

Current Rainfall and NDVI

This report is a compilation of climate data on Somalia that FSAU and FEWS NET regularly review for analysis. Primary data sources are NOAA/USGC, MARS-JRC and SWALIM.

Maps and graphs in this bulletin are produced from three sources:

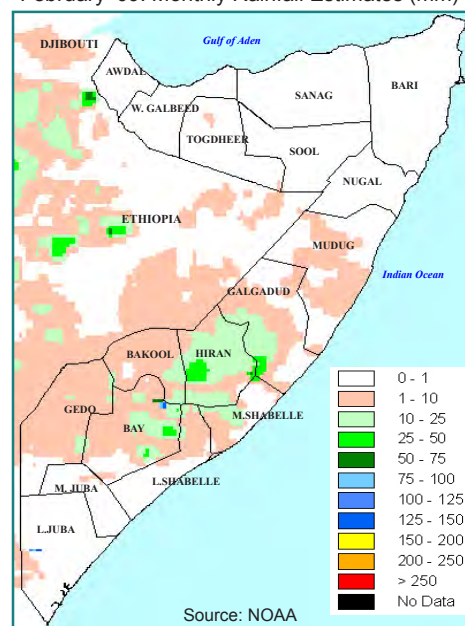
- Current Rainfall Estimates and NDVI data are derived from NOAA/CPC, while the rain gauge data is collected by FAO-SWALIM
- The seasonal profiles on page 2 are produced in collaboration with MARS-JRC. For more information visit <http://mars.jrc.ec.europa.eu/mars/About-us/FOODSEC>
- The Rainfall and NDVI long term trends are derived from NOAA AVHRR and SPOT VEGETATION.

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

February '09: Monthly Rain Gauge Data (mm)



February '09: Monthly Rainfall Estimates (mm)



Climate in Somalia is characterized by a bi-modal rainfall pattern with the major "Gu" rains (April-June) and the "Deyr" rains (October-December). These rainy seasons are separated by two dry spells, "Jilaal" (January-March) and "Hagaa" (July-August)

Somalia Seasonal Time Line

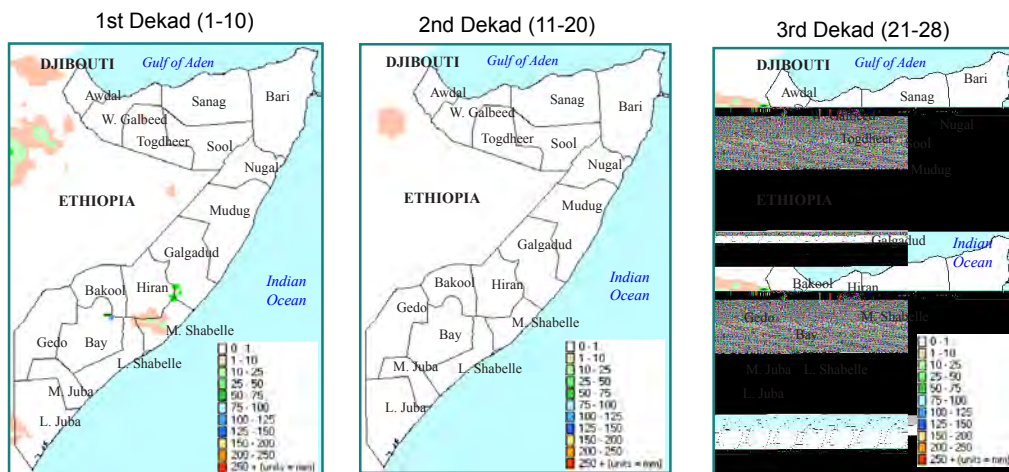


Feb. '09: Dekadal Rain Gauge Data (mm)

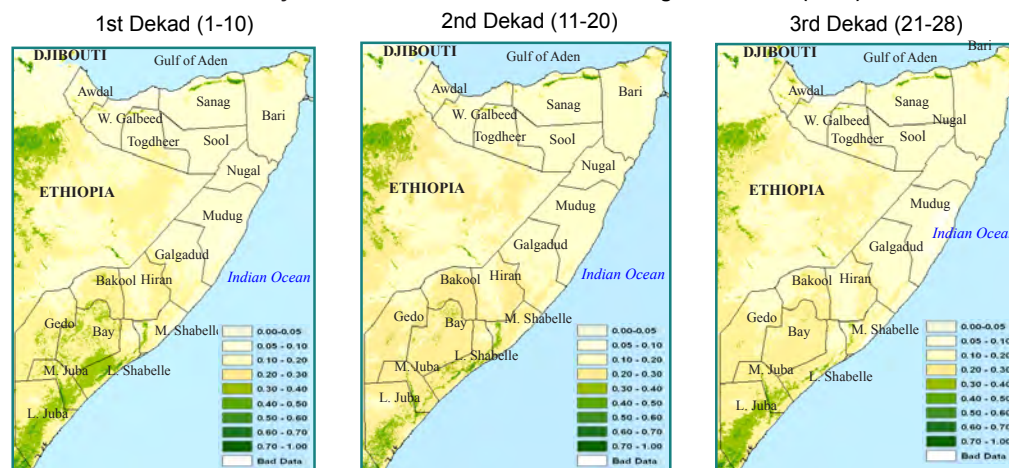
Station Name	DEKAD		
	1	2	3
Awdal			
Borama	0	0	0
Gulajeed	0	0	0
Wogooyi Galbeed			
Berbera	0	0	0
Hargeisa	0	0	0
Togdheer			
Burao	0	0	0
Odweyne	0	0	0
Sanaag			
Erigavo	0	0	0
Elafweyne	0	0	0
Sool			
Caynabo	0	0	0
Bari			
Bossasso	0	0	0
Nugal			
Garowe	0	0	0
Mudug			
Galkayo	0/a	0	0
Bakool			
CeelBerde	0	0	0
Hudur	n/a	n/a	n/a
Bay			
Baidoa	n/a	n/a	n/a
Dinsoor	n/a	n/a	n/a
Gedo			
Bardhere	0	0	33
Middle Shabelle			
Jowhar	0	15	0
Lower Shabelle			
Afgoye	0	0	0
Middle Juba			
Buale	0	0	0
Lower Juba			
Jamame	n/a	n/a	n/a

*n/a: Data not available

February '09: Dekadal Rainfall Estimates (NOAA)

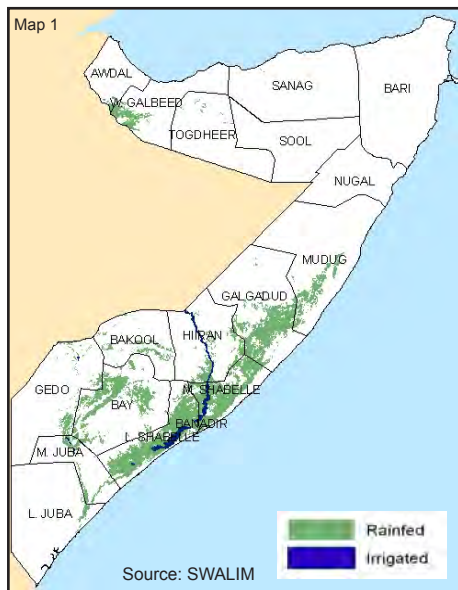


February '09: Dekadal Normalized Difference Vegetation Index (NDVI)

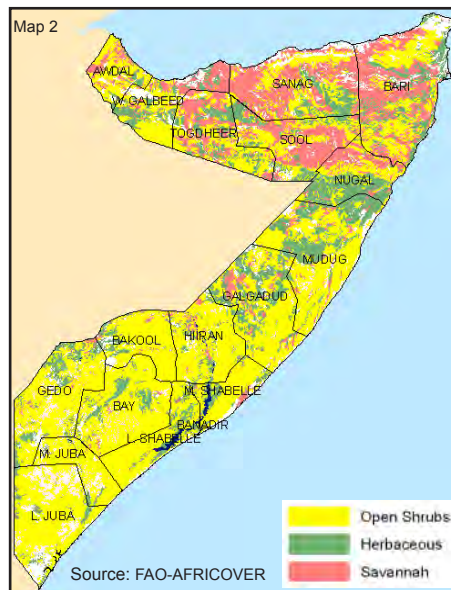


Seasonal Trends

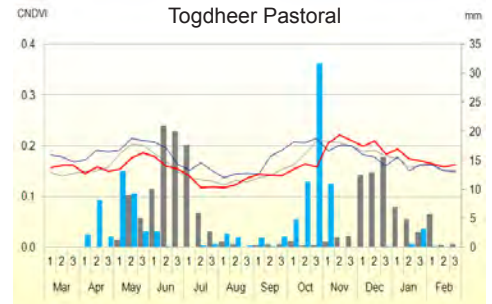
Agricultural Areas



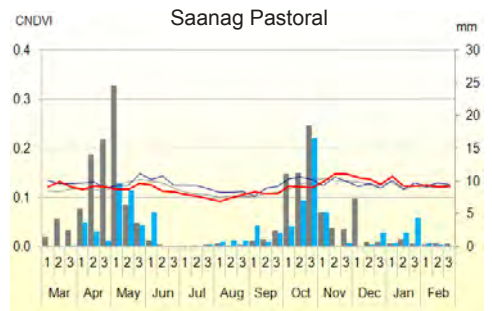
Pastoral Areas



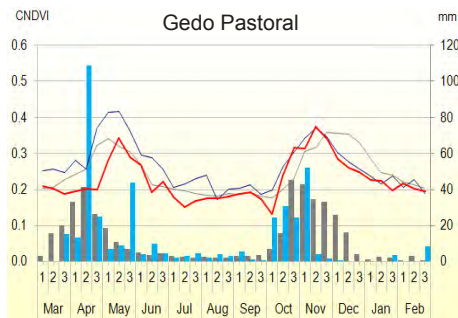
Togdheer Pastoral



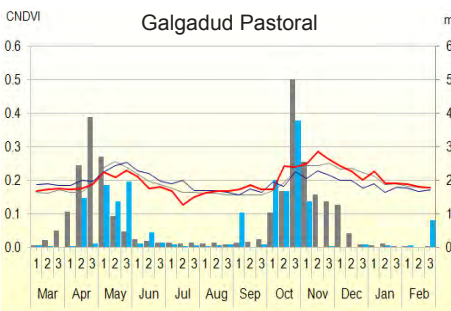
Saanag Pastoral



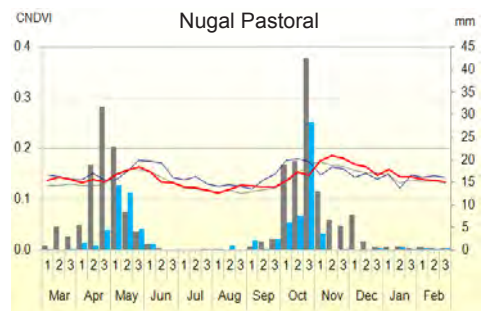
Gedo Pastoral



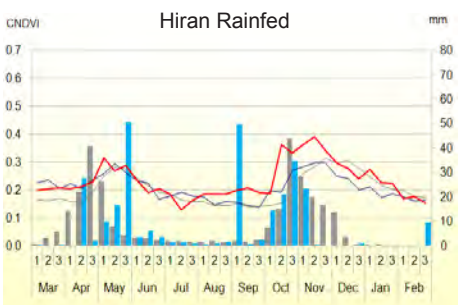
Galgadud Pastoral



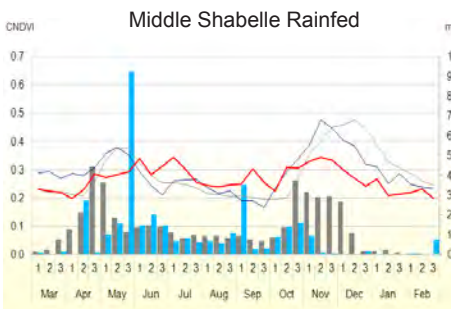
Nugal Pastoral



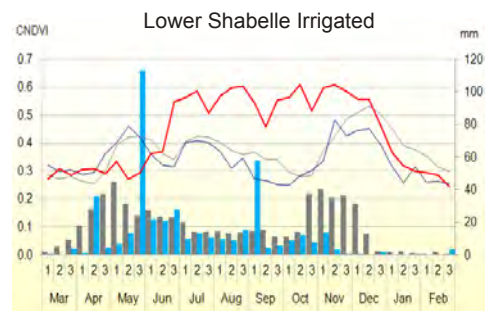
Hiran Rainfed



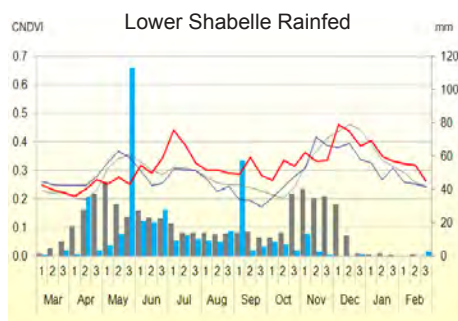
Middle Shabelle Rainfed



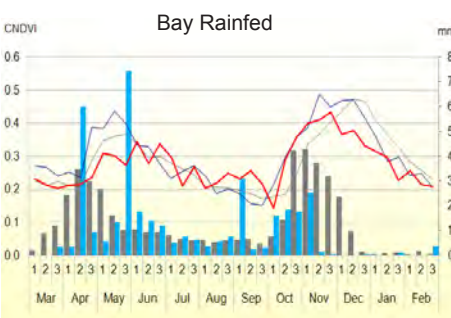
Lower Shabelle Irrigated



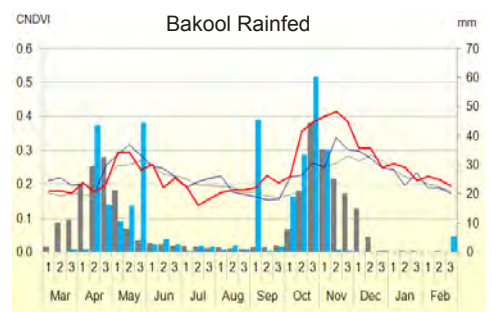
Lower Shabelle Rainfed



Bay Rainfed



Bakool Rainfed



rainfall 98-06 rainfall 08-09 CNDVI 98-06 CNDVI 06-07 CNDVI 08-09



The maps and graphs on this page are produced in collaboration with the FOODSEC action of the Joint Research Centre of the European Commission. The graphs present time profiles of crop specific NDVI (Normalized Difference Vegetation Index) as lines and rainfall values from the ECMWF model as bars. For more information please refer to <http://mars.jrc.ec.europa.eu/mars/About-us/FOODSEC>

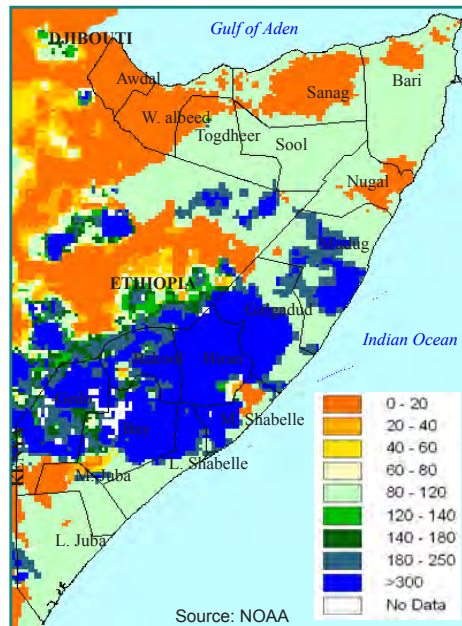
Long Term Trends

Time Series Data

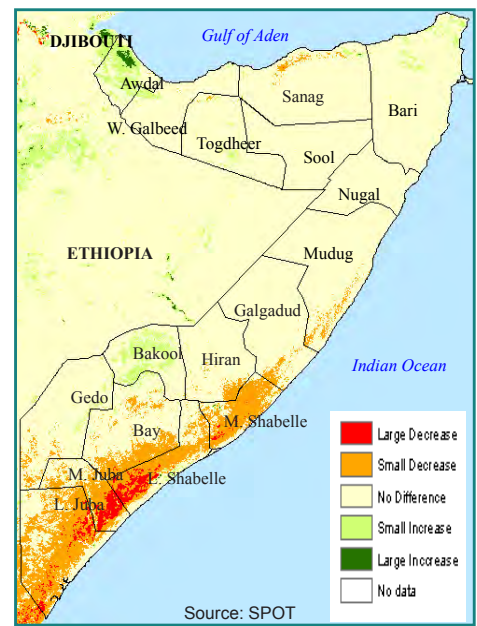
The 20 year RFE (Rainfall) time series map and graph are based on NOAA AVHRR data. The time series of NDVI data are derived as follows: The 10 year NDVI graphs used for the agricultural graphs are based on SPOT VEGETATION data and the 20 year NDVI data used for Pastoral graphs are from NOAA AVHRR (1982-present). These allow analysis of changes in vegetation vigor and density in response to biophysical conditions (including plant type, weather and soil). The primary use of these graphs is to compare the current state of rainfall and vegetation with previous time periods.

The hatched area on the graphs is the "Normal Deviation Range" (corresponding to approximately 1 standard deviation)

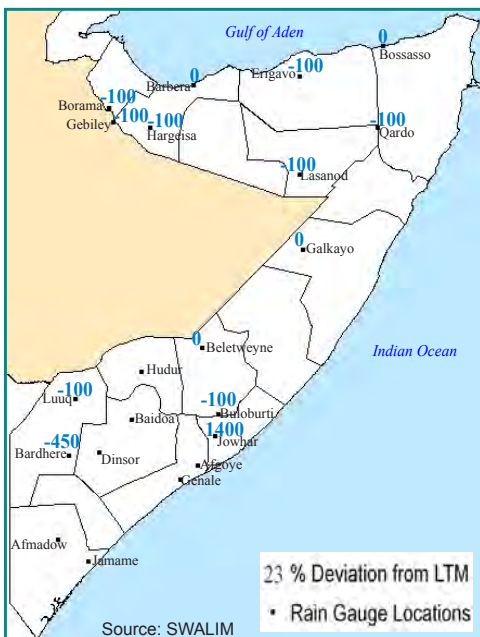
February '09: Rainfall as % of Long Term Mean



February '09: NDVI Absolute Difference from Long Term Mean



February '09: Rainfall station data as % of Long Term Mean

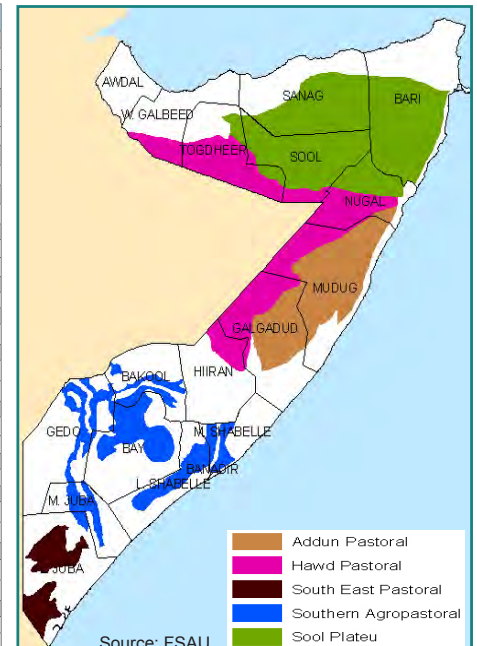


February '09: Rainfall station data Longterm Trend Data (LTM)

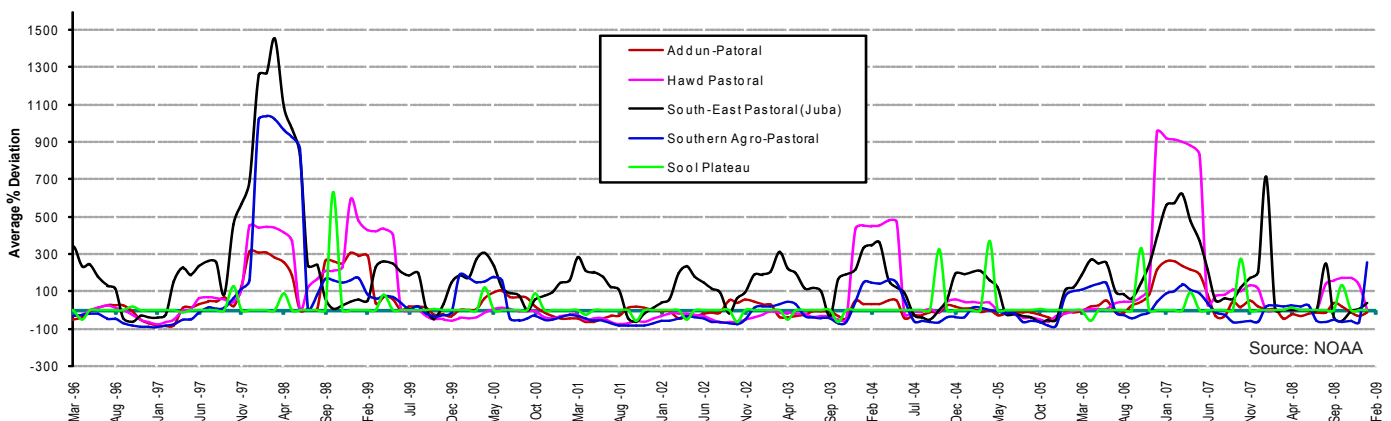
Station Name	Monthly Total	Monthly LTM	% Deviation
Awdal			
Borama	0	21	-100
Gediye	0	4	-100
W. Galbeed			
Barbera	0	0	0
Hargeisa	0	11	-100
Saanag			
Erigavo	0	8	-100
Sool			
Lasanod	0	1	-100
Bari			
Bossasso	0	0	0
Qardo	0	1	-100
Mudug			
Galkayo	0	0	0
Bakool			
Hudur	n/a	0	n/a
Bay			
Baidoa	n/a	3	n/a
Dinsor	n/a	0	n/a
Gedo			
Bardhere	33	6	450
Luuq	0	1	-100
M. Shabelle			
Jowhar	15	1	1400
L. Shabelle			
Afgoye	n/a	2	n/a
Genale	n/a	0	n/a
L. Juba			
Jamame	n/a	3	n/a
Afmadow	n/a	12	n/a
Central			
Beletweyne	0	0	0
Bulo burti	0	3	-100

*n/a: Data not available

Livelihood Zones for RFE Time Series Analysis



Historic RFE % Deviation From Long Term Mean (Refer to Livelihood Zones Map above)



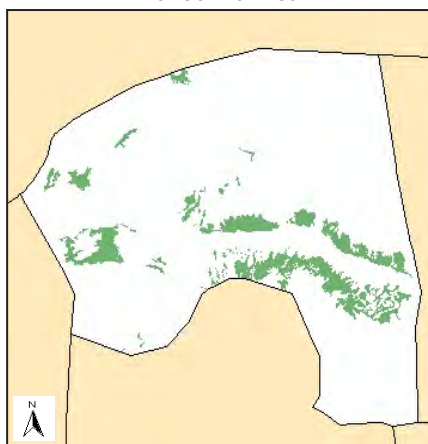
Longterm Trends - Historic NDVI % Deviation from Longterm Mean

Bakool/Hiran Regions - Agricultural Areas

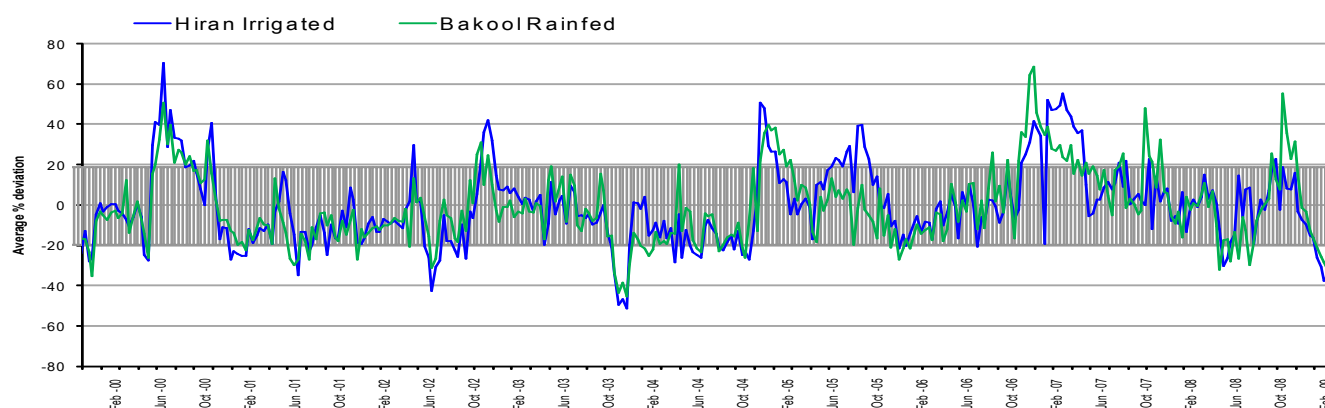
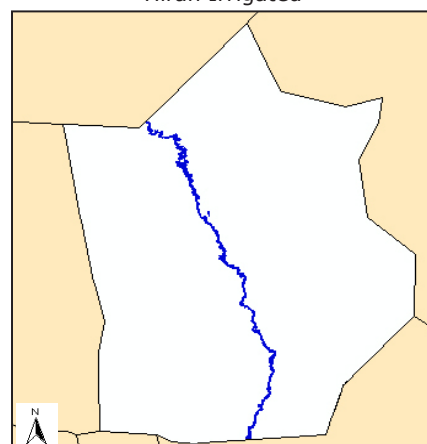
Bakool and Hiran Regions



Bakool Rainfed

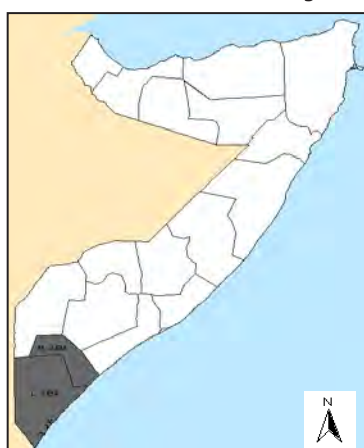


Hiran Irrigated

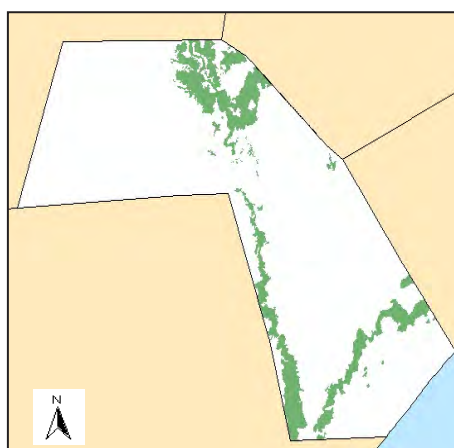


Juba Region - Agricultural Areas

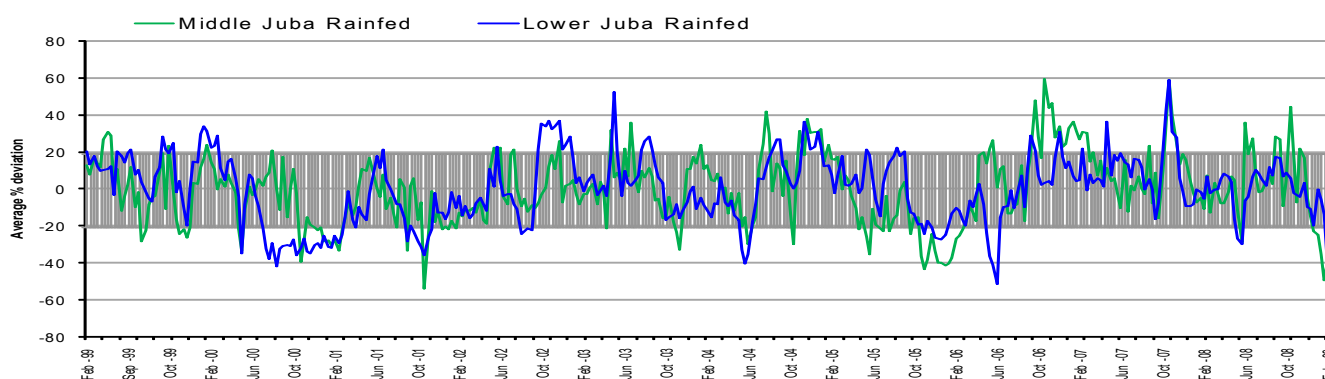
Middle and Lower Juba Regions



Middle Juba Rainfed

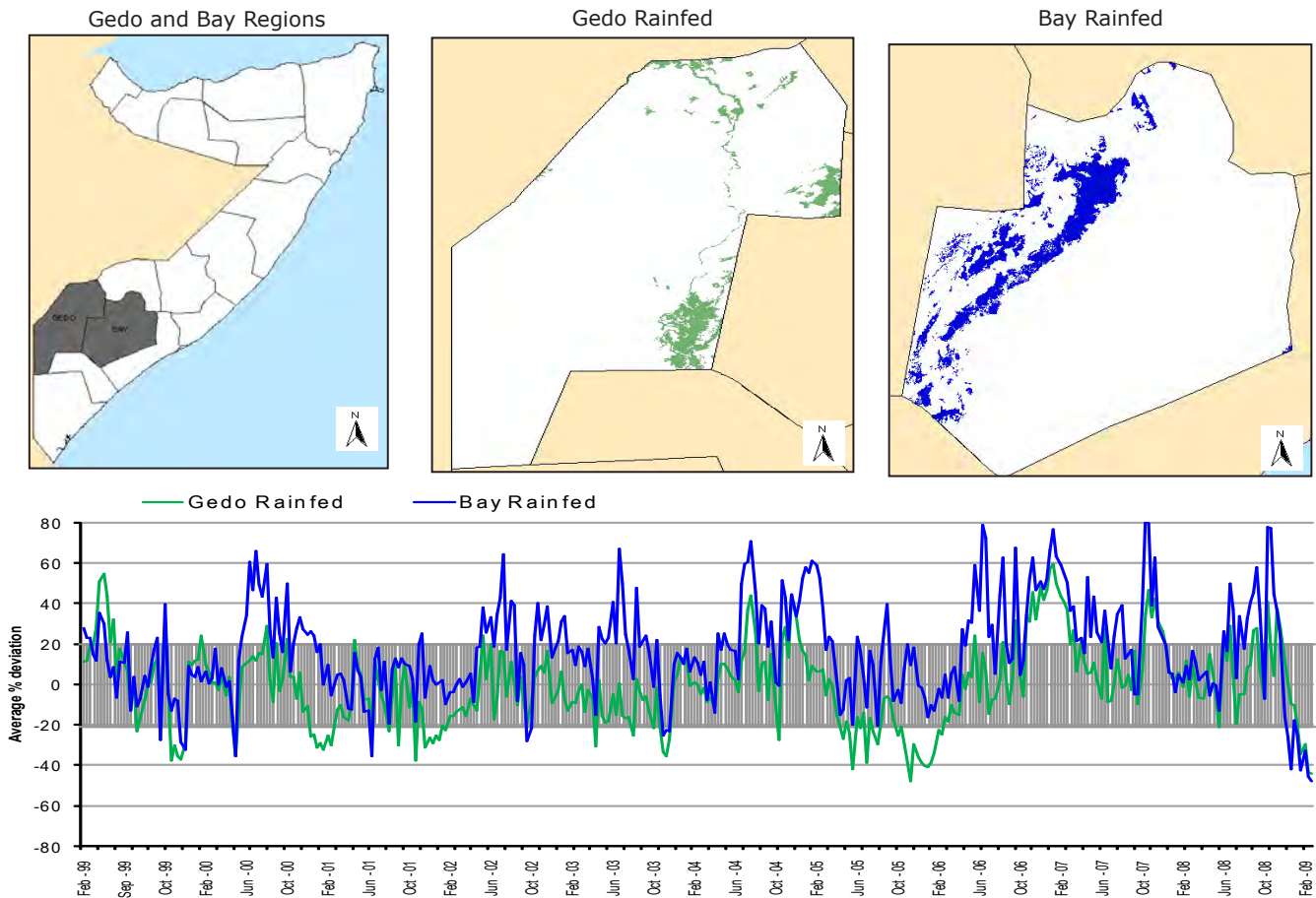


Lower Juba Rainfed

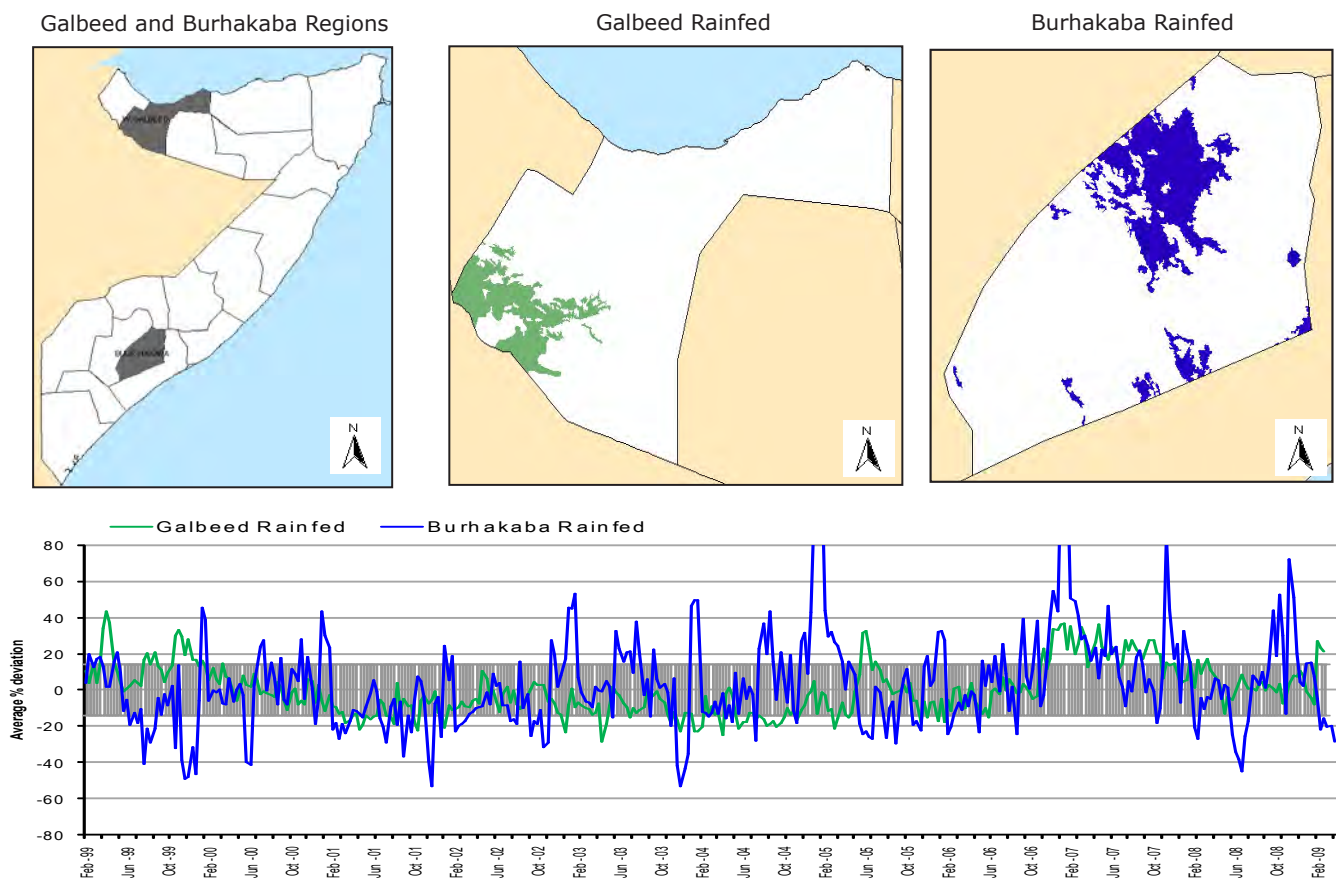


Longterm Trends - Historic NDVI % Deviation from Longterm Mean

Gedo/Bay Regions - Agricultural Areas



Galbeed/Bay Regions - Agricultural Areas



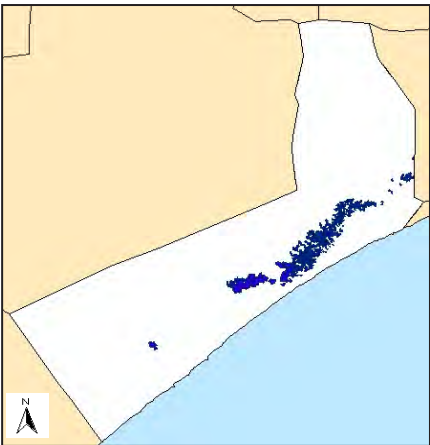
Longterm Trends - Historic NDVI % Deviation from Longterm Mean

Shabelle Regions - Agricultural Areas

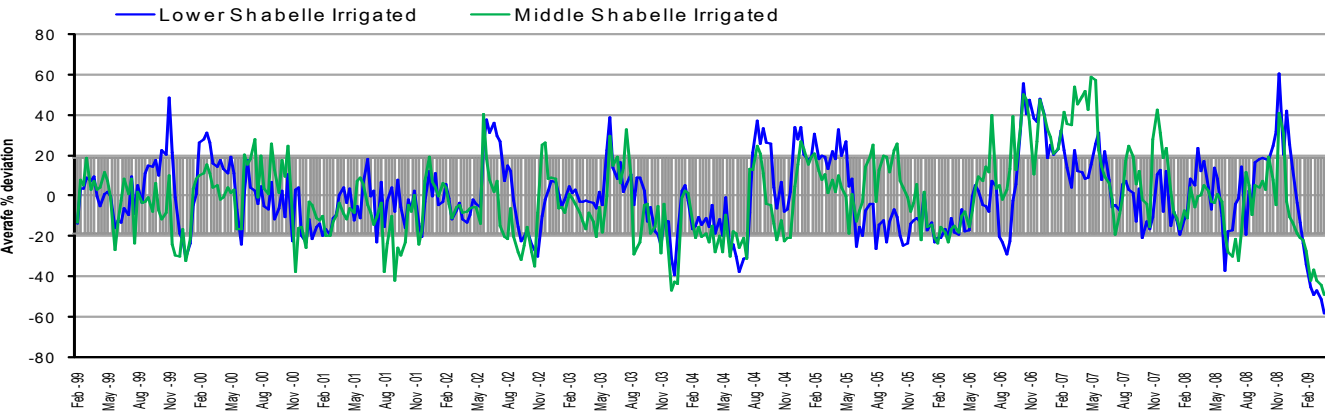
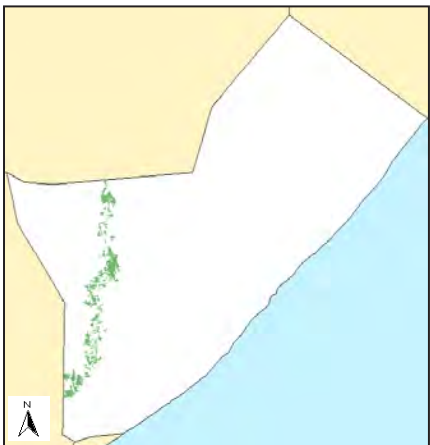
Lower and Middle Shabelle Regions



Lower Shabelle Irrigated

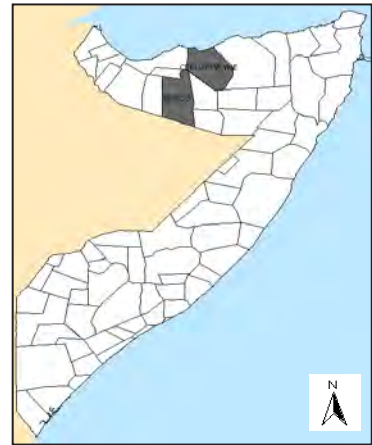


Middle Shabelle Irrigated

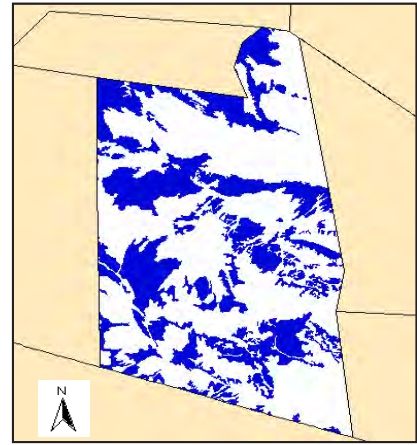


Burao/Elafweyn Districts - Rangelands

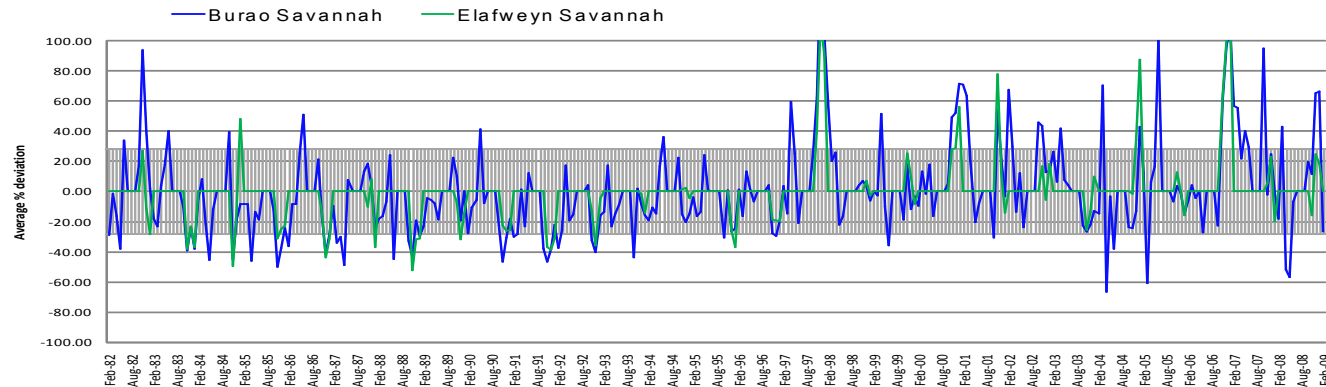
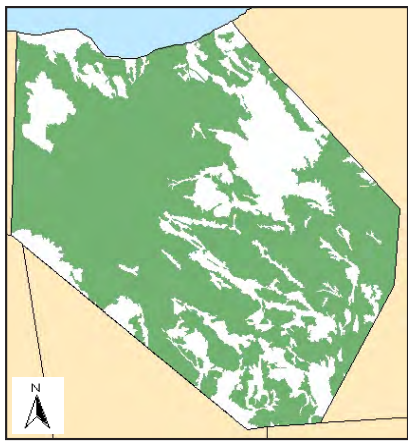
Burao and Elafweyn Districts



Burao Savannah

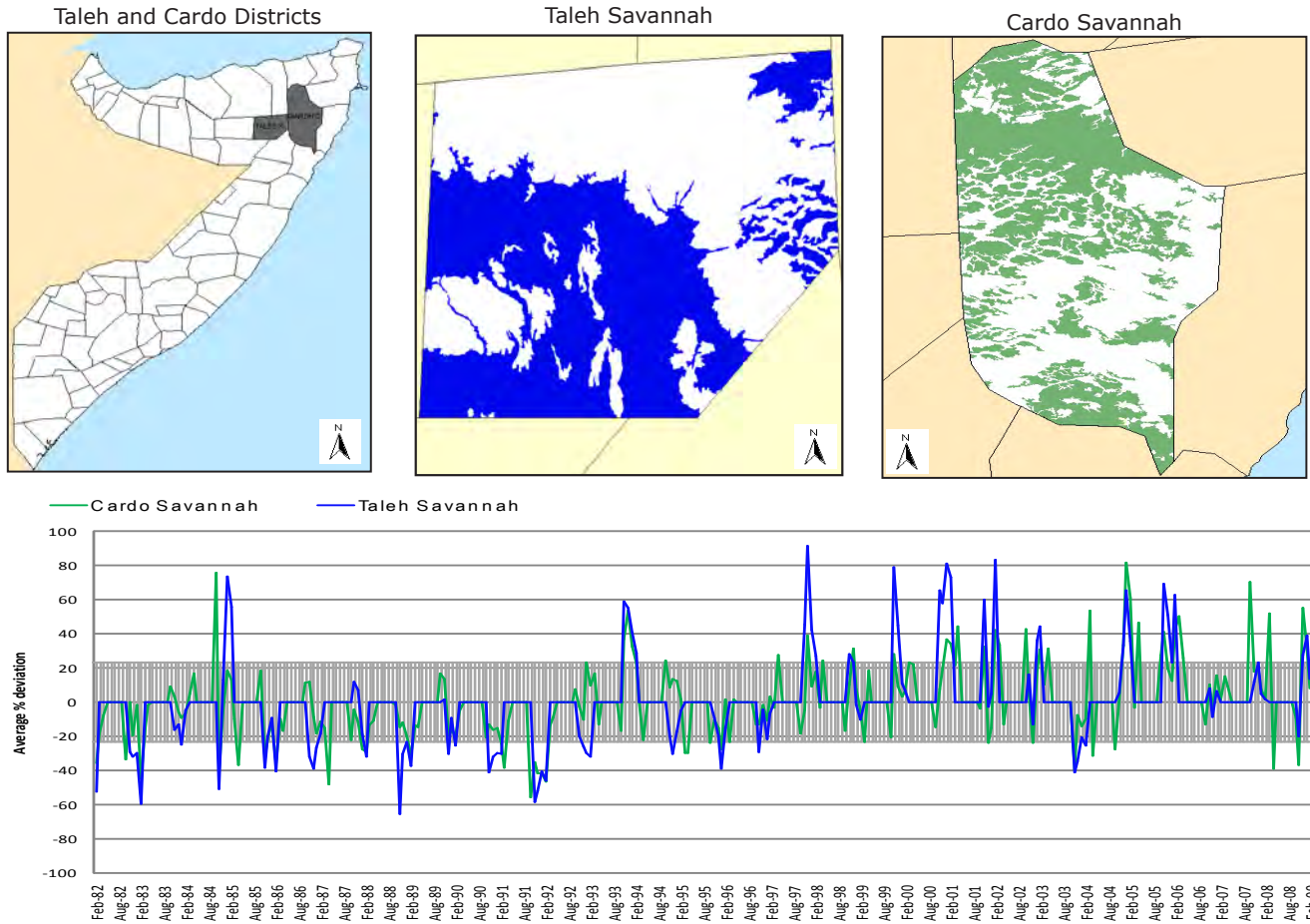


Elafweyn Savannah

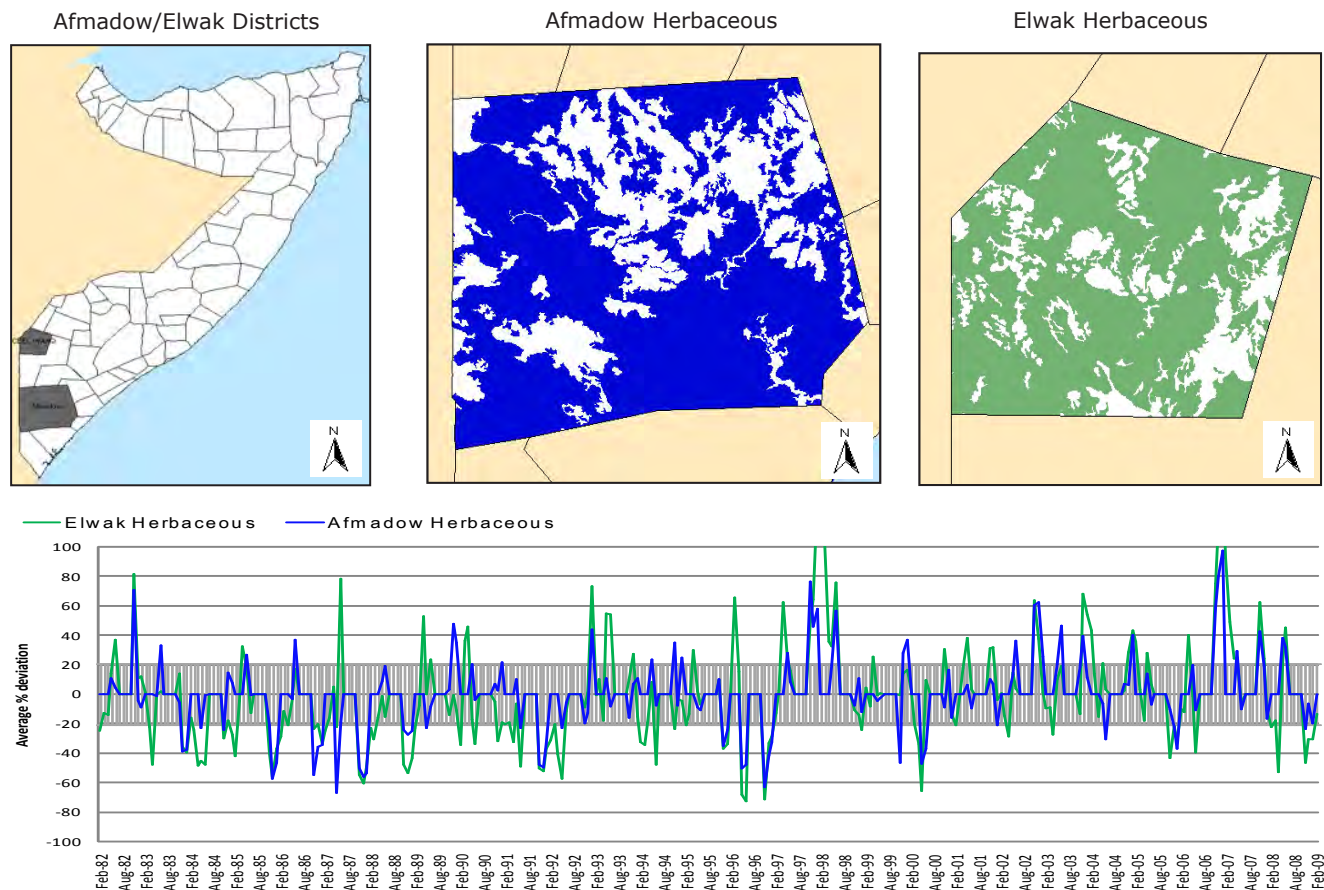


Longterm Trends - Historic NDVI % Deviation from Longterm Mean

Taleh/Cardo Districts - Rangelands



Afmadow/Elwak Districts - Rangelands



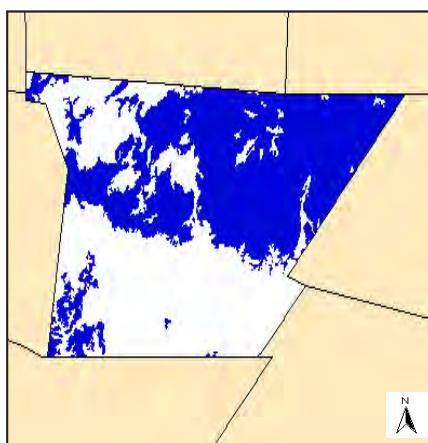
Longterm Trends - Historic NDVI % Deviation from Longterm Mean

Lasanod/Eyl Districts - Rangelands

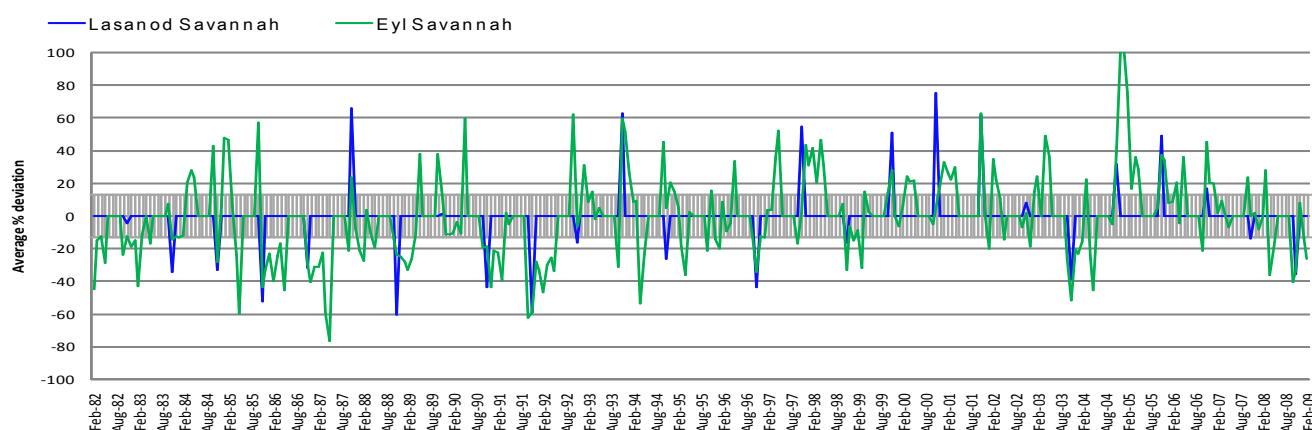
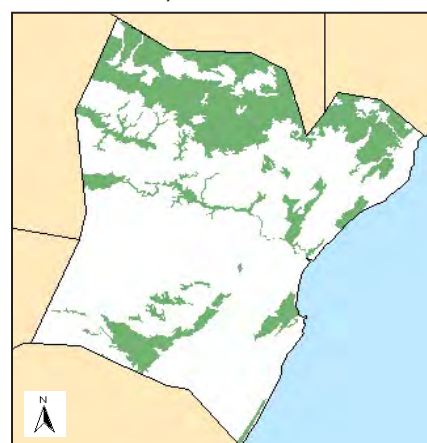
Lasanod and Eyl Districts



Lasanod Savannah



Eyl Savannah

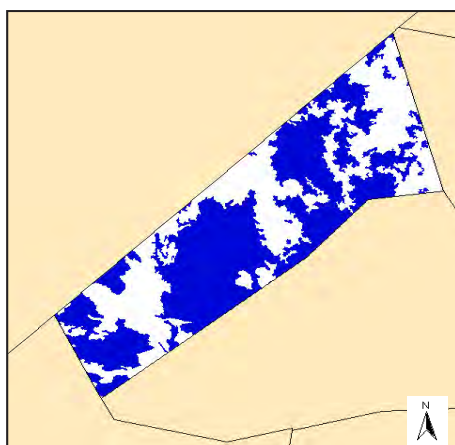


Abudwak/Elberde Districts - Rangelands

Abudwak and Elberde Districts



Abudwak Savannah



Elberde Savannah

