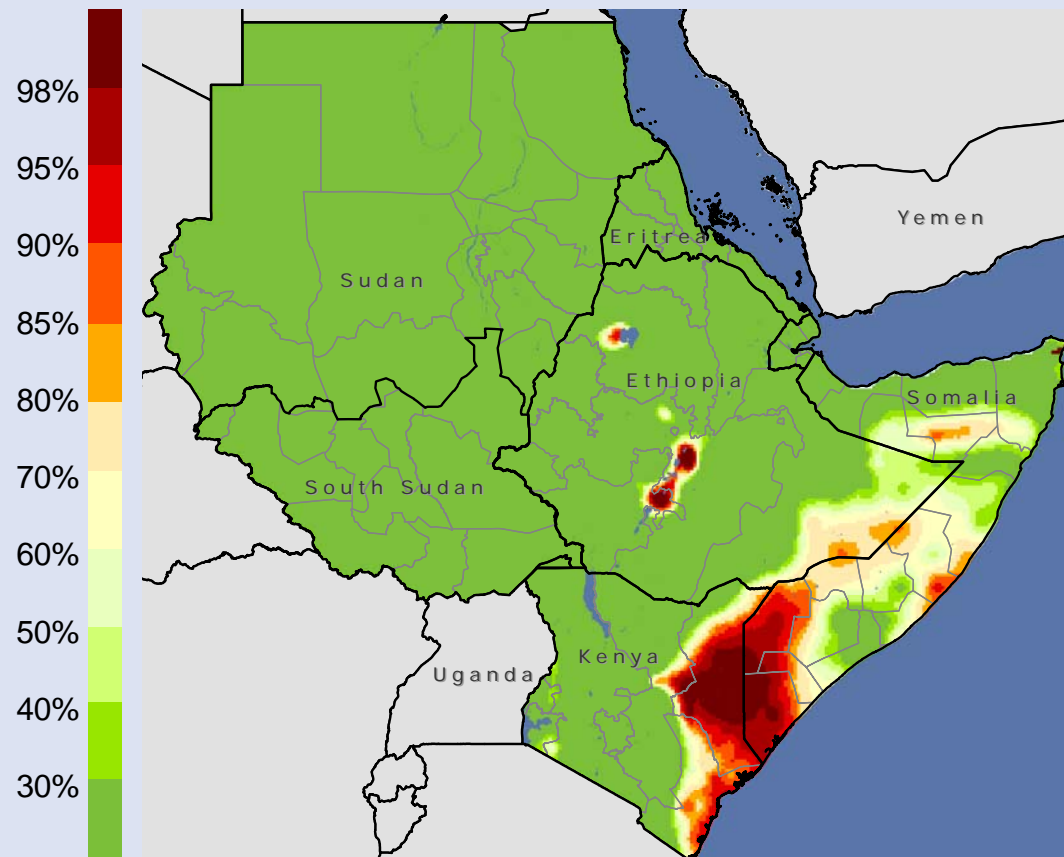


# Food Security Bulletin

## Special issue – Horn of Africa

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Probability that this is the worst drought in 60 years

# VEGETATION CONDITION

## JUNE 2011

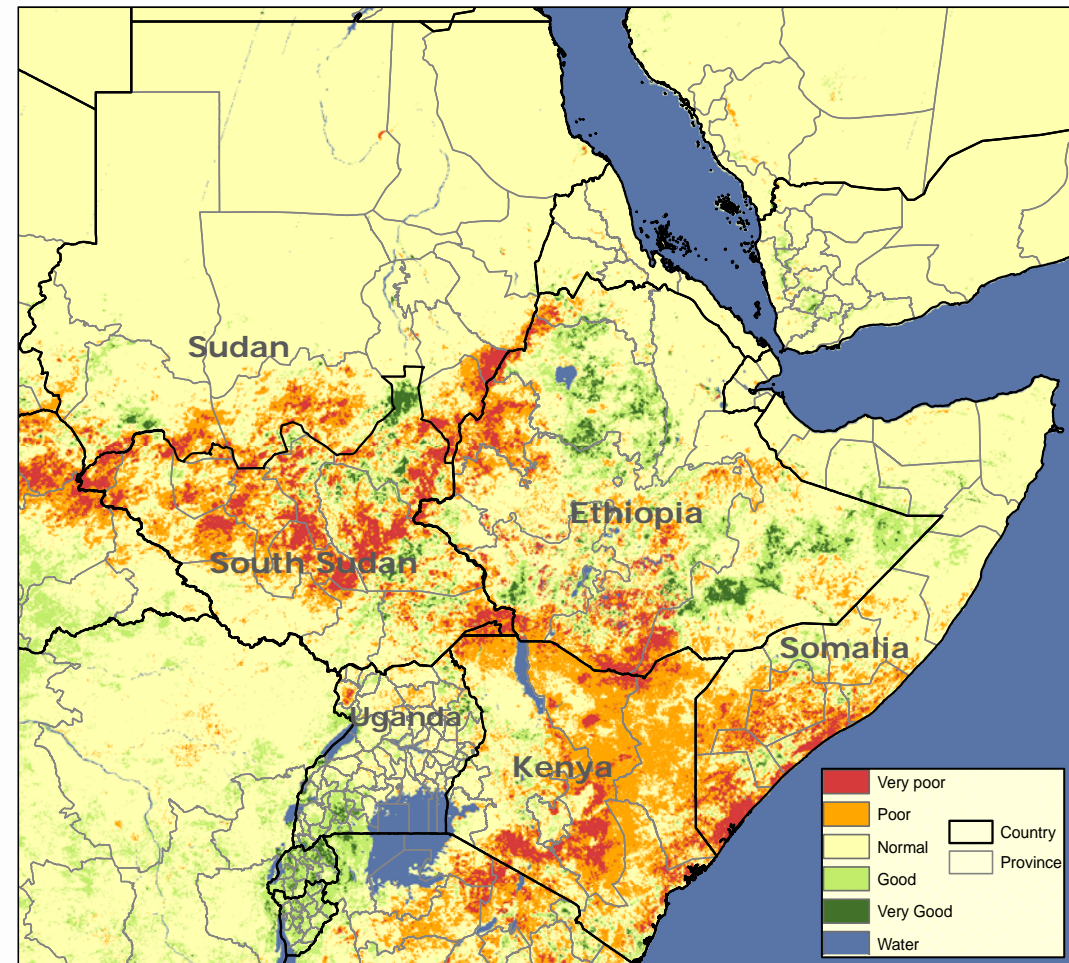


### OVERVIEW:

- POOR CONDITIONS ARE OBSERVED IN LARGE PARTS OF PASTORAL AREAS
- THE SITUATION WAS ALREADY CRITICAL IN DECEMBER 2010.
- AREAS OF MOST CONCERNS ARE SOUTH SOMALIA, KENYA AND SOUTH ETHIOPIA.
- NORTH SUDAN AND SOUTH SUDAN SHOW BAD CONDITIONS AT THE BEGINNING OF THIS YEAR'S SEASON.
- THE SITUATION NEEDS TO BE CLOSELY MONITORED IN THE COMING MONTHS.

**PRINCIPLE:** THE NORMALIZED DIFFERENCE VEGETATION INDEX (NDVI) IS DERIVED FROM SATELLITE REMOTE SENSING DATA. REMARKABLY LOW VALUES FOR A GIVEN PERIOD AND COMPARED TO THE HISTORICAL AVERAGE INDICATE POOR VEGETATION CONDITIONS.

The drought hitting the Horn of Africa is evidenced on this map that shows the current vegetation conditions -at the end of June 2011- compared with a normal season. Poor vegetation conditions are observed in pastoral areas across the region, namely South-West Somalia, East and North Kenya, South Ethiopia and in southern and eastern regions of North Sudan. In South Sudan, the drought-prone area in the east (Kapoeta) and central regions (Warapp and Lakes) show significant delays in the vegetation growth in these first months of the 2011 growing season. The region needs particular attention in the coming months as its livelihoods are mainly based in livestock. The poor conditions observed in Ethiopia, Kenya and Somalia are persistent since the last trimester of 2010, as shown on the trend figures (next page).



Vegetation condition in June 2011 compared with the short-term average (1999-2009).  
Sensor: SPOT VEGETATION



# VEGETATION CONDITION

## FROM DECEMBER 2010 TO JUNE 2011

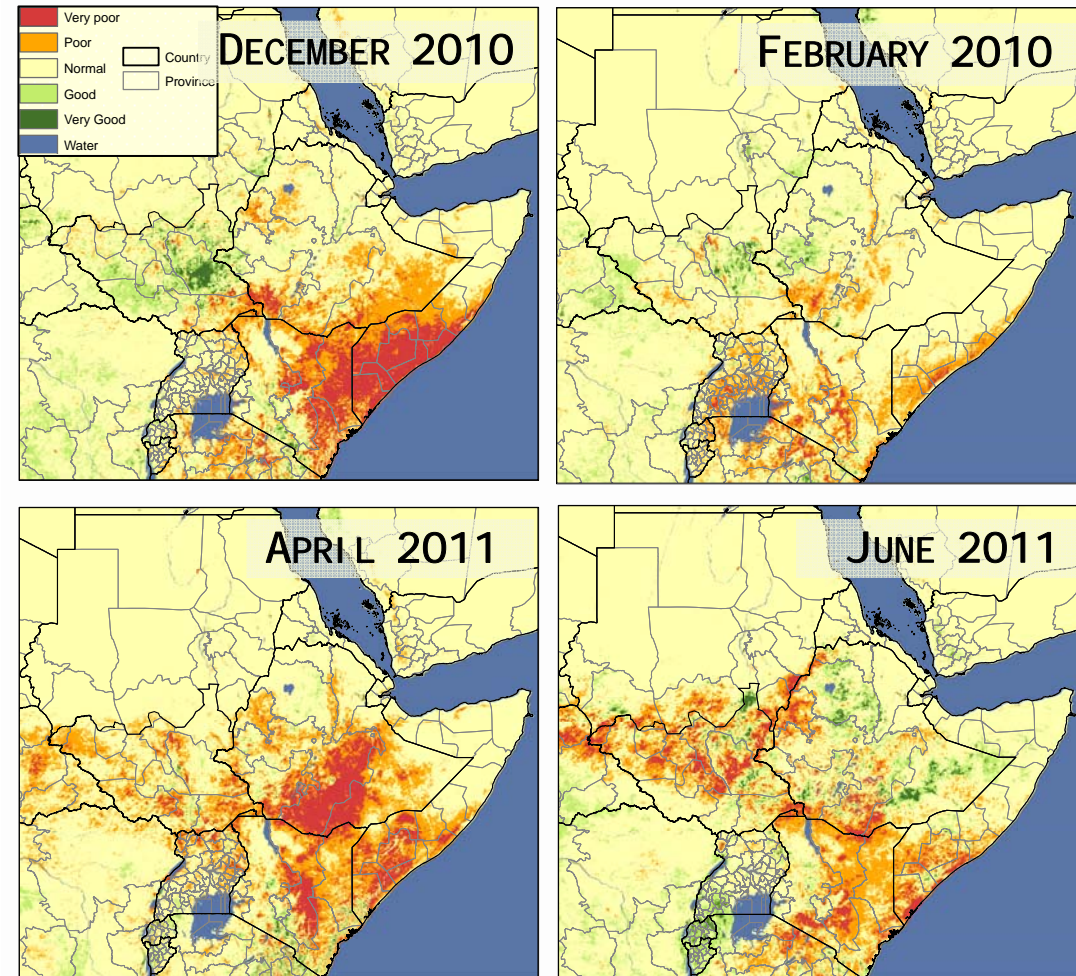


### OVERVIEW:

- VERY POOR CONDITIONS ALREADY IN DECEMBER 2010.
- NO SEASON SHIFT AS THE SHORT DRY SEASON (FEBRUARY 2011) WASN'T BETTER THAN THE AVERAGE.
- VERY POOR CONDITIONS AGAIN IN THE MAIN RAIN SEASON (APRIL 2011).
- JUNE 2011: CONCERNS OVER DELAYED VEGETATION DEVELOPMENT IN SUDAN AND IN SOUTH SUDAN.

**PRINCIPLE:** THE NORMALIZED DIFFERENCE VEGETATION INDEX (NDVI) IS DERIVED FROM SATELLITE REMOTE SENSING DATA. REMARKABLY LOW VALUES FOR A GIVEN PERIOD AND COMPARED TO THE HISTORICAL AVERAGE INDICATE DROUGHT.

Very poor conditions were observed in December 2010 in a large part of south Somalia and eastern Kenya. The south and south-eastern parts of Ethiopia were also affected by the drought but at a less extent than Somalia and Kenya. The second crop season of 2010, from October to December failed in almost the entire region. The main rain season of 2011 failed also in most parts of the areas already affected by the drought in 2010. The vegetation conditions in April 2011 show that the crop season was compromised in Somalia and South Ethiopia. The pastures did not recover from the previous failed rain season. Though the overall conditions seem to improve in June 2011 for the northern parts of the region – Central Ethiopia and South Sudan – there are concerns about poor vegetation conditions observed in parts of South Sudan and of North Sudan (Kordofan and Blue Nile).



NDVI absolute difference between actual and short-term average (1999-2009).  
Sensor: SPOT VEGETATION.

# VEGETATION CONDITION SEASONS ASSESSMENT FROM JULY 2010 TO JULY 2011

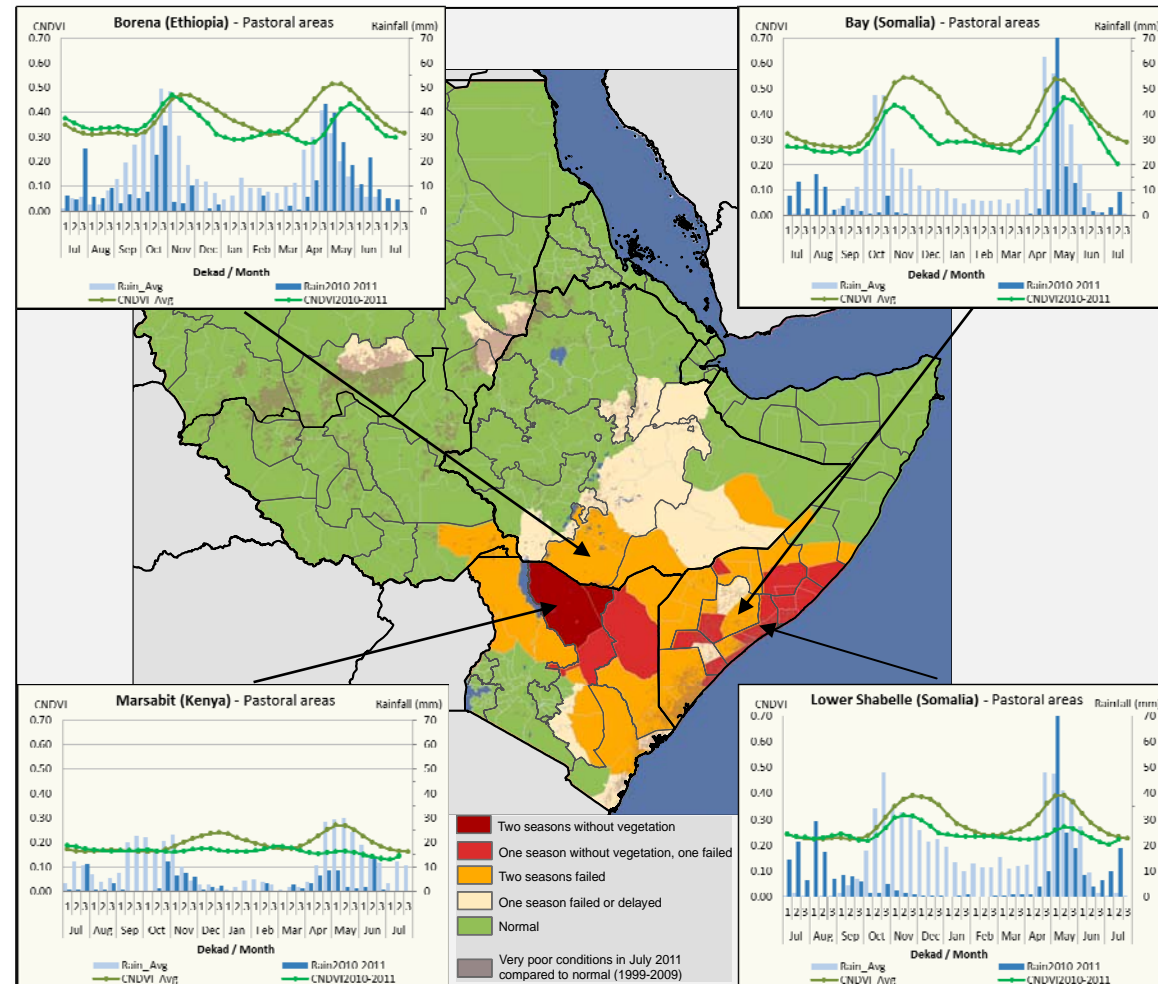


**PRINCIPLE:** THE ANALYSIS OF VEGETATION PROFILES PROVIDES AN OVERALL ASSESSMENT OF THE SEASONS. A SEASON IS CONSIDERED FAILED IF THE VEGETATION INDEX IS FAR BELOW THE LONG-TERM AVERAGE THROUGHOUT THE SEASON.

## OVERVIEW:

- TWO CONSECUTIVE CROP SEASONS TOTALLY FAILED IN LARGE PARTS OF SOMALIA AND NORTH-EAST KENYA.
- POOR CROP AND PASTURES PERFORMANCE IN SOUTH ETHIOPIA AND LARGE PARTS OF EAST KENYA.
- JULY 2011: CONCERNS OVER DELAYED VEGETATION DEVELOPMENT IN SOME AREAS OF SUDAN AND SOUTH SUDAN.

The region most affected by the drought has usually two rain seasons, from September to December, and from March to July. The exceptional character of the current situation is a result of erratic rainfalls during the last two seasons. In northeast of Kenya and in the Shabelle region of Somalia, the two seasons totally failed (red areas in the map), and in the surrounding regions, the first crop season failed whereas the second was significantly delayed, reducing sensibly the production and the duration of good pastures and water availability. The vegetation index has been systematically below the historical average during all the normal vegetation growing periods. The vegetation index of July 2011 indicates also that the season is delayed in southern part of North Sudan, namely in Kordofan.



Number of seasons since October 2010 that have failed or are delayed. "Failed" means that a poor season has been observed compared to the short-term average (1999-2009). These conditions are derived from the interpretation of SPOT NDVI profiles.

# RAINFALL ANALYSIS

FROM AUGUST 2010 TO JULY 2011



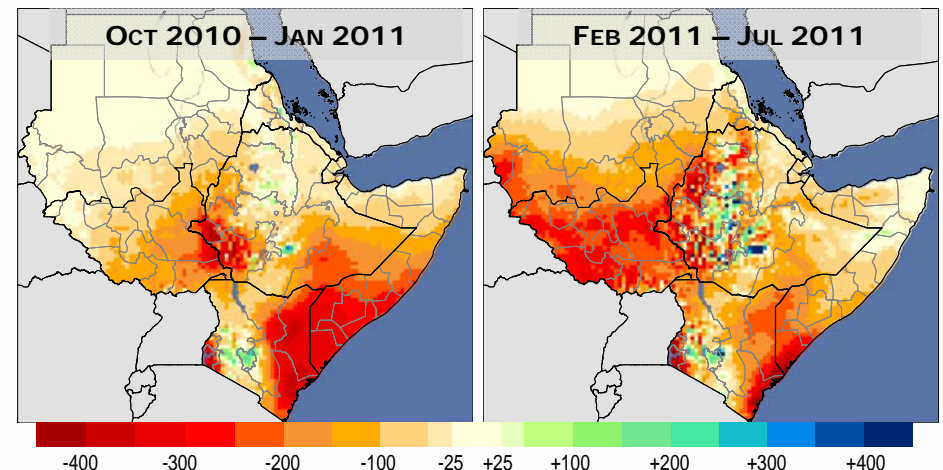
## OVERVIEW:

- THE LAST 12 MONTHS ARE CHARACTERISED BY EXTREMELY LOW RAINFALL.
- CONCERNED AREAS ARE SOMALIA, NORTH EAST KENYA, EAST ETHIOPIA.
- RAINFALL LEVELS THAT HAPPEN IN AVERAGE EVERY 60 YEARS HAVE BEEN OBSERVED IN TWO CONSECUTIVE SEASONS.

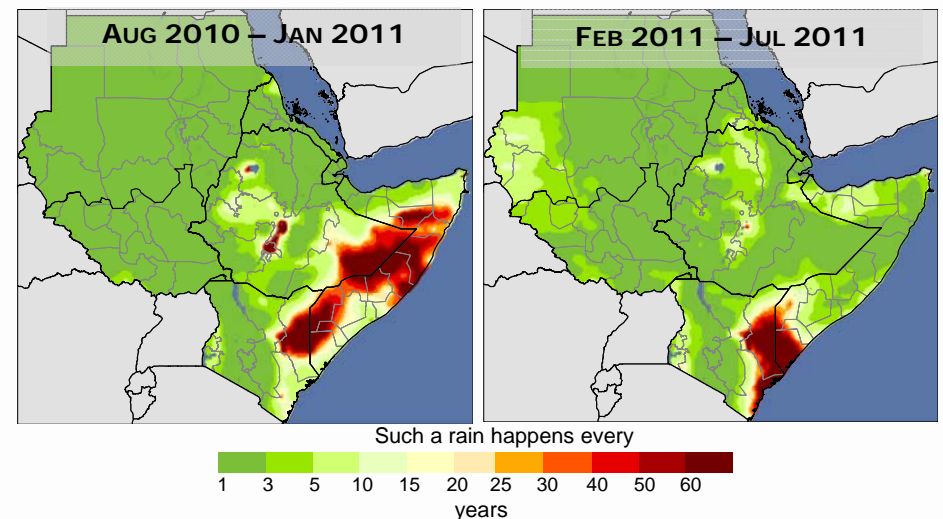
**PRINCIPLE:** THE CUMULATIVE RAINFALL ANOMALIES ARE THE DIFFERENCE BETWEEN TOTAL RAINFALL RECEIVED DURING A PERIOD (A SEASON) AND THE AVERAGE OF TOTAL RAINFALL RECEIVED DURING THE SAME PERIOD IN THE PREVIOUS YEARS. NEGATIVE ANOMALIES INDICATE CONDITIONS DRYER THAN EXPECTED.

Most of the Horn of Africa received much less rainfalls than usual, and the deviations went up to more than 200 mm in the period October 2010 – January 2011 in Somalia and eastern Kenya, areas that usually receive around 600 mm per year. The cumulative anomalies, still largely negative, seem less dramatic in February-July 2011 because of unexpected heavy rains that fell in the beginning of May and mid-July 2011 (see graphs on page 3). The situation in Sudan needs to be closely monitored in the coming months as this is the middle of the rain season and cumulative rainfall are already at more than 200 mm below the average.

The total rainfall observed in the periods August 2010 – January 2011 and February 2011 – July 2011 were so exceptionally low in drought affected areas of Somalia, Ethiopia and Kenya that less rains are expected to happen only every 50 to 60 years (brown spots on the maps of p. 4).



Total rainfall anomalies (mm) with the short-term average (1999-2010) for two seasons: from October 2010 to January 2011, and from February to July 2011. Source: ECMWF data.



Expected occurrence of the total rainfall observed in the last 12-month period.



# GENERAL FOOD SECURITY CONDITION

## SOMALIA



### OVERVIEW:

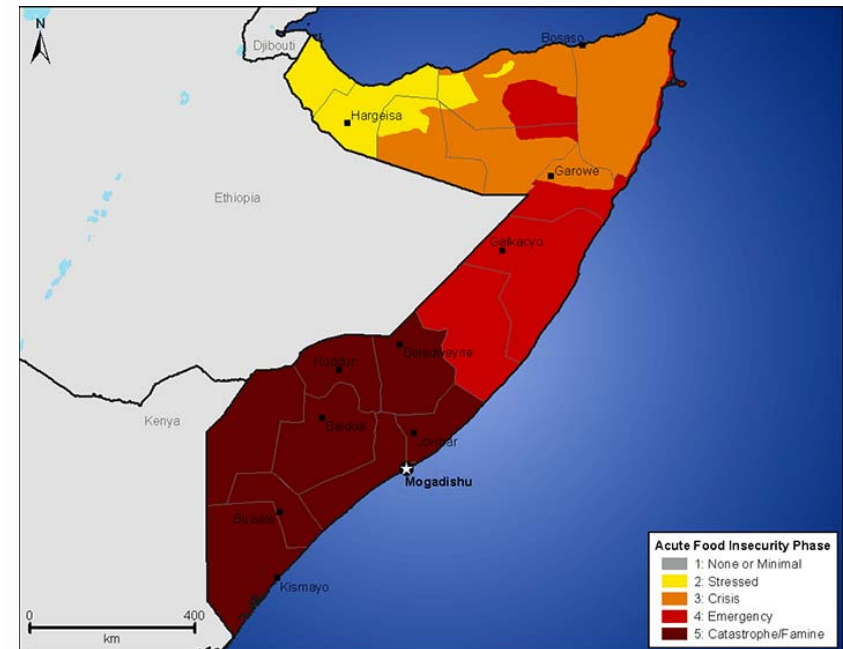
- FAMINE HAS BEEN DECLARED IN TWO REGIONS IN SOUTHERN SOMALIA.
- SIX MORE REGIONS MAY FACE FAMINE IN THE UPCOMING MONTHS.
- GLOBAL ACUTE MALNUTRITION REACHES 55%.
- SEVERE ACUTE MALNUTRITION REACHES 30%.
- 3.7 MILLION PEOPLE ARE CONCERNED IN THE COUNTRY.

Famine was declared to two regions of southern Somalia: southern Bakool and Lower Shabelle on Wed 20 July by FSNAU (Food Security and Nutrition Analysis Unit/FAO) of Somalia and FewsNet. Famine/catastrophe declaration is based on IPC (Integrated Food Security Phase Classification) classification, which was raised from phase 4 Emergency to phase 5 Famine for these two areas. Central Somalia remains for the time being in phase 4 Emergency, whereas most parts of southern Somalia are in phase 3 (Crisis).

The classification relies on three main outcome indicators: Global Acute Malnutrition (GAM >30%), Crude Death Rate (>2/10,000/day), and at 20% of households facing extreme food shortages with limited ability to cope. In addition the following evidence was used to support the classification: destitution, large displacement, disease outbreaks, and social collapse. Since humanitarian access to affected areas is extremely limited, and the prevailing conditions are expected to continue in terms of drought, high food prices, and limited coping mechanisms, it is likely that all eight regions in southern Somalia will face famine conditions in the coming 1-2 months.

Currently the number of people in crisis nationwide is **3.7 million** (nearly half of the total population), and **2.8 million** of them are located in southern Somalia.

Current malnutrition rates of children less than five years old in southern Somalia range from GAM rates of 23.8% to 55%, whereas SAM (Severe Acute Malnutrition) rates vary from 5.9% to 29.8%. These rates indicate an extremely serious situation and high risk of mortality (SAM rate >1% alone indicates an increased risk of mortality). In terms of mortality, situation especially in Lower Shabelle and southern Bakool is very worrisome, with Crude Death Rates ranging from 4.29 to 6.12 in Lower Shabelle, whereas Under 5 Death Rates are between 13.2 and 20.3 in Lower Shabelle, and between 5.3 and 7 in Bakool.



Latest IPC projection for August-September 2011.  
Source: FEWS-NET



# GENERAL FOOD SECURITY CONDITION

## KENYA



### OVERVIEW:

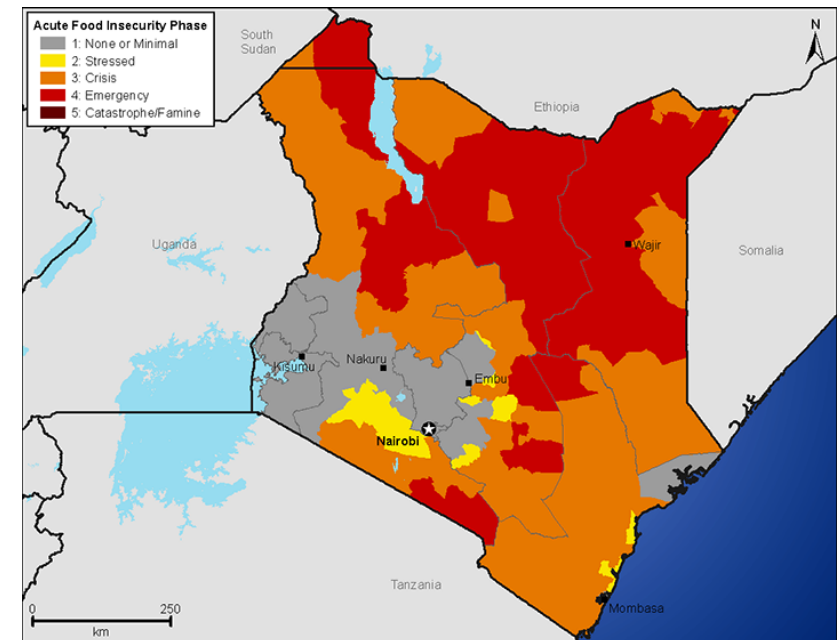
- GLOBAL ACUTE MALNUTRITION MAY REACH 37%.
- HIGH STAPLE FOOD PRICE INCREASES HAVE BEEN OBSERVED.
- 400.000 SOMALI REFUGEES ARE BENEFITING FROM ASSISTANCE.
- ESTIMATED 3.5 MILLION PEOPLE MAY REQUIRE HUMANITARIAN ASSISTANCE.

In terms of malnutrition, the GAM rates vary from 15.6% in Central Kenya (Garbatulla) to 22.8% in Wajir, and to 27.5% in Mandera. These survey results are from the time period between February and April, indicating that situation at the moment is likely to be worse due to the failed long rains. Recent nutrition surveys in 11 northern districts (reported by CARE) indicate GAM rates from 24 to 37%. These numbers show that the situation is very serious (>15% GAM indicates an emergency situation).

Prices of staple foods have increased especially in areas where rains failed (marginal agricultural areas of southeastern Kenya), and in pastoral areas where there is low market access. For example in Kitui the price of white maize was 246% higher in May 2011 than a year ago. As a response to the price increases the authorities have suspended the import duty on maize. There are also reports that the government is importing rice to stabilize the grain markets but it is not known yet whether this rice will reach the pastoral and marginal agricultural areas suffering from highest price increases. Depending on the long rains harvest expected in the high producing areas in August, prices may also decrease especially in those areas receiving average or above-average harvest.

The situation in and around the Dadaab refugee camp in North-Eastern Province of Kenya is worrisome. The continuing influx and presence of 400,000 Somali refugees is stretching the local services and capacity (e.g. environmental degradation is evident due to firewood extraction), and there is some tension as the refugees receive more assistance than the locals do – yet the malnutrition rates of the local population are comparable to those of the refugees.

The number of people requiring humanitarian assistance in the coming months is estimated at **3.5 million**. Depending on the results of the shortly starting long rains assessment the number may, however, be revised. The results of the long rains assessment are likely to be released around mid-August.



Latest IPC projection for August-September 2011.  
Source: FEWS-NET



# WEALTH MAP

## KENYA



### OVERVIEW:

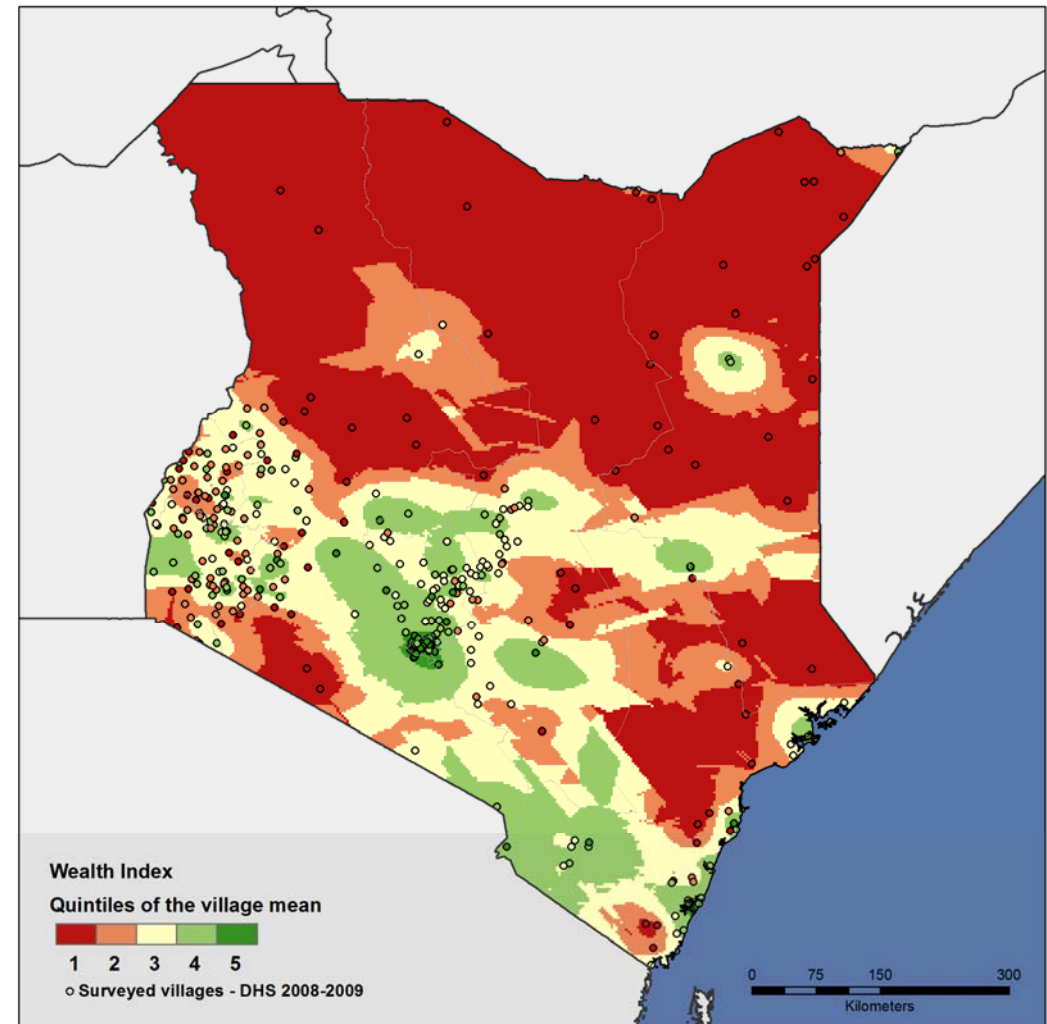
- MOST OF THE DROUGHT AFFECTED AREAS OVERLAP WITH THE POOREST REGIONS.
- REFUGEES FROM SOMALIA ARE ARRIVING IN AN ALREADY DEPRIVED AREA.
- THE PRESENT DROUGHT IS EXPECTED TO DETERIORATE LIVELIHOODS OF THE POORER AND INCREASE THEIR VULNERABILITY TO FUTURE NEGATIVE SHOCKS.

**DEFINITION:** THE WEALTH INDEX (WI) IS A COMPOSITE INDEX THAT COMBINES THE OWNERSHIP OF KEY ASSETS; IT IS USED AS A PROXY INDICATOR OF HOUSEHOLD LEVEL OF WEALTH.

Wealthy households can better cope with negative shocks on their revenues than poor families. This map shows that in Kenya relative wealth is concentrated in highly populated regions, especially around Nairobi; while the North and East Kenya are characterized by widespread poverty.

It is worth noting that the drought regions highlighted by the previous vegetation and rainfall analysis are mostly included in the poorest areas of the country. This increases food security concerns and in particular on the Somali border from where thousands of refugees are arriving in an already deprived area.

Households in the affected areas may lose their assets (livestock mortality) or may have to sell them to face the crisis. As a consequence, substantial deteriorations of their livelihoods are expected as well as an increase of food insecurity in the upcoming years.



Quintiles of averaged (village level) wealth index: krigged values and surveyed villages - Source: Demographic and Health Survey Kenya 2008-2009





# GENERAL FOOD SECURITY CONDITION ETHIOPIA



Due to relatively good production in 2010 many Ethiopian households had stocks that lasted for a few months in 2011. The stocks, however, have been depleted and now most households rely on market purchases. This has put households in an increasingly difficult position due to high and rising food prices, especially in those *belg* dependent and pastoral areas where there are no local crop or animal products to sell due to failed rains. It has been reported that in Somali region alone 250,000 livestock died in recent months due to drought.

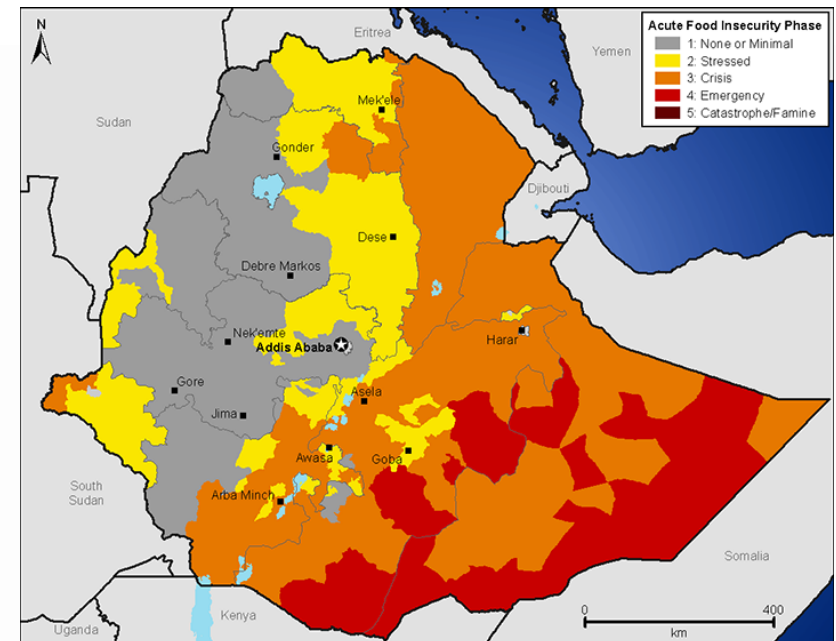
In addition the drought in neighboring Somalia and northern Kenya has meant that available stocks for example from SNNPR were exported to those areas, which has further increased the prices in Ethiopia. Moreover, it seems that the *mehar* production in 2010 was overestimated, which explains the lack of available cereals and high food prices in most markets. For example, the price of white wheat in Addis Ababa in May was 66% higher than in May 2010. As a result the government has set an export ban for cereals, and is planning to procure cereals at international markets to sell at subsidized prices to urban consumers.

According to results of nutrition studies conducted in southern and central Ethiopia the GAM rates ranged from 10.5 (in Borena) to 25% (in Bale). The studies were conducted in March and May, respectively, and it can be expected that the malnutrition situation worsens before the *mehar* harvest unless large-scale humanitarian assistance is made available.

According to the preliminary results of the *belg* assessment >1 million additional people need assistance for the coming months, with half of them residing in SNNPR (the official assessment results have not been released). The government, however, released a revised Humanitarian Requirements Document on 11 July, raising the total number of people in need of humanitarian assistance to **4.6 million**. In addition the country has around 7.5 million PSNP beneficiaries, who receive regular inter-annual assistance.

## OVERVIEW:

- IN SOMALI REGION 250.000 LIVESTOCK DIED DUE TO DROUGHT.
- GLOBAL ACUTE MALNUTRITION REACHES 25%.
- THE GOVERNMENT CLAIMS 4.6 MILLION PEOPLE ARE IN NEED OF HUMANITARIAN ASSISTANCE.



Latest IPC projection for August-September 2011.

Source: FEWS-NET

**All maps and underlying data can be downloaded at:**

<ftp://mars.jrc.ec.europa.eu/bulletin/HornAfrica/>

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