

Climate Data Update



Food Security and Nutrition Analysis Unit - Somalia



Monthly Rainfall and NDVI, June, 2011

Highlights

During the month of June 2011, there has been continued below normal rainfall, which is aggravating the generally poor *Gu* rainfall situation characterized by late start in April, a clear deficit in May and irregular distribution. However, light showers were experienced in the North west and in some pockets of southern Somalia. The highest amounts of rainfall recorded were in Gebiley (74mm) and Wajale (64mm) in Somaliland. The weather stations located in the southern parts of the country of which include Baidoa, Bu'ale, Marere and Afmadow recorded moderate rainfall of less than 20mm. The rest of the country remained dry. The information from the rainfall monitoring network together with FSNAU field reports indicate an early cessation of the *Gu* rainfall season and onset of the *Hagga* rainfall season.

The significant reduction in rain is confirmed by satellite derived Rainfall Estimates (RFE), which indicate most parts of the country having received less than 20mm of rainfall (Map 5). The Normalized Difference Vegetation Index (NDVI) indicates a small decrease to no change in vegetation conditions in most areas of the country (Map 10). Minimum NDVI values have been depicted in agro-pastoral and riverine areas of Lower Shabelle, Jamine and Afmadow (page 3 and 4). The seasonal NDVI profiles indicate clearly below average crop performance for the main producing regions of Southern Somalia and in particular in Lower Shabelle and Bay. Greener than usual vegetation can only be seen in small pockets of southern and south-eastern agro-pastoral areas, while Large decreases of vegetation index are visible in considerable parts of Lower Juba agro-pastoral, Lower and Middle Shabelle agro-pastoral and small pockets of southern coastal pastoral areas.

Livestock conditions are generally poor due to preceding reduced *Deyr* and *Gu* rains. In the southern areas of Lower juba, there is high influx of livestock from Kenya to the southern inland and south east grazing areas due to the failed rains in north eastern Kenya. This migration is already depleting existing finite pasture and water resources in the key grazing zones that received near normal rainfall. This might lead to resource-based conflicts as competition for the limited yet diminishing resources intensifies.

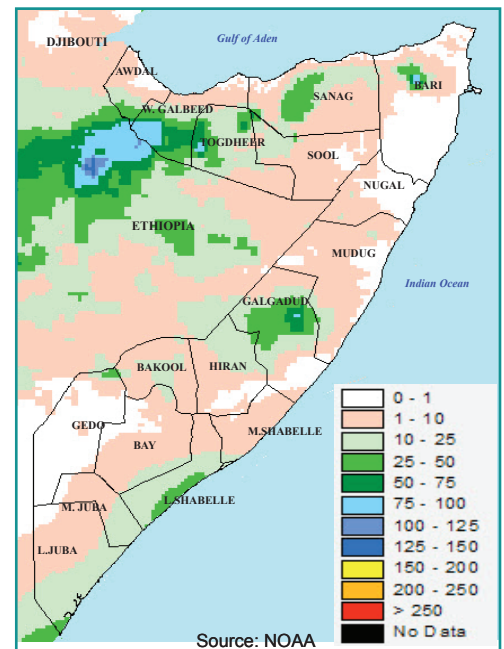
Further analysis of the selected regions and districts are presented on page 3 and 4 of this update.

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: June 2011: Monthly Rain Gauge data (mm)

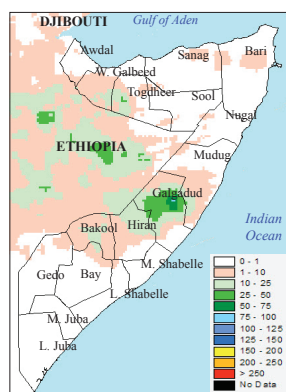


Map 2: June 2011: Monthly Rainfall Estimates (mm)

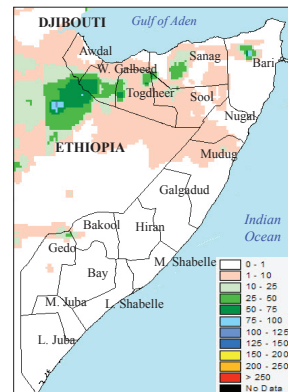


June 2011: Dekadal Rainfall Estimates (RFE)

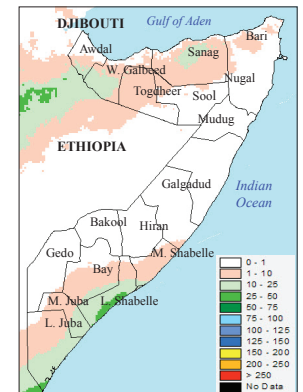
Map 3: 1st Dekad (1-10)



Map 4: 2nd Dekad (11-20)

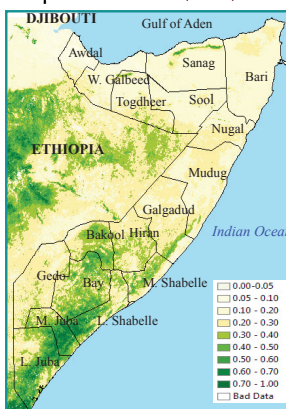


Map 5: 3rd Dekad (21-30)

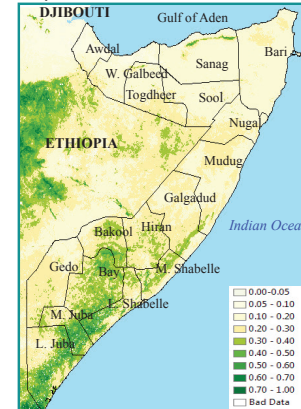


June 2011: Dekadal Normalized Difference Vegetation Index (NDVI)

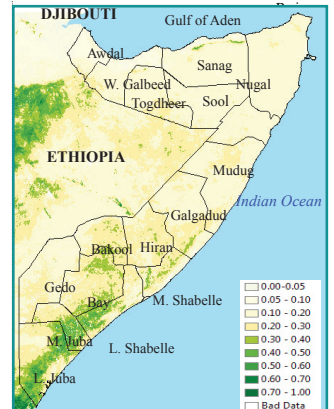
Map 6: 1st Dekad (1-10)



Map 7: 2nd Dekad (11-20)

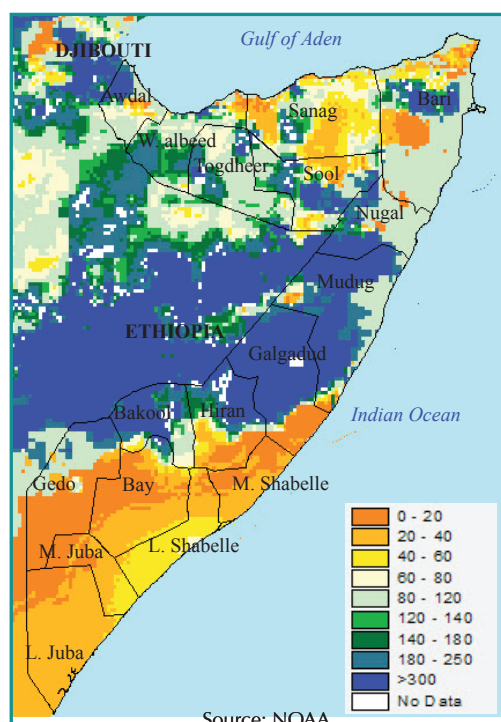


Map 8: 3rd Dekad (21-30)



Monthly rainfall and NDVI performance

June 9: June 2011: Rainfall as % of long term mean



Map 10: June 2011: NDVI absolute difference from long term mean

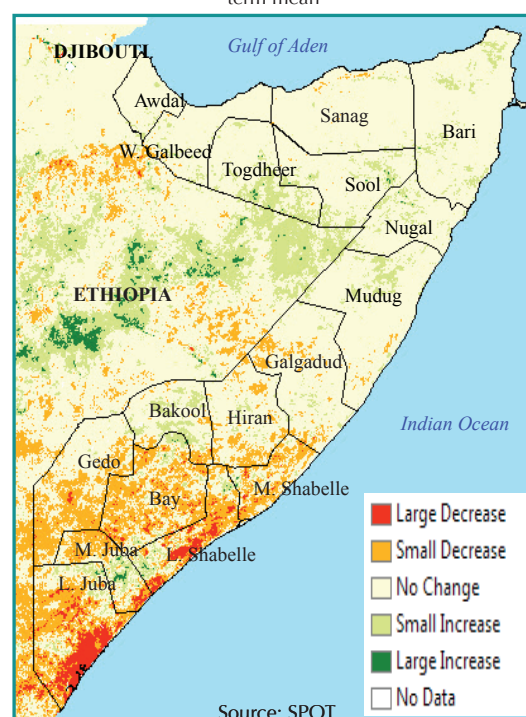


Table 1: June 2011: Observed rain gauge data compared to long term monthly averages

Northern Somalia stations

Region	Station_Name	dek 1	dek 2	dek 3	Jun-11	LTM
Awdal	Qulenjeed	0.5	0.0	2.0	2.5	33.0
Bari	Iskushuban	0.0	0.0	0.0	0.0	2.0
Bari	Dangoroyo	0.0	0.0	0.0	0.0	1.0
Bari	Ballidhin	0.0	0.0	0.0	0.0	1.0
Mudug	Jarriban	0.0	0.0	0.0	0.0	4.0
Mudug	Galdogob	0.0	0.0	0.0	0.0	1.0
Nugaal	Garowe	0.0	0.0	0.0	0.0	10.0
Nugaal	Eyl	0.0	0.0	0.0	0.0	0.0
Nugaal	Burtile	0.0	0.0	0.0	0.0	2.0
Sanaag	Eerigavo	15.0	13.0	0.0	28.0	38.0
Sanaag	Elafweyn	0.0	0.0	0.0	0.0	18.0
Sool	Caynabo	0.0	19.0	0.0	19.0	20.0
Sool	Las Aanod	0.0	0.0	0.0	0.0	1.0
Sool	xudun	0.0	0.0	0.0	0.0	2.0
Sool	Taleex	0.0	0.0	0.0	0.0	3.0
Togdheer	Burao	14.5	7.5	0.0	22.0	23.0
Togdheer	Odweyne	36.0	4.0	0.0	40.0	25.0
Togdheer	Wajaale	26.0	21.5	16.5	64.0	2.0
Togdheer	Buadodde	0.0	0.0	0.0	0.0	1.0
Wogooyi Galbeed	Hargeisa	11.5	6.5	0.0	18.0	33.0
Wogooyi Galbeed	Gebiley	13.5	43.5	17.0	74.0	51.0
Wogooyi Galbeed	Aburin	0.5	22.0	12.0	34.5	50.0

Southern Somalia stations

Region	Station_Name	dek 1	dek 2	dek 3	Jun-11	LTM
Bay	Baidoa	0.0	0.0	0.0	0.0	20.0
Bay	Diinsor	0.0	0.0	0.0	0.0	15.0
Bay	Bardaale	3.5	0.0	0.0	3.5	25.0
Gedo	Bardheere	0.0	0.0	0.0	0.0	5.0
Gedo	Luuq	0.0	0.0	0.0	0.0	2.0
Hiraan	Belet weyne	0.0	0.0	0.0	0.0	15.0
Hiraan	Bulo burti	0.0	0.0	0.0	0.0	5.0
Lower Juba	Afmadow	0.0	0.0	11.5	11.5	23.0
Middle Juba	Marere	0.5	0.0	14.5	15.0	89.0
Middle Juba	Bualle	0.0	0.0	10.5	10.5	25.0
Middle Shabelle	Jowhar	0.0	0.0	0.0	0.0	41.0
Mudug	Galkayo	0.0	0.0	0.0	0.0	6.0

*N/A indicates missing data

Primary data sources are NOAA/USGS, 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>

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

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.

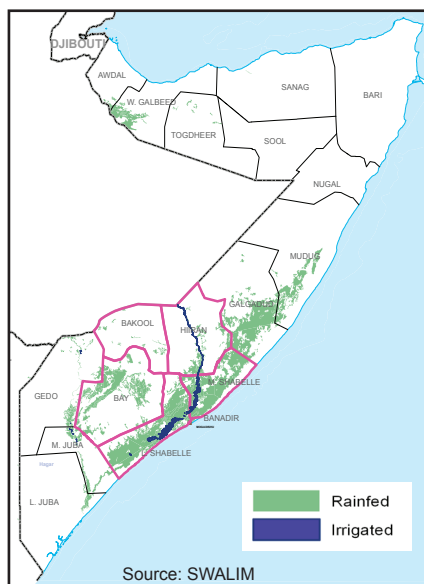
Seasonal trend graphs

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).

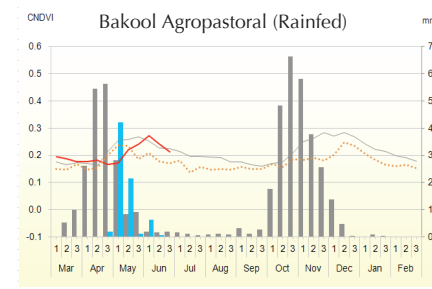
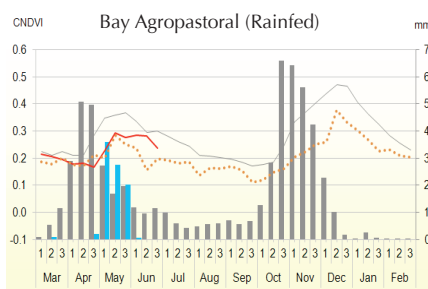
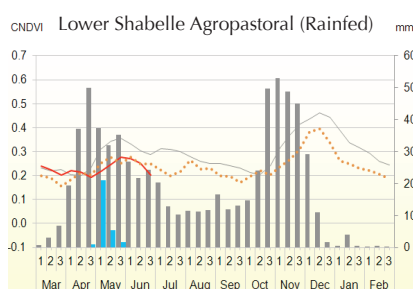
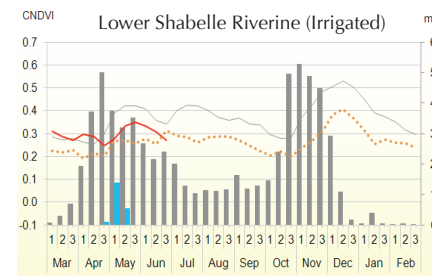
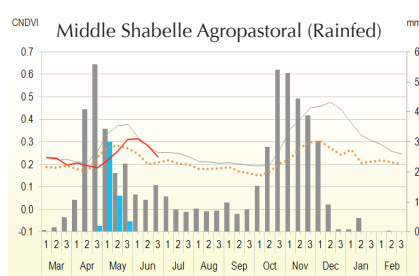
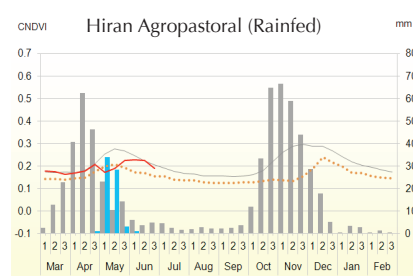
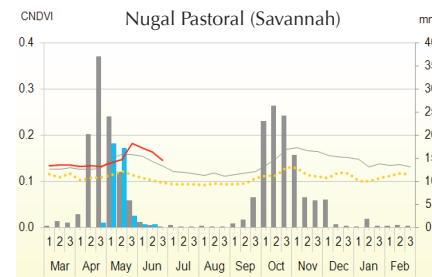
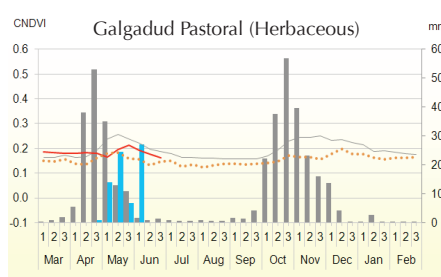
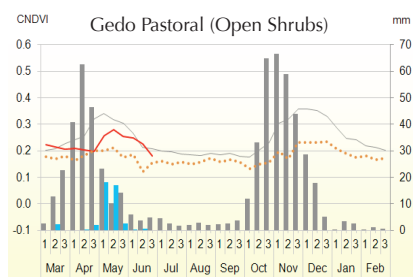
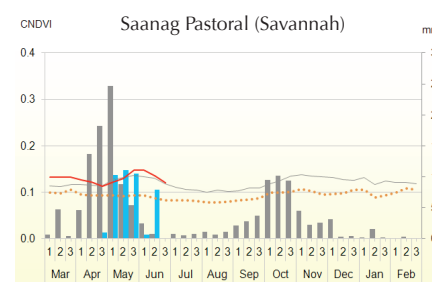
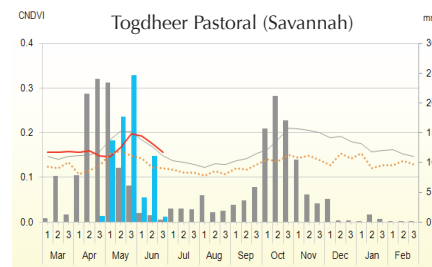
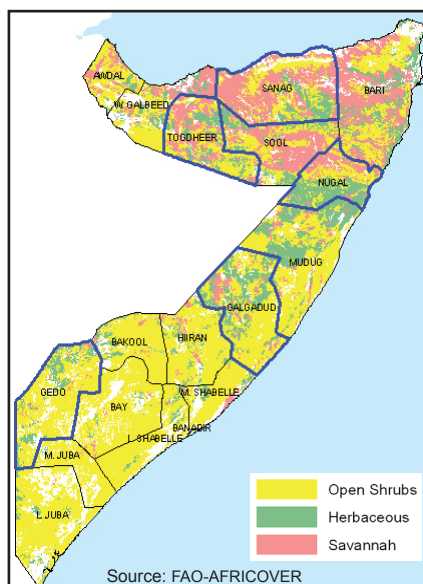
For more information or request on available data, please send an email to data@fsnau.org.

Seasonal rainfall and NDVI trends by region

Map 11: Agricultural Areas



Map 12: Pastoral Areas

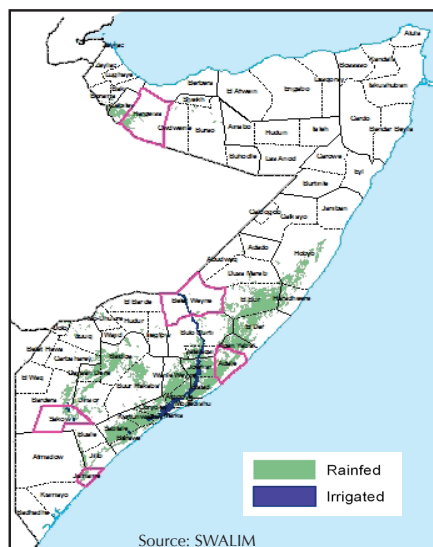


Rainfall LTA
 Rainfall Current
 CNDVI LTA
 CNDVI Minimum
 CNDVI Current

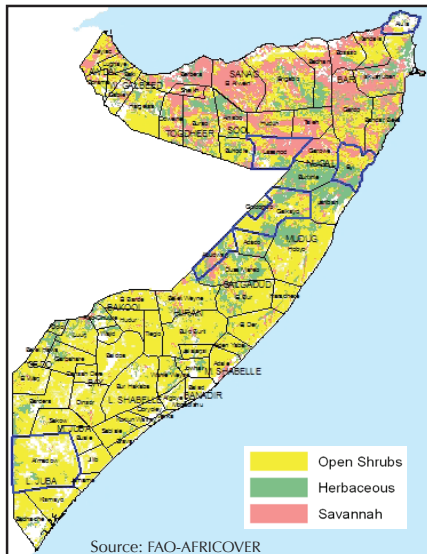
* The NDVI minimum represents the lowest value of NDVI recorded since 1999

Seasonal rainfall and NDVI trends for selected districts

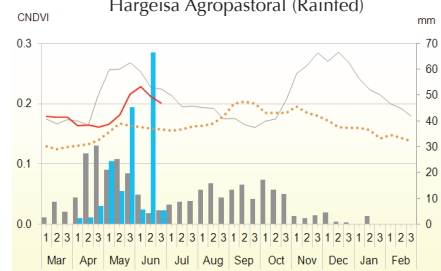
Map 13: Agricultural Areas



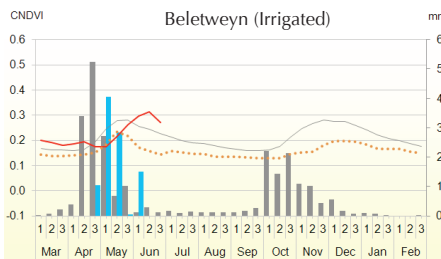
Map 14: Pastoral Areas



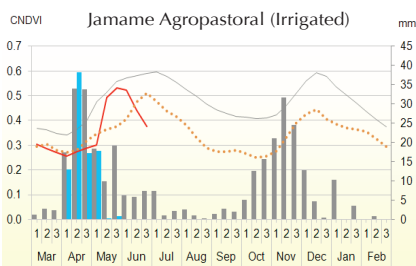
Hargeisa Agropastoral (Rainfed)



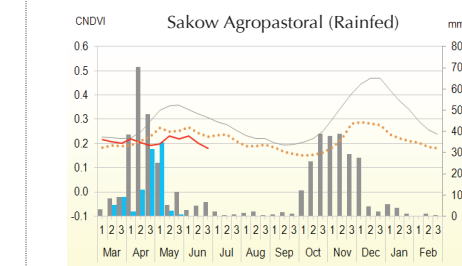
Beletweyn (Irrigated)



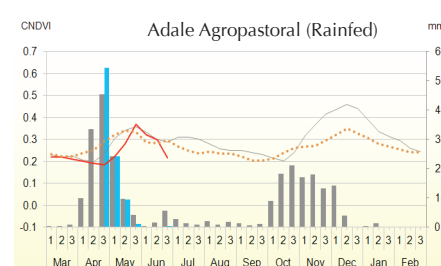
Jamame Agropastoral (Irrigated)



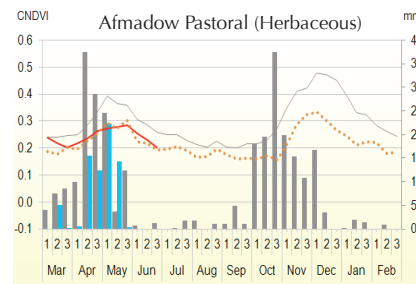
Sakow Agropastoral (Rainfed)



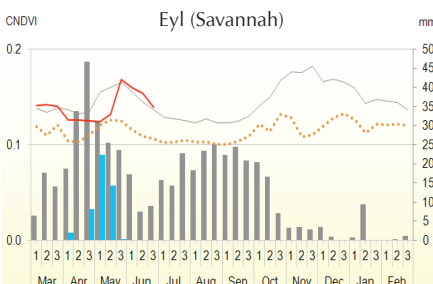
Adale Agropastoral (Rainfed)



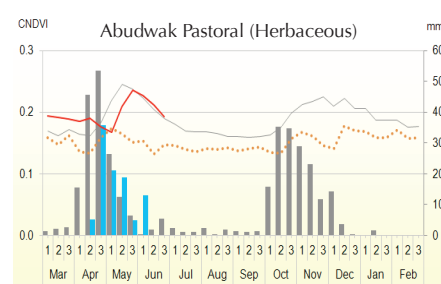
Afmadow Pastoral (Herbaceous)



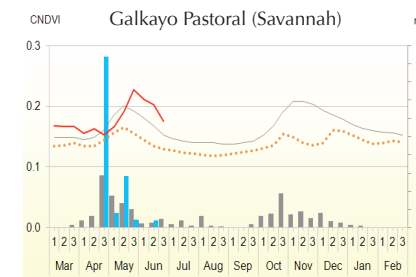
Eyl (Savannah)



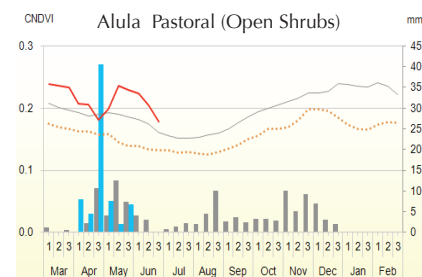
Abudwak Pastoral (Herbaceous)



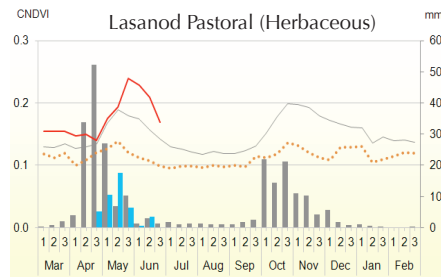
Galkayo Pastoral (Savannah)



Alula Pastoral (Open Shrubs)



Lasanod Pastoral (Herbaceous)



Rainfall LTA
 Rainfall Current
 CNDVI LTA
 CNDVI Minimum
 CNDVI Current

* The NDVI minimum represents the lowest value of NDVI recorded since 1999

Technical and Managerial Support

Funding Agencies

