

Climate Data Update April



Food Security and Nutrition Analysis Unit - Somalia



Monthly Rainfall and NDVI, Issued May 17th, 2012

Highlights

The *Gu* rains (April – June) commenced in most parts of the country in the 2nd and 3rd *dekads* of April 2012. They were characterized by uneven distribution with some parts of Somalia receiving heavy rains while other areas received little or no rain. Specifically, light to no rains were reported in parts of the North (including most of Bari region, parts of Sool, Togdheer, W.Galbeed and Awdal); South (coastal areas of Lower Shabelle, localised areas of Bay, parts of Middle/Lower Juba and Hiran); and Central (Addun and Cowpea Belt). This has been confirmed by field reports and observations.

According to rainfall data from rain gauges and automated weather stations, heavy rains were received in parts of Northwest, Middle Juba, Bay and Bakool regions during the month. Most stations in these regions recorded normal to slightly above normal rains. In the Northwest these include: Gebiley (109mm), Hargeisa (100mm), Caynabo (168mm) and Dilla (116mm). In the South and Central regions these include Dinsor (171 mm), Baidoa (166mm), Bardaale (123mm), and Buale (139mm) (Table 1). The rest of the country received depressed rains during the month of April. Some stations in this category include Qardo (22mm), Erigavo (31mm), Lasanod (8mm), Luuq (47mm) and Beletweyne (25mm).

Satellite-derived Rainfall Estimates (RFE) also confirmed the onset of the *Gu* rains and show its further advancement from the north towards the central and southern parts of the country (Map 3, 4, 5 and 9).

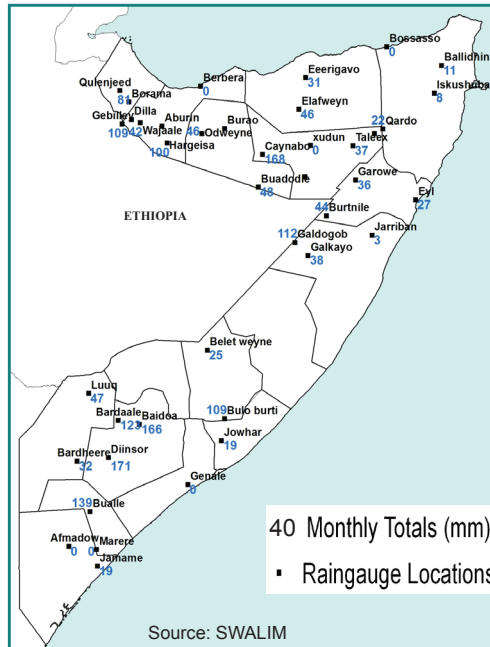
Following the rainfall activities inside Somalia and the Ethiopian highlands, observed river levels increased slightly along the Juba and Shabelle rivers but remained well below flood risk levels.. However, in Lower Shabelle, river flooding has been reported in some villages in Kurtunwarey district, which is attributed to artificial breakage of river embankments.

Normalized Difference Vegetation Index (NDVI) is still below average in significant areas of the country following a hotter than normal *jilaal* season (Source: ECMWF), but rapid greening is visible in Bay, Bakool and parts of the Shabelle regions (Map 6, 7 and 8). Below average vegetation conditions remain evident in Central and Southern Agro-Pastoral areas of M. Shabelle and Galgaduud; Southern Inland Pastoral areas (camel pastoralists) of Gedo and Juba; pockets of the West Golis Pastoral area of Awdal and W. Galbeed; and the Golis of Sanaag (Map 10). Field reports from Bari point out deterioration of pasture in the region. The poor recovery of vegetation/pasture in April is generally attributed to the effect of *jilaal* dry conditions (Dec – Mar) and erratic *Gu* rains in April.

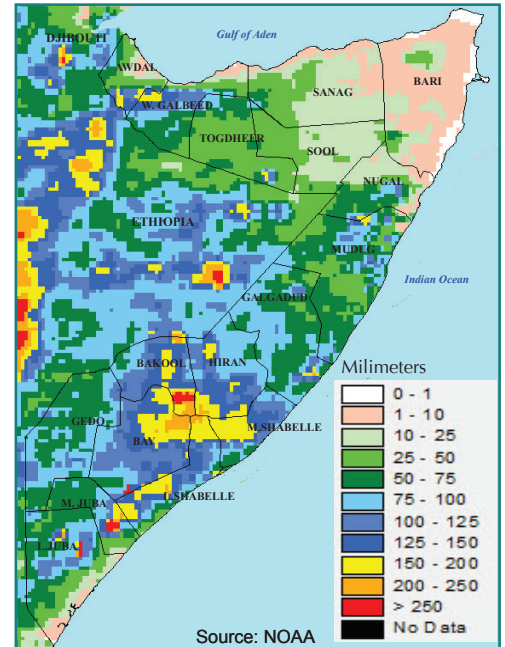
FSNAU field reports for April indicate average to poor livestock body conditions due to the impact of *jilaal* season. Largely normal migration is currently observed across all livelihoods, except in Coastal *Deeh* and Addun in central regions, where abnormal migration in search of pasture and water has been reported. *Gu* rains are expected to improve water source availability by replenishing natural water catchments and *berkads*. Dry and wet planting of crops (mostly maize and sorghum) is reported across agropastoral and riverine areas in the South.

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: April 2012 Monthly Rain Gauge Data (mm)

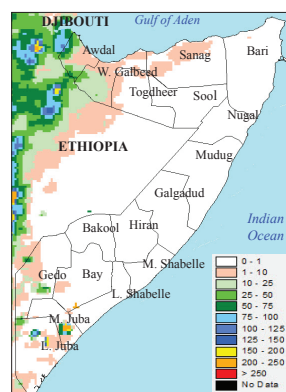


Map 2: April 2012 Monthly Rainfall Estimates

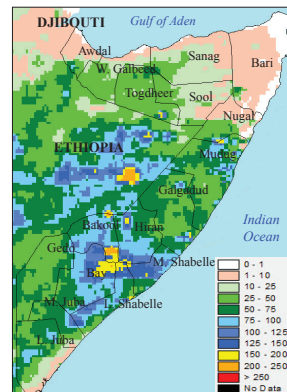


April 2012: Dekadal Rainfall Estimates (RFE)

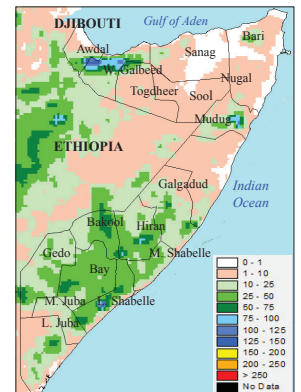
Map 3: 1st Dekad (1-10)



Map 4: 2nd Dekad (11-20)



Map 5: 3rd Dekad (21-30)

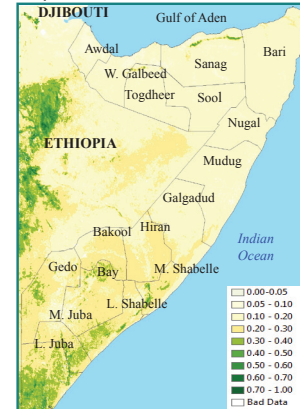


April 2012: Dekadal Normalized Difference Vegetation Index (NDVI)

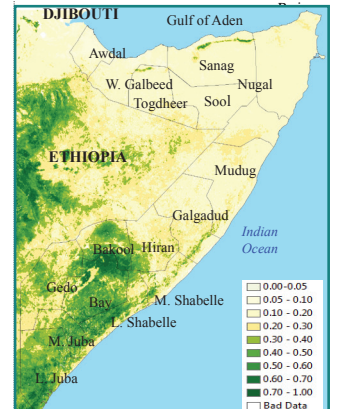
Map 6: 1st Dekad (1-10)



Map 7: 2nd Dekad (11-20)

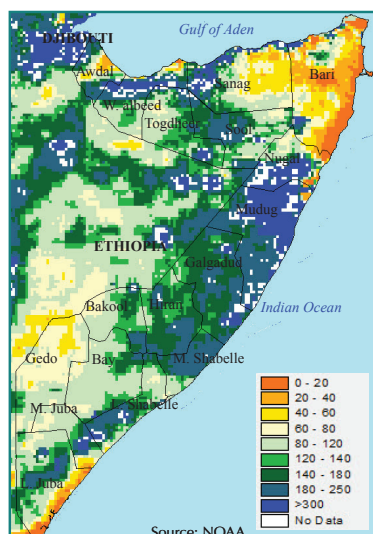


Map 8: 3rd Dekad (21-30)



Monthly rainfall and NDVI performance

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



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

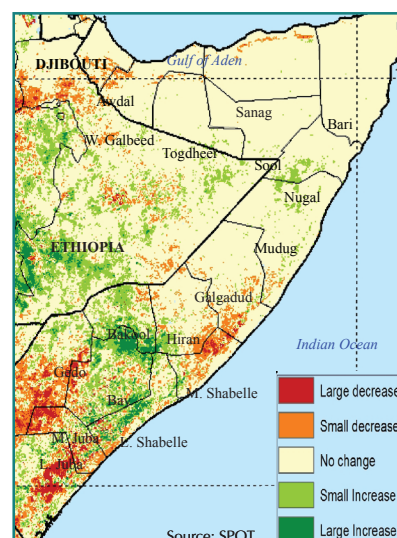


Table 1: April 2012: Observed rain gauge data compared to long term monthly averages

Northern Somalia stations

Region	Station_Name	dek 1	dek 2	dek 3	Apr-12	LTM
Awdal	Borama	3.0	34.5	29.0	67	104
Awdal	Qulenjeed	26.5	12.0	42.5	81	*
Bari	Bossasso	0.0	0.0	0.0	0	4
Bari	Qardo	0.0	12.0	10.0	22	26
Bari	Iskushuban	0.0	7.5	0.0	8	*
Bari	Dangoroyo	0.0	0.0	34.0	34	*
Bari	Ballidhin	0.0	3.1	8.3	11	*
Mudug	Jarriban	0.0	0.0	3.0	3	*
Mudug	Galdogob	0.0	27.0	85.0	112	*
Nugaal	Garowe	0.0	36.0	0.0	36	*
Nugaal	Eyl	21.0	0.0	6.0	27	27
Nugaal	Burnile	0.0	6.0	37.8	44	*
Sanaag	Eerigavo	9.7	21.6	0.0	31	39
Sanaag	Elafweyn	0.0	18.5	27.0	46	*
Sool	Caynabo	0.0	0.0	168.0	168	*
Sool	Las Aanod	0.0	2.0	6.0	8	14
Sool	Xudun	0.0	0.0	0.0	0	*
Sool	Taleex	0.0	15.5	21.0	37	*
Togdheer	Burao	0.0	13.0	16.0	*	47
Togdheer	Odweyne	0.0	46.0	0.0	46	*
Togdheer	Wajaale	18.0	8.0	15.5	42	*
Togdheer	Buadodle	0.0	16.2	31.6	48	*
Wogoyi Galbeed	Hargeisa	1.0	6.4	92.4	100	85
Wogoyi Galbeed	Dilla	10.0	18.0	88.0	116	*
Wogoyi Galbeed	Gebilley	23.5	44.0	41.0	109	52
Wogoyi Galbeed	Aburin	11.0	19.0	5.0	35	*
Wogoyi Galbeed	Berbera	0.0	0.0	0.0	0	0

*indicates missing data

Southern Somalia stations

Region	Station_Name	dek 1	dek 2	dek 3	Apr-12	LTM
Bay	Baidoa	5.5	44.5	115.5	166	165
Bay	Diinsor	3.2	15.0	153.0	171	138
Bay	Bardaale	0.0	53.5	69.5	123	*
Gedo	Bardheere	0.0	13.0	18.5	32	117
Gedo	Luuq	0.0	38.0	9.0	47	82
Hiraan	Belet weyne	0.0	3.0	21.5	25	72
Hiraan	Bulo burti	28.0	27.0	53.5	109	70
Lower Juba	Afmadow	*	*	*	*	102
Lower Juba	Jamame	0.0	18.5	0.0	19	60
Lower Shabelle	Genale	*	*	*	*	87
Middle Juba	Marere	*	*	*	*	148
Middle Juba	Bualle	0.0	117.0	22.0	139	*
Middle Shabelle	Jowhar	0.0	12.5	6.0	19	100
Mudug	Galkayo	0.0	1.5	36.5	38	37

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.

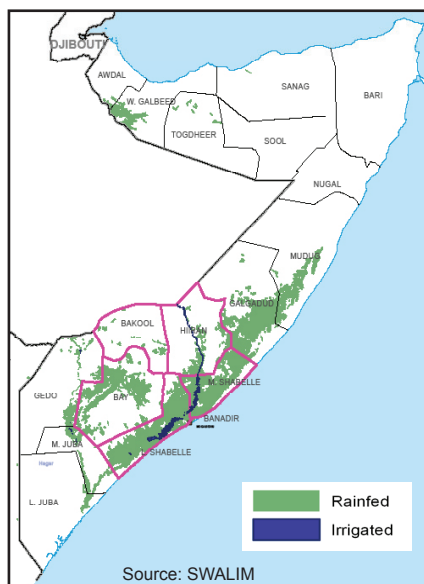
Primary data sources are NOAA/USGS, European Centre for Medium-range Weather Forecast (ECMWF), MARS-JRC, FSNAU and SWALIM. Maps and graphs on this bulletin are produced from four sources.

- 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>

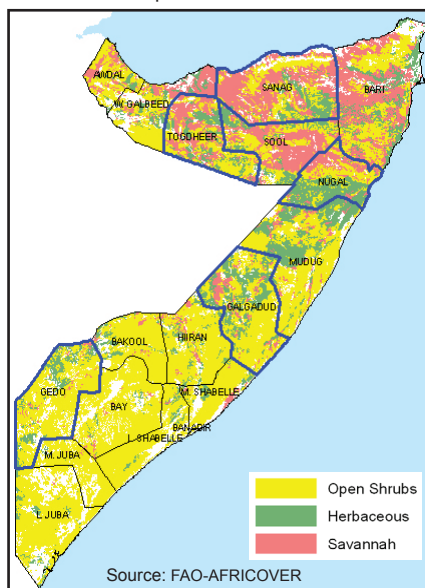
For more information on NDVI, visit <http://earlywarning.usgs.gov/adds> and <http://fsausomali.org/fileadmin/uploads/1308.pdf>

Seasonal rainfall and NDVI trends by region

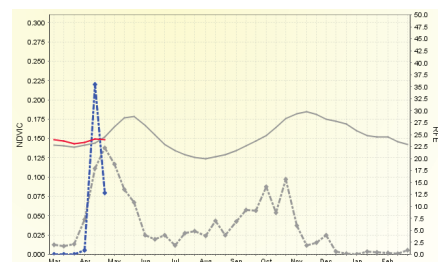
Map 11: Agricultural Areas



Map 12: Pastoral Areas



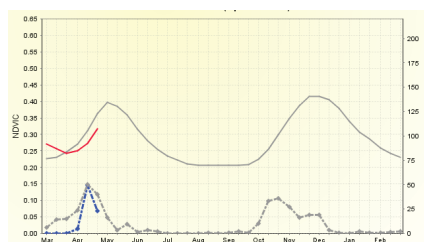
Togdheer Pastoral (Savannah)



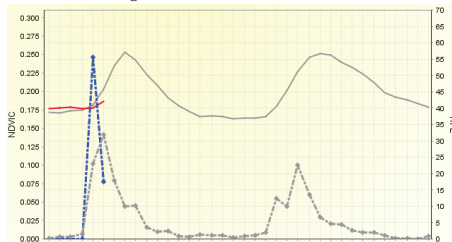
Saanag Pastoral (Savannah)



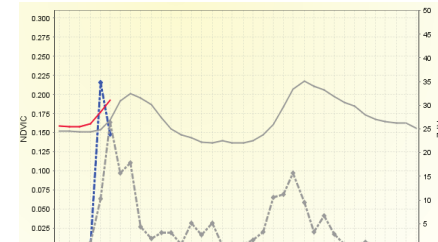
Gedo Pastoral (Open Shrubs)



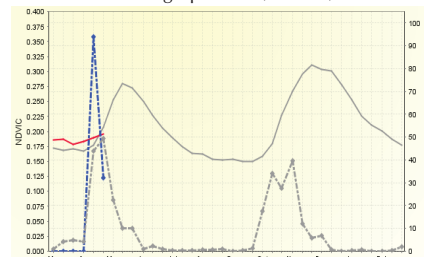
Galgadud Pastoral (Herbaceous)



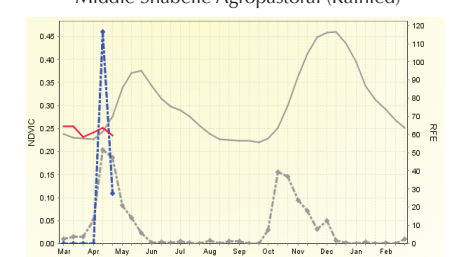
Nugal Pastoral (Savannah)



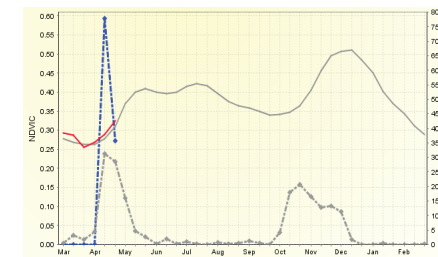
Hiran Agropastoral (Rainfed)



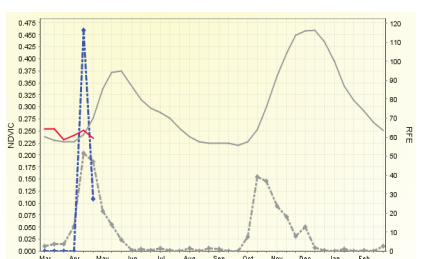
Middle Shabelle Agropastoral (Rainfed)



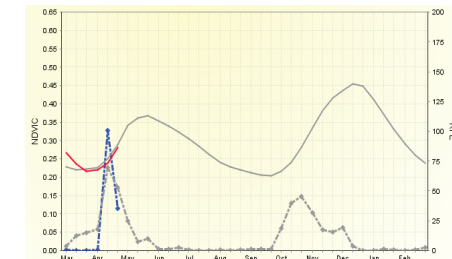
Lower Shabelle Riverine (Irrigated)



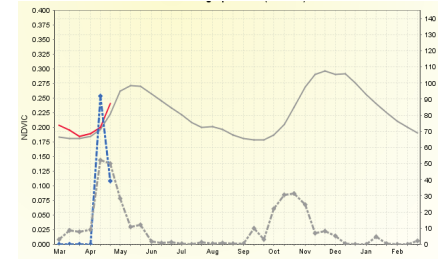
Lower Shabelle Agropastoral (Rainfed)



Bay Agropastoral (Rainfed)



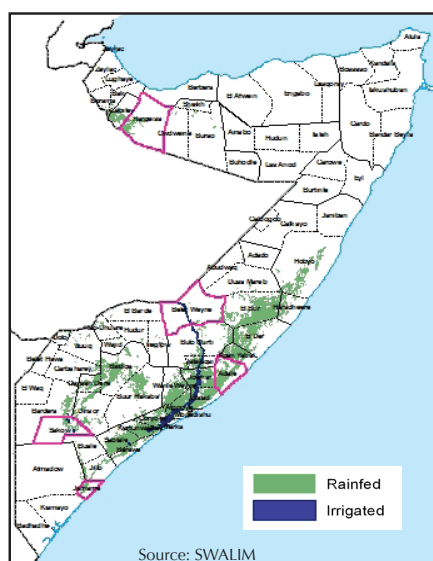
Bakool Agropastoral (Rainfed)



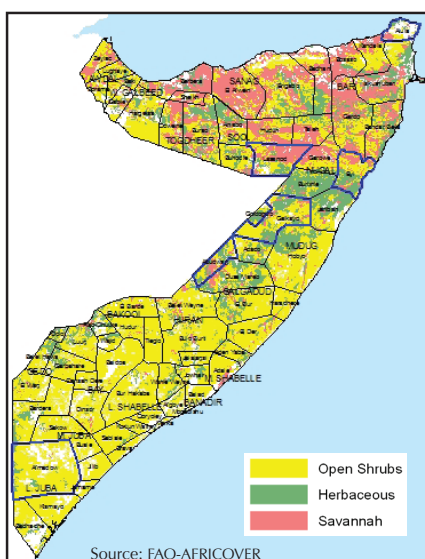
◆ RFE 2012 ■ RFE Avg: 1999 : 2012 — NDVIC 2011 — NDVIC LTA-MEAN

Seasonal rainfall and NDVI trends for selected districts

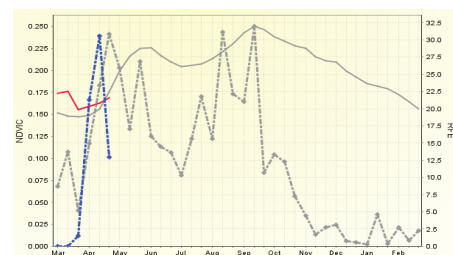
Map 13: Agricultural Areas



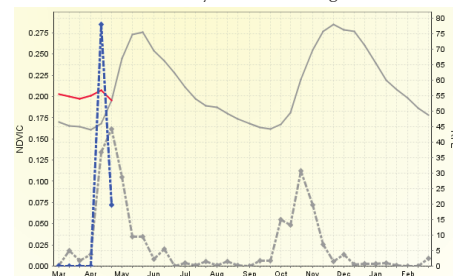
Map 14: Pastoral Areas



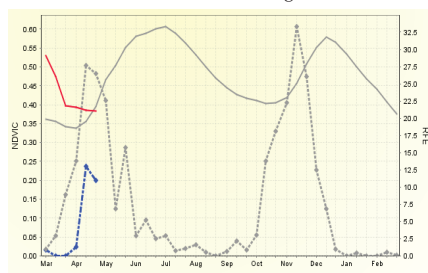
Hargeisa Agropastoral (Rainfed)



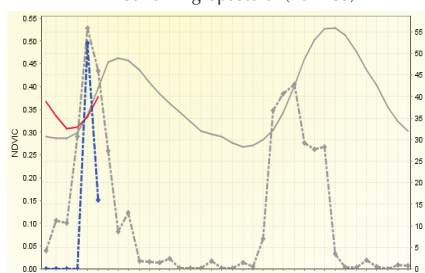
Beletweyn Riverine (Irrigated)



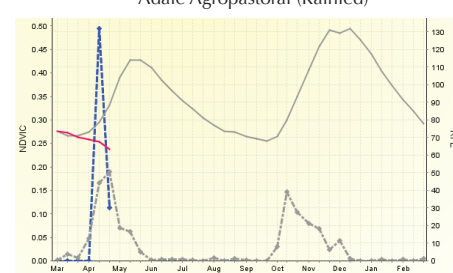
Jamame Riverine (Irrigated)



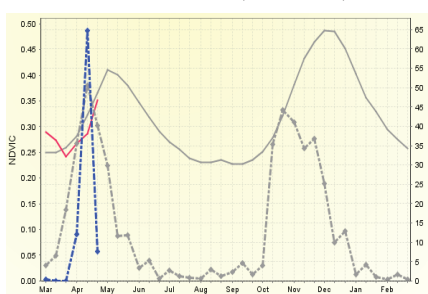
Sakow Agropastoral (Rainfed)



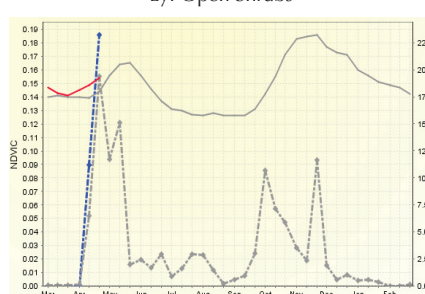
Adale Agropastoral (Rainfed)



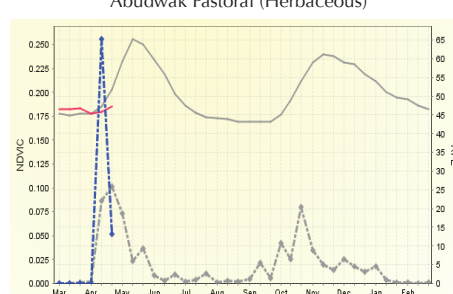
Afmadow Pastoral (Herbaceous)



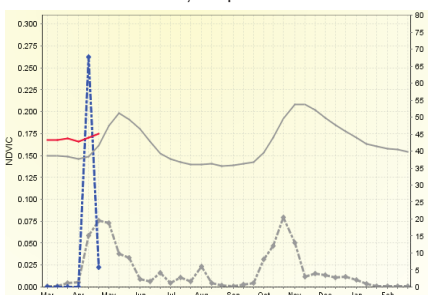
Eyl Open Shrubs



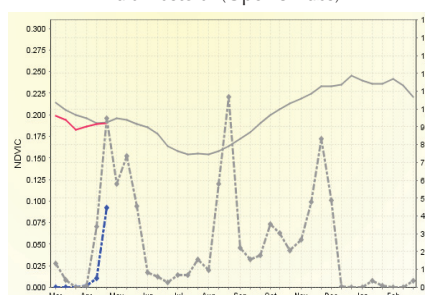
Abudwak Pastoral (Herbaceous)



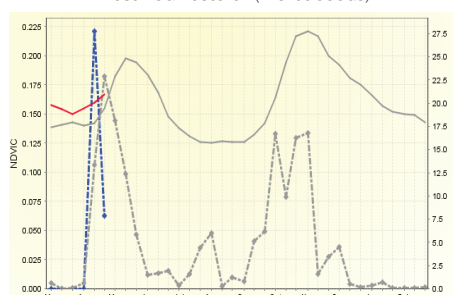
Galkayo Open Shrubs



Alula Pastoral (Open Shrubs)



Lasanod Pastoral (Herbaceous)



—●— RFE 2012
 —●— RFE Avg: 1999 : 2012
 — NDVIC 2011
 — NDVIC LTA-MEAN

Technical and Managerial Support



Funding Agencies

