data sources, please refer to page 2.

The TAMSAT data are produced for JRC but publicly available as explained on http://www.met.reading.ac.uk/tamsat/about/

Map 1: March 2013 Monthly Rain Gauge Data (mm)

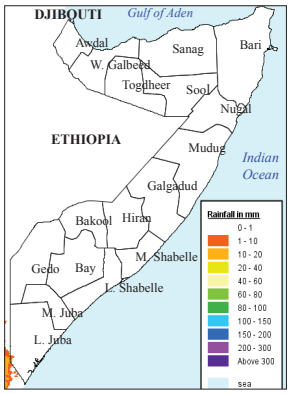


Map 2: March 2013 TAMSAT Monthly Rainfall Estimates

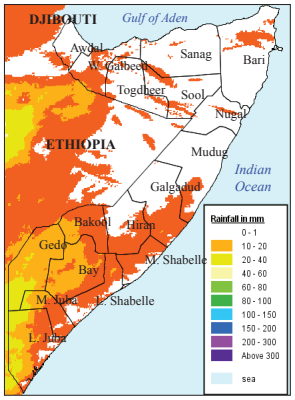


March 2013: TAMSAT Dekadal Rainfall Estimates (RFE)

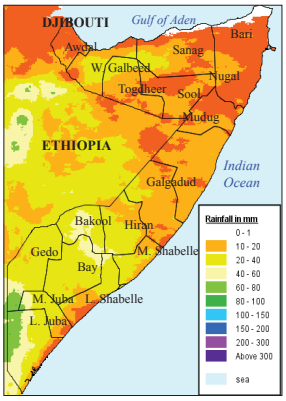
Map 3: 1st Dekad (1-10)



Map 4: 2nd Dekad (11-20)

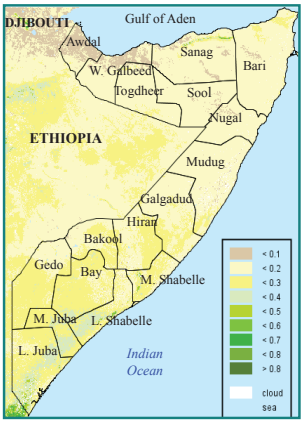


Map 5: 3rd Dekad (21-30)

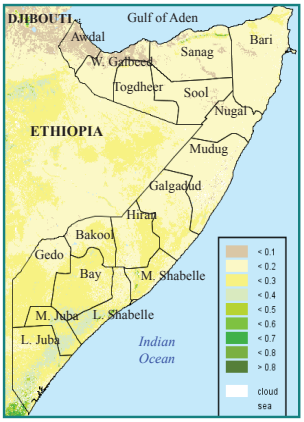


March 2013: SPOT Dekadal Normalized Difference Vegetation Index (NDVI)

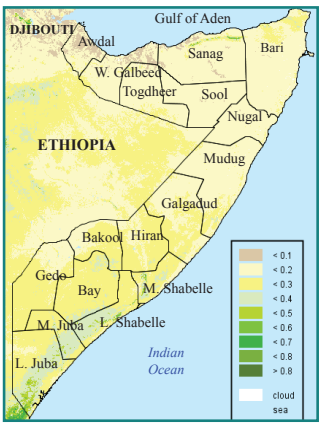
Map 6: 1st Dekad (1-10)



Map 7: 2nd Dekad (11-20)

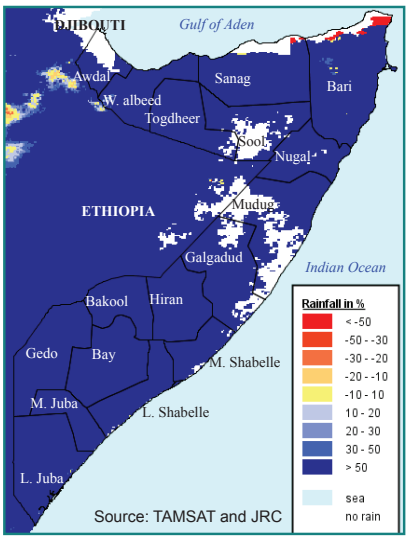


Map 8: 3rd Dekad (21-30)



Monthly rainfall and NDVI performance

Map 9: March 2013 TAMSAT Rainfall as % of long term mean (1983-2011)



Map 10: March 2013 NDVI absolute difference from long term mean (1990- 2011)

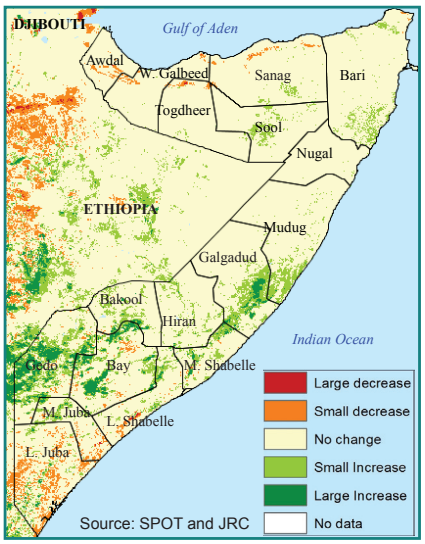


Table 1: Observed rain gauge data compared to long term monthly averages (March 2013)

Northern Regions							
Station_Name	**Region**	**dek 1**	**dek 2**	**dek 3**	**Mar-13**	**LTM**	**Anomaly**
Borama	Awdal	0.0	0.0	55.0	55.0	44.0	125%
Qulenjeed	Awdal	0.0	1.5	39.5	41.0	*	*
Bossasso	Bari	0.0	0.0	0.0	0.0	0.0	
Qardo	Bari	0.0	0.0	9.0	9.0	7.0	129%
Iskushuban	Bari	0.0	0.0	5.0	5.0	3.0	167%
Dangoroyo	Bari	0.0	0.0	0.0	0.0	6.0	0%
Ballidhin	Bari	0.0	0.0	27.2	27.2	5.0	544%
Jarriban	Mudug	0.0	0.0	5.0	5.0	6.0	83%
Galdogob	Mudug	0.0	0.0	5.0	5.0	6.0	83%
Garowe	Nugaal	0.0	0.0	1.0	1.0	*	*
Eyl	Nugaal	0.0	0.0	55.0	55.0	5.0	1100%
Burtnile	Nugaal	0.0	0.0	20.0	20.0	7.0	286%
Eeerigavo	Sanaag	0.0	0.0	77.5	77.5	22.0	352%
Elafweyn	Sanaag	0.0	0.0	33.5	33.5	*	*
Caynabo	Sool	0.0	0.0	69.5	69.5	*	*
Las Aanod	Sool	0.0	0.0	92.5	92.5	4.0	2313%
xudun	Sool	0.0	0.0	41.0	41.0	8.0	513%
Taleex	Sool	0.0	0.0	10.5	10.5	7.0	150%
Burao	Togdheer	0.0	0.0	88.0	88.0	5.0	1760%
Odweyne	Togdheer	0.0	0.0	146.0	146.0	21.0	695%
Wajaale	Togdheer	0.0	23.0	47.0	70.0	36.0	194%
Buadodle	Togdheer	0.0	0.0	18.5	18.5	12.0	154%
Hargeisa	W. Galbeed	0.0	0.0	54.5	54.5	25.0	218%
Dilla	W. Galbeed	0.0	44.0	43.0	87.0	*	*
Gebilley	W. Galbeed	0.0	0.0	55.5	55.5	28.0	198%
Aburin	W. Galbeed	0.0	0.0	49.0	49.0	*	*
Berbera	W. Galbeed	0.0	0.0	1.0	1.0	0.0	*
Malawle	W. Galbeed	0.0	0.0	53.5	53.5	28.0	191%
Daraweyne	W. Galbeed	0.0	0.0	27.5	27.5	25.0	110%
Cadaadley	W. Galbeed	0.0	0.0	38.5	38.5	22.0	175%
Dhubato	W. Galbeed	0.0	0.0	118.0	118.0	25.0	472%
Baligubable	W. Galbeed	0.0	0.0	64.0	64.0	30.0	213%

Southern Regions						
Station Name	**dek 1**	**dek 2**	**dek 3**	**Mar-13**	**LTM**	**Anomaly**
Bardheere	0.0	19.0	103.0	122.0	**27.0**	452%
Belet weyne	0.0	0.0	3.0	3.0	**9.0**	*
Bulo burti	0.0	38.0	42.0	80.0	**11.0**	*
Galkayo	0.0	0.0	32.0	32.0	**4.0**	800%
Jamame	0.0	0.0	0.0	0.0	**5.0**	0%
Jowhar	0.0	8.0	48.0	56.0	**4.0**	1400%
Luuq	0.0	0.0	76.0	76.0	**18.0**	422%

*indicates missing data

For information on FOODSEC Action of JRC, please refer to http://mars.jrc.ec.europa.eu/mars/About-us/FOODSEC

Monthly rainfall and NDVI perfomance maps

The Mapped NDVI and RFE above represent the differences from Long Term Mean. SPOT-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 graphs

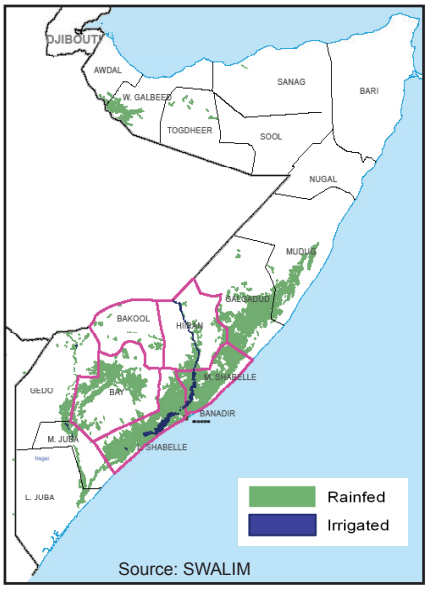
The maps and graphs on the following pages (3 & 4) are produced in collaboration with the FOODSEC Action of the Joint Research Centre of the European Commision. The graphs present seasonal trends of crop specific NDVI (Normalised Difference Vegetation Index) as lines and rainfall values (RFE) as bars 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.

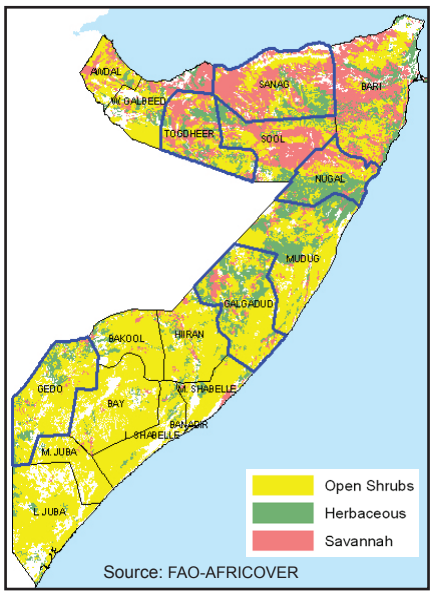
- Current Rainfall Estimates and NDVI data are derived from NOAA/CPC and DEVCOCAST (www.devcocast.eu) respectively, while the rain gauge data is collected by FAO-SWALIM and FEWSNET.
- The seasonal profiles on page 3 and 4 are produced in collaboration with JRC-MARS. For more information visit http://mars.jrc.europa.eu/mars/About-us/FOODSEC For more information on NDVI, visit http://earlywarning.usgs.gov/adds and http://fsausomali.org/fileadmin/uploads/1308.pdf

Seasonal rainfall and NDVI trends by region

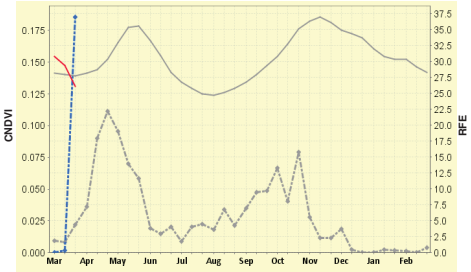
Map 11: Agricultural Areas



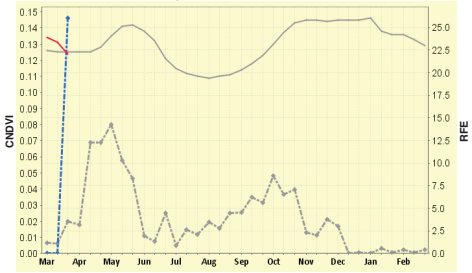
Map 12: Pastoral Areas



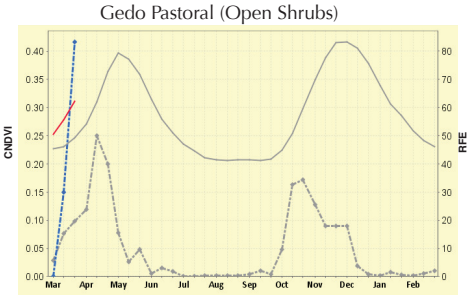
Togdheer Pastoral (Savannah)



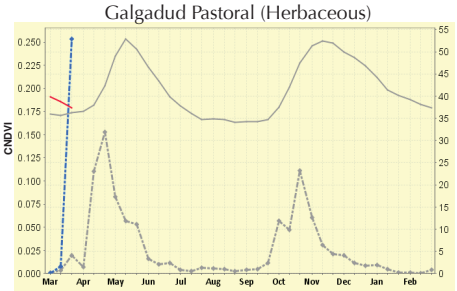
Saanag Pastoral (Savannah)



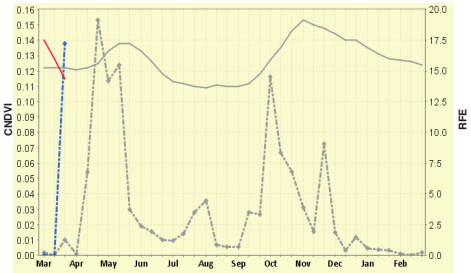
Gedo Pastoral (Open Shrubs)



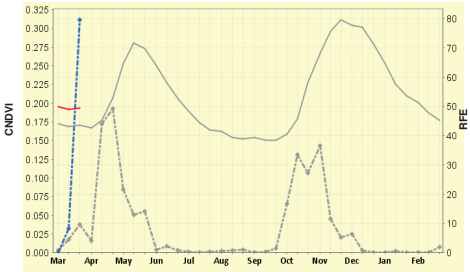
Galgadud Pastoral (Herbaceous)



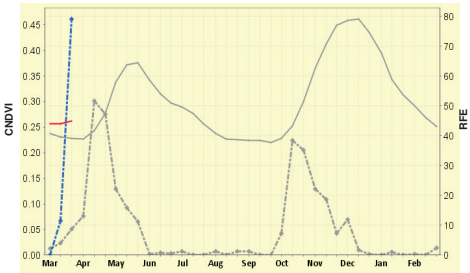
Nugal Pastoral (Savannah)



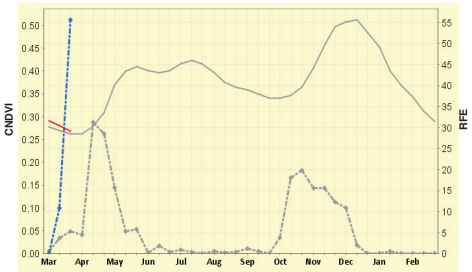
Hiran Agropastoral (Rainfed)



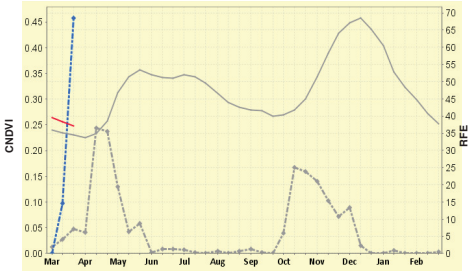
Middle Shabelle Agropastoral (Rainfed)



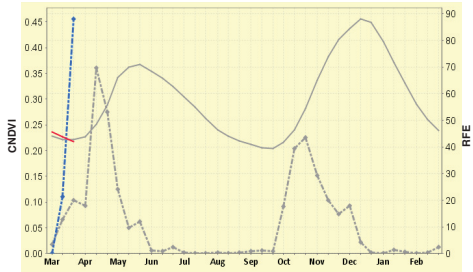
Lower Shabelle Riverine (Irrigated)



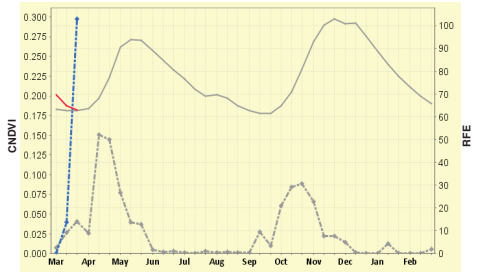
Lower Shabelle Agropastoral (Rainfed)



Bay Agropastoral (Rainfed)



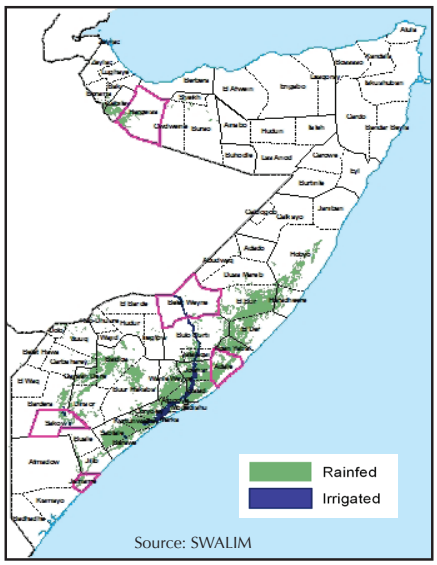
Bakool Agropastoral (Rainfed)



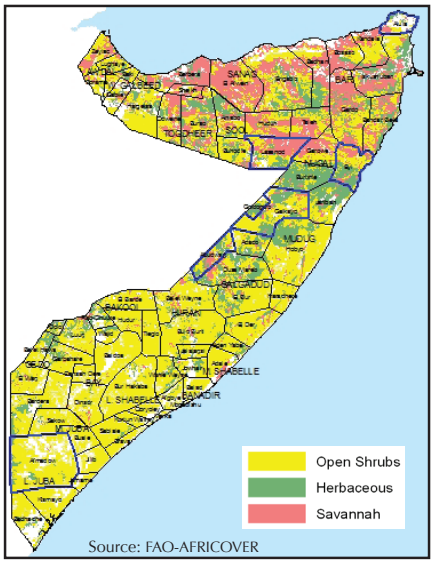
RFE 2012/13 **RFE AVG: 1999-2012** **NDVI-C 2013** **NDVI-C LTA MEAN**

Seasonal rainfall and NDVI trends for selected districts

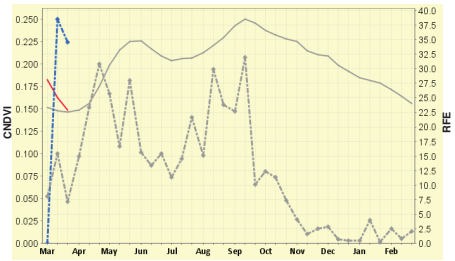
Map 13: Agricultural Areas



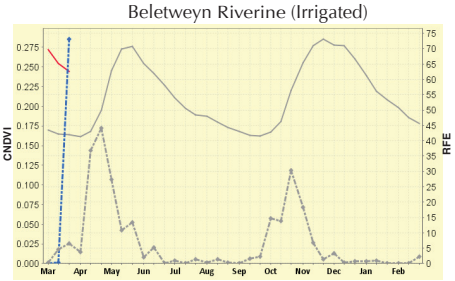
Map 14: Pastoral Areas



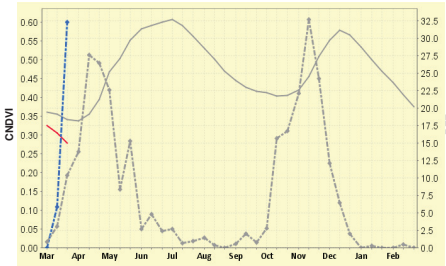
Hargeisa Agropastoral (Rainfed)



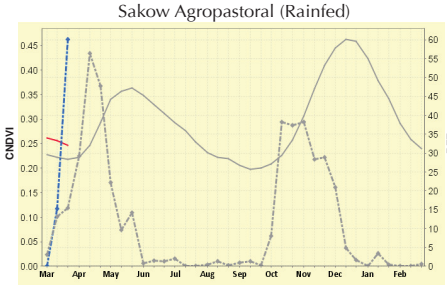
Beletweyn Riverine (Irrigated)



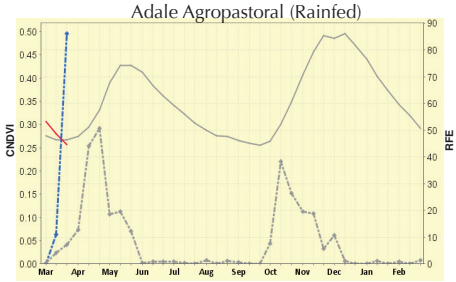
Jamame Riverine (Irrigated)



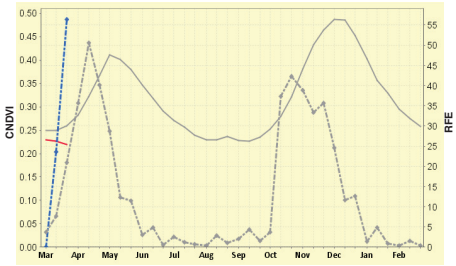
Sakow Agropastoral (Rainfed)



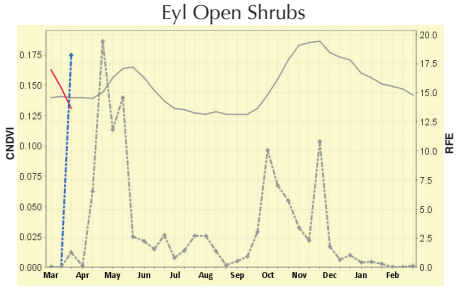
Adale Agropastoral (Rainfed)



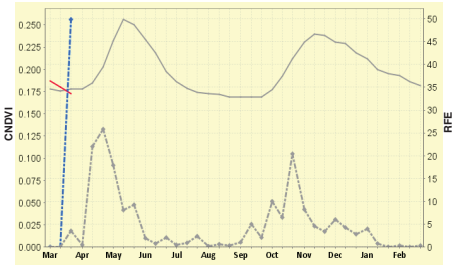
Afmadow Pastoral (Herbaceous)



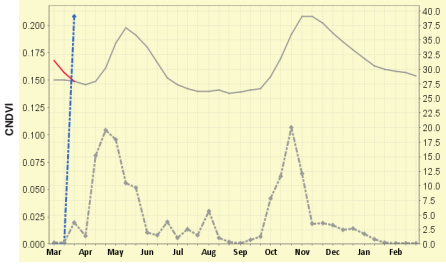
Eyl Open Shrubs



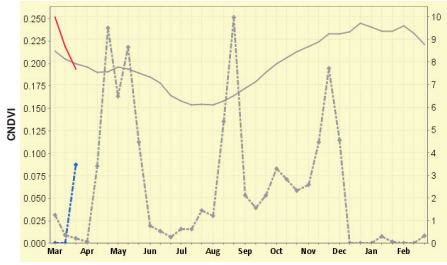
Abudwak Pastoral (Herbaceous)



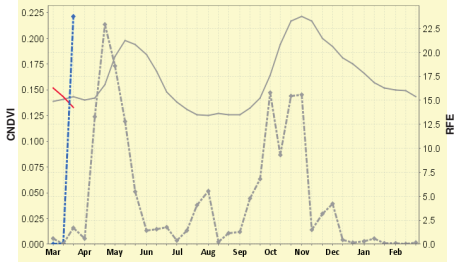
Galkayo Open Shrubs



Alula Pastoral (Open Shrubs)



Lasanod Pastoral (Herbaceous)



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Funding Agencies