

Climate DataUpdate

September



Food Security and Nutrition Analysis Unit - Somalia



Monthly Rainfall and NDVI, Issued October 18th, 2012

Highlights

Deyr rains began early (September) in most parts of Somalia. Some areas like Jowhar and Beletweyn experienced floods. In Beletweyn, two-days of precipitation (188mm) led to heavy floods that inundated significant parts of the town and its environs causing distraction of houses, irrigation infrastructure and crop loss.

In South-Central, the highest levels of rainfall according to the data from raingauge stations include: Galkayo (26mm) in Mudug region; Beletweyn (206mm) and Jowhar (34mm). Light showers of below 30mm were recorded in Baidoa, Dinsor, Buloburti, and Jamame stations. In the North, the highest amount of rainfall was recorded in Qulenjeed (33mm) in Awdal; Borama (131mm) in W. Galbeed; Togwajaale (120mm) in Togdheer; Xudun (16mm) in Sool; Elafweyn (71mm) in Sanaag; Bilidin (107mm) in Bari and Burtinle (27mm) in Nugal (Map1 and Table 1).

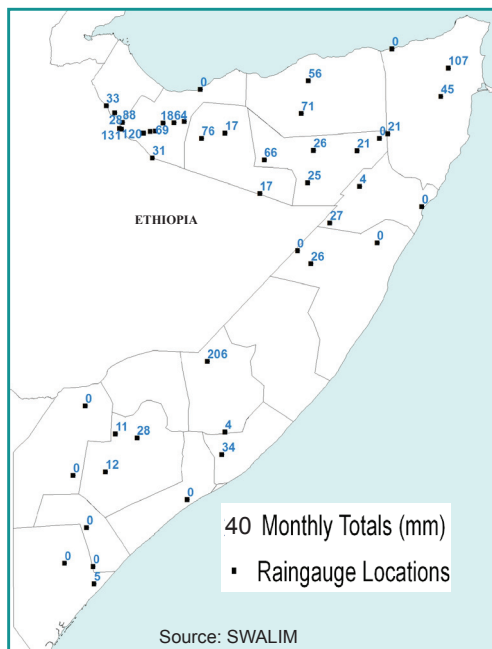
Satellite derived rainfall estimates (RFE) shows a build-up of rainfall activity from Northwest towards Northeast and South confirming the gradual cessation of *Karan* rains and the start of *Deyr* rains (Map 2-5). According to the RFE (Map 9), significantly above average rainfall was received in northern parts of Bakool and Hiran regions, including the surrounding areas in Ethiopia; considerable parts of Bari, Nugal, Mudug and Galgaduud regions.

Vegetation conditions are normal in most of northern and central Somalia, as indicated by Normalized Difference Vegetation Index (NDVI) for September 2012 (Maps 6-8,10), which is close to the long-term average (LTA). Greener than normal (small increase) vegetation is visible in small pockets of most regions in the country. The exceptions are the regions of Central and Awdal in Northwest where vegetation is generally close to average. However, deterioration of pasture is still evident in some areas in the South with the worst vegetation being depicted in most of Lower Shabelle and Lower Juba regions. Small decrease in vegetation remains evident in small to large areas in Bay, Shabelles, Jubas and the Golis of Sanaag and Awdal. Large decrease in vegetation vigo is evident in L & M Agropastoral irrigated livelihood zone in Lower Shabelle.

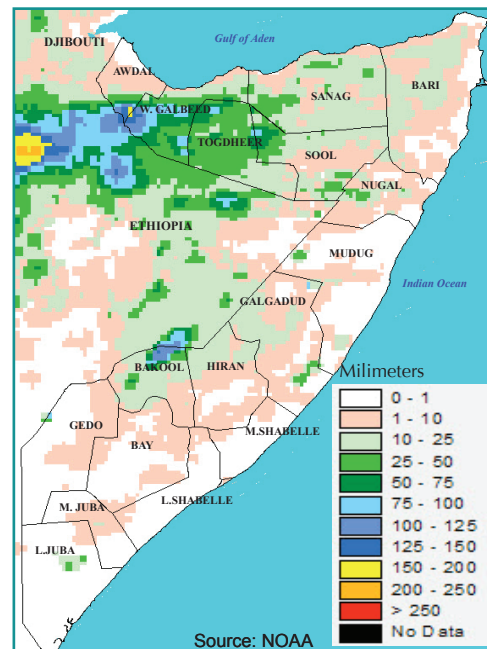
Based on the recent FSNAU assessment in October 2012, the actual off-season maize production in the South (Jubas, Shabelle, Gedo) is estimated at 2,500Mt, which is 97% of the projections made during Gu '12 assessment (2,591Mt). Wet and dry *Deyr* planting took place in some areas of Juba. Field reports indicate that riverine and agropastoral famers in Beletweyn increased areas under crop production. Abnormal livestock migration has been reported in Alula, while opportunistic normal migration is widespread across the country to the areas that received good rainfall. Harsh climatic condition in Guban livelihood zone has led to poor livestock condition and subsequent death of small ruminants. Water availability started to improve in September; further improvements are expected with the progression of the *Deyr* season.

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

Map 1: September 2012 Monthly Rain Gauge Data (mm)

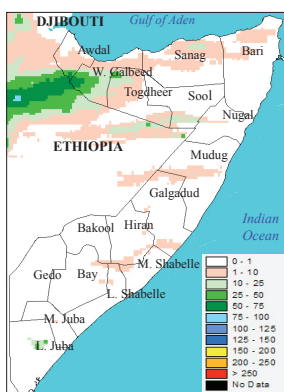


Map 2: September 2012 Monthly Rainfall Estimates

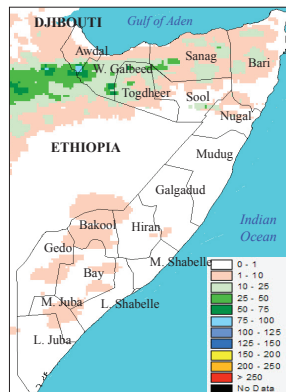


September 2012: Dekadal Rainfall Estimates (RFE)

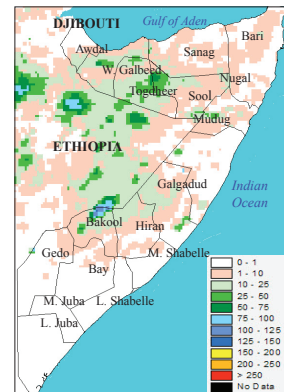
Map 3: 1st Dekad (1-10)



Map 4: 2nd Dekad (11-20)

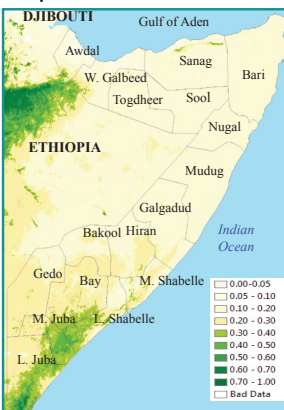


Map 5: 3rd Dekad (21-30)

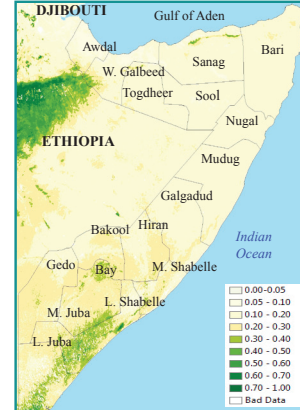


September 2012: Dekadal Normalized Difference Vegetation Index (NDVI)

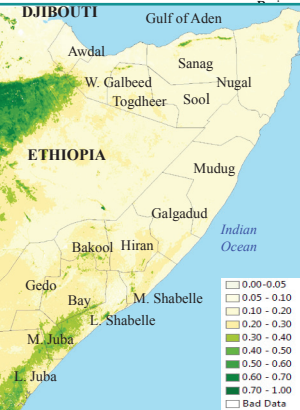
Map 6: 1st Dekad (1-10)



Map 7: 2nd Dekad (11-20)

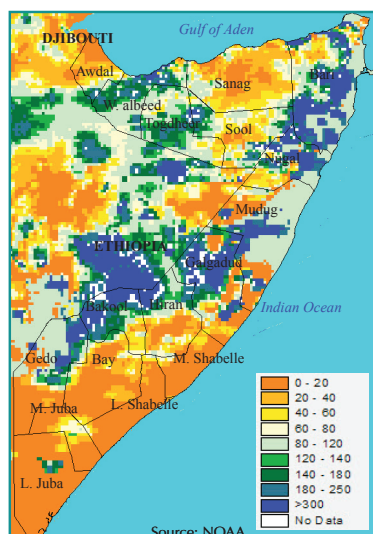


Map 8: 3rd Dekad (21-30)



Monthly rainfall and NDVI performance

Map 9: September 2012 Rainfall as % of long term mean



Map 10: September 2012 NDVI absolute difference from long term mean

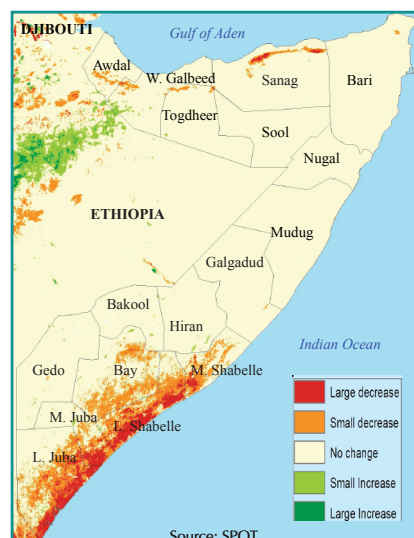


Table 1: September 2012: Observed rain gauge data compared to long term monthly averages

Northern Somalia stations

Station_Name	Region	dek 1	dek 2	dek 3	Aug-12	LTM
Borama	Awdal	23.5	4.0	0.0	28	107.0
Qulenjeed	Awdal	21.0	7.0	5.0	33	*
Bossasso	Bari	0.0	0.0	0.0	0	0.0
Qardo	Bari	0.0	7.0	14.0	21	4.0
Iskushuban	Bari	0.0	0.0	45.0	45	7.0
Dangoroyo	Bari	0.0	0.0	0.0	0	9.0
Ballidhin	Bari	29.9	30.0	47.0	107	9.0
Jarriban	Mudug	0.0	0.0	0.0	0	11.0
Galdogob	Mudug	0.0	0.0	0.0	0	10.0
Garowe	Nugaal	0.0	0.0	3.5	4	17.0
Eyl	Nugaal	0.0	0.0	0.0	0	0.0
Burtnile	Nugaal	0.0	0.0	27.0	27	17.0
Eerigavo	Sanaag	19.3	28.5	8.0	56	31.0
Elafweyn	Sanaag	0.0	32.5	38.5	71	*
Caynabo	Sool	0.0	41.0	25.0	66	*
Las Aanod	Sool	0.0	25.0	0.0	25	0.0
xudun	Sool	0.0	10.0	16.0	26	23.0
Taleex	Sool	0.0	15.5	5.0	21	19.0
Burao	Togdheer	0.0	16.5		17	8.0
Odweyne	Togdheer	42.0	34.0	0.0	76	51.0
Wajaale	Togdheer	55.0	55.5	9.5	120	70.0
Buadodle	Togdheer	0.0	1.2	15.8	17	31.0
Hargeisa	Wogooyi Galbeed	19.5	38.0	11.0	69	55.0
Dilla	Wogooyi Galbeed	25.0	49.0	14.0	88	*
Gebilley	Wogooyi Galbeed	39.0	84.0	8.0	131	82.0
Aburin	Wogooyi Galbeed	72.7	42.7	0.0	115	*
Berbera	Wogooyi Galbeed	0.0	0.0	0.0	0	3.0
Malawle	Wogooyi Galbeed	63.0	43.0	0.0	106	66.0
Darawayne	Wogooyi Galbeed	9.5	0.0	8.9	18	59.0
Cadaadley	Wogooyi Galbeed	4.5	21.0	6.0	32	49.0
Dhubato	Wogooyi Galbeed	6.0	22.0	35.5	64	56.0
Baligubable	Wogooyi Galbeed	30.0	1.0	0.0	31	65.0

*indicates missing data

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

Southern Somalia stations

Station_Name	Region	dek 1	dek 2	dek 3	Aug-12	LTM
Baidoa	Bay	0.0	7.0	21.0	28	8.0
Diinsor	Bay	0.0	3.5	8.2	12	11.0
Bardheere	Gedo	0.0	0.0	0.0	0	5.0
Luuq	Gedo	0.0	0.0	0.0	0	1.0
Belet weyne	Hiraan	0.0	17.5	188.0	206	1.0
Bulo burti	Hiraan	0.0	0.0	4.0	4	3.0
Marere	Middle Juba					41.0
Jowhar	Middle Shabelle	5.0	0.0	29.0	34	12.0
Galkayo	Mudug	0.0	0.0	26.0	26	1.0
Genale	Lower Shabelle				*	52.0
Afmadow	Lower Juba				*	13.0
Buaille	Middle Juba				*	*
Jamame	Lower Juba	5.0	0.0	0.0	5	24.0

Monthly rainfall and NDVI performance 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 NOAA-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 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.

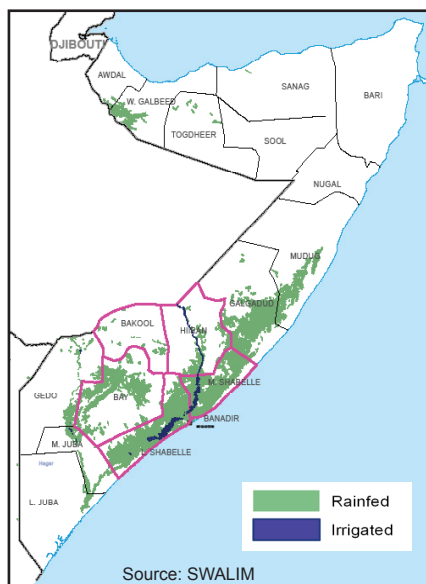
- Current Rainfall Estimates and NDVI data are derived from NOAA/CPC and DEVCOCAST (www.devcoast.eu) respectively, while the rain gauge data is collected by FAO-SWALIM and FEWSNET.

- 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>

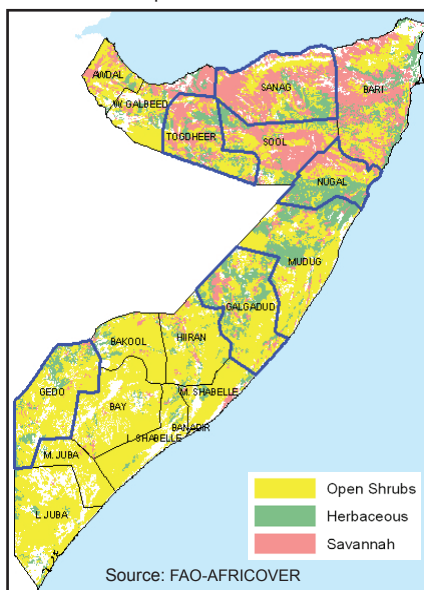
For more information on NDVI, visit <http://earlywarning.usgs.gov/adds> and <http://fsausomali.org/fileadmin/uploads/1308.pdf>

Seasonal rainfall and NDVI trends by region

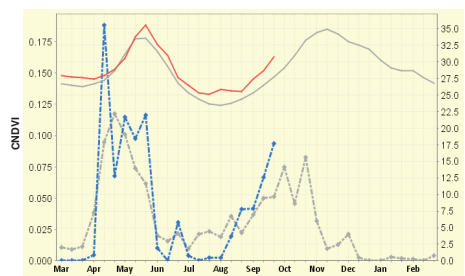
Map 11: Agricultural Areas



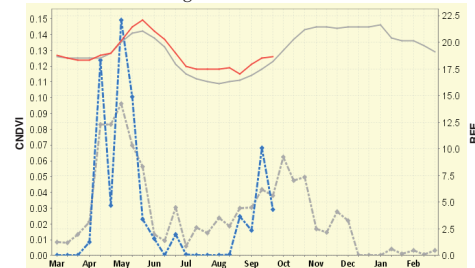
Map 12: Pastoral Areas



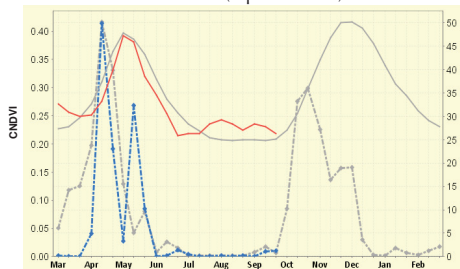
Togdheer Pastoral (Savannah)



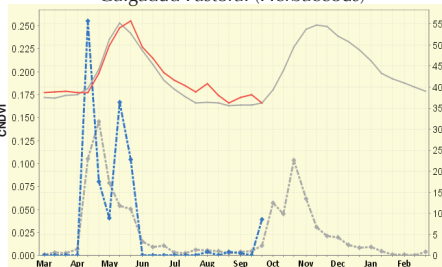
Saanag Pastoral (Savannah)



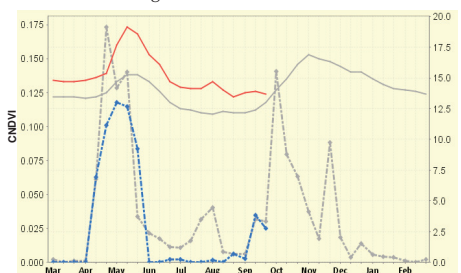
Gedo Pastoral (Open Shrubs)



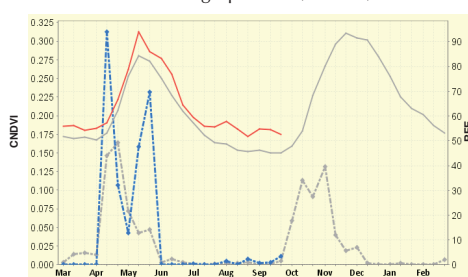
Galgadud Pastoral (Herbaceous)



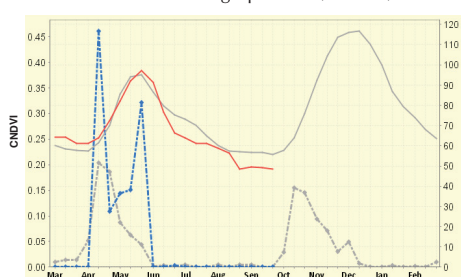
Nugal Pastoral (Savannah)



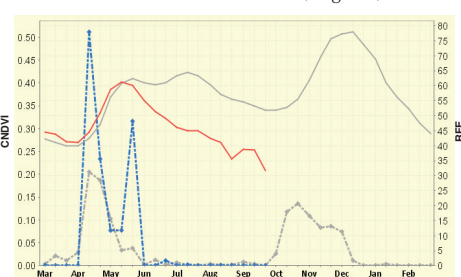
Hiran Agropastoral (Rainfed)



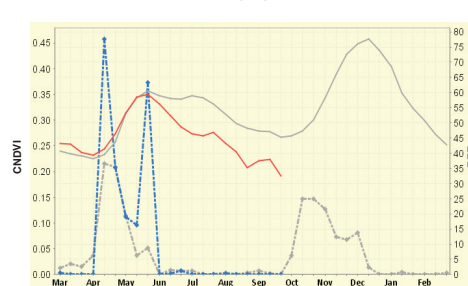
Middle Shabelle Agropastoral (Rainfed)



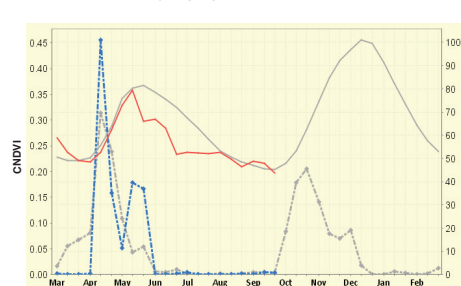
Lower Shabelle Riverine (Irrigated)



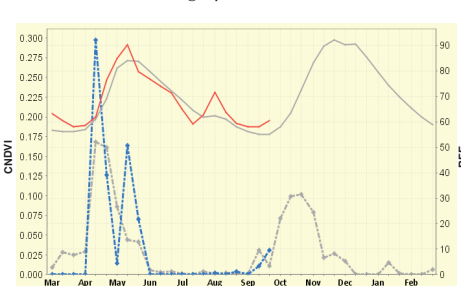
Lower Shabelle Agropastoral (Rainfed)



Bay Agropastoral (Rainfed)



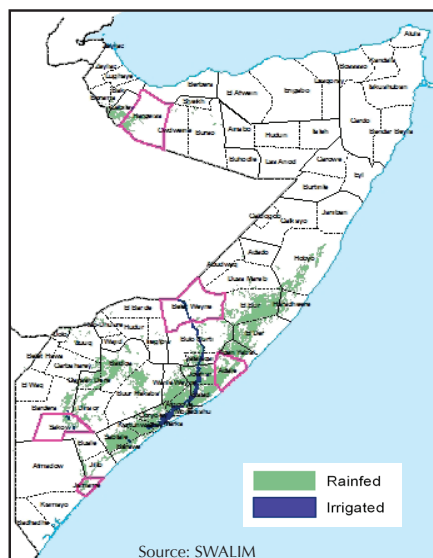
Bakool Agropastoral (Rainfed)



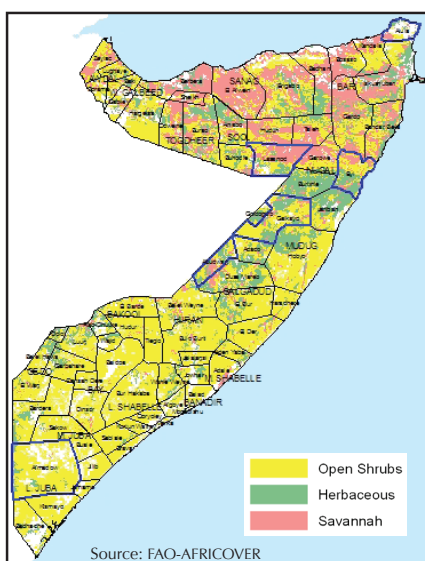
— RFE 2012 — RFE Avg: 1999 2012 — NDVIC 2012 — NDVIC LTA-MEAN

Seasonal rainfall and NDVI trends for selected districts

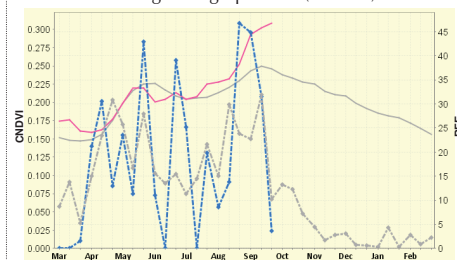
Map 13: Agricultural Areas



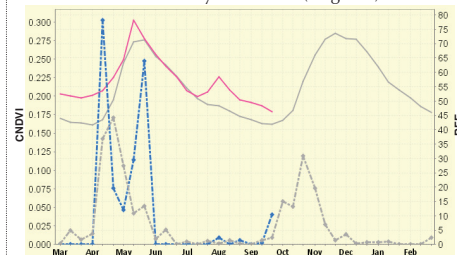
Map 14: Pastoral Areas



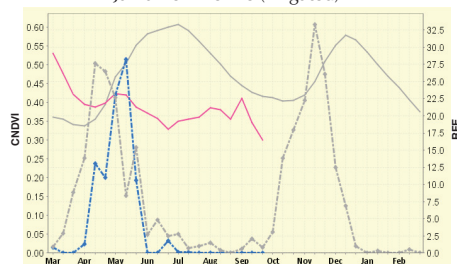
Hargeisa Agropastoral (Rainfed)



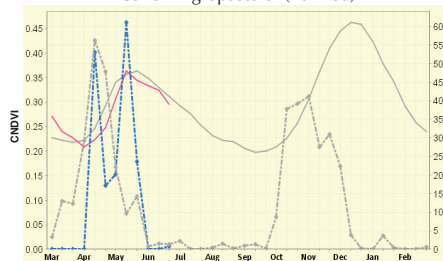
Beletweyn Riverine (Irrigated)



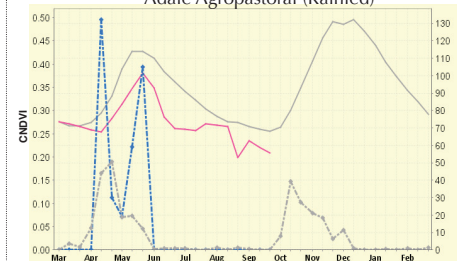
Jamame Riverine (Irrigated)



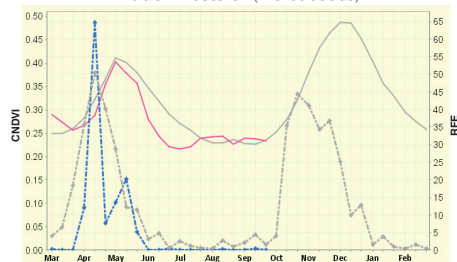
Sakow Agropastoral (Rainfed)



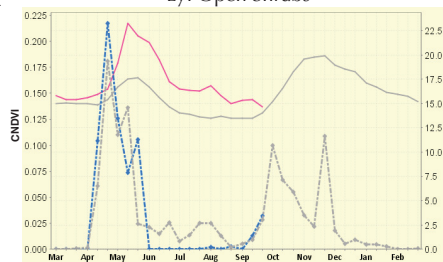
Adale Agropastoral (Rainfed)



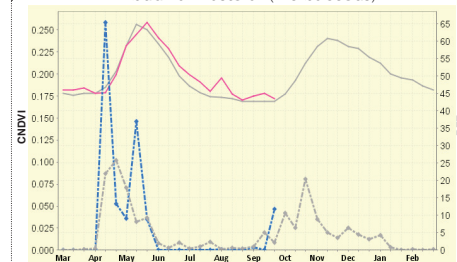
Afmadow Pastoral (Herbaceous)



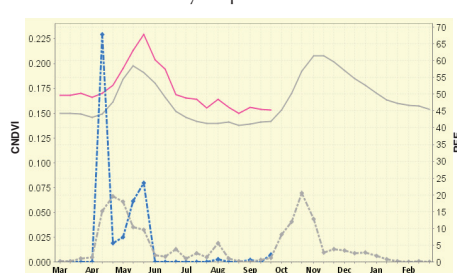
Eyl Open Shrubs



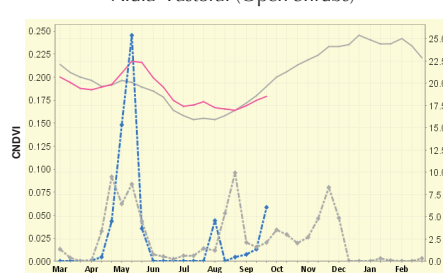
Abudwak Pastoral (Herbaceous)



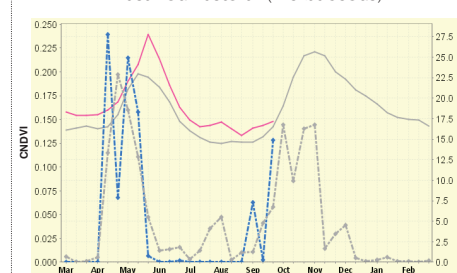
Galkayo Open Shrubs



Alula Pastoral (Open Shrubs)



Lasanod Pastoral (Herbaceous)



— RFE 2012 — RFE Avg: 1999 2012 — NDVIC 2012 — NDVIC LTA-MEAN

Technical and Managerial Support



Funding Agencies

