



Drought-related food insecurity: A focus on the Horn of Africa

Drought has caused famine in parts of Somalia and killed tens of thousands of people in recent months. The situation could get even worse unless proper action is taken urgently. In the Bakool and Lower Shabelle areas, acute malnutrition tops 50 percent and death rates exceed six per 10,000 people per day. Droughts have been a regular occurrence in the past in many parts of the world with grave consequences on food security and malnutrition. With climate change, severe droughts are likely to occur more often and to affect larger areas.

The international community needs to rapidly tackle the current humanitarian disaster in the eastern part of the Horn of Africa. It also must consider longer-term measures to deal with the devastating impacts of droughts.

Droughts and impacts on agriculture and food security

Drought has become more frequent and more severe in recent years and drought-affected areas are projected to increase in extent. Drought ranks as the single most common cause of severe food shortages, particularly in developing countries, and represents one of the most important natural triggers of malnutrition and famine. It affects the four dimensions of food security – availability, stability, access and utilization.

Drought impacts on agriculture include crop losses, lower yields in both crop and livestock production, increased livestock deaths, increases in insect infestation and plant and animal diseases, damage to fish habitat, forest and range fires, land degradation and soil erosion. Its impacts on human health include increased risk of food and water shortages, increased risk of malnutrition and higher risk of water- and food-borne diseases.

Drought represents a constant threat to world food security. It causes income losses because several sectors can be affected. Prices of food products rise as supplies are reduced, with severe effects on the poorest and most vulnerable. Also shortfalls in food production leads to substantial increases in imports to meet local needs, which can result in increased fiscal pressure on national budgets.

The impact of drought affecting major food producing and/or consuming countries or regions can be felt on global markets. The 2007-08 and the 2010 episodes of price spikes are cases in point.

Examples of major drought-affected regions include: the USA which experiences droughts in intervals of a few years, with serious droughts in 1980, 1988, 1998 and 2002 significantly affecting agriculture

production; Australia with serious events in 1982-83 and 1991-95 having considerable economic impacts on the agriculture sector, including in irrigated areas; and India which is subject to frequent and widespread drought – during the drought of 2002, the impact covered over half of the Indian land mass and threatened the livelihoods of 300 million people across 18 states.

In addition to the economic and natural resources losses, droughts cause displacement of people, migration and loss of human life. The table below shows the most serious drought disasters for the period 1900 to 2011 and the number of estimated fatalities.

Serious drought disasters 1900 - 2011

Country	Year	Fatalities, thousands
Ethiopia, Drought	1982-84	300
Sudan, Drought	1982-84	150
Ethiopia, Drought	1973	100
India, Drought	1965	1 500
Bangladesh, Drought	1943	1 900
India, Drought	1942	1 500
China P Rep, Drought	1928	3 000
Soviet Union, Drought	1921	1 200
China P Rep, Drought	1920	500
India, Drought	1900	1 250

Source: "EM-DAT: The OFDA/CRED International Disaster Database
www.em-dat.net - Université Catholique de Louvain, Brussels, Belgium"

Increasing impact of weather-related events on global commodity markets

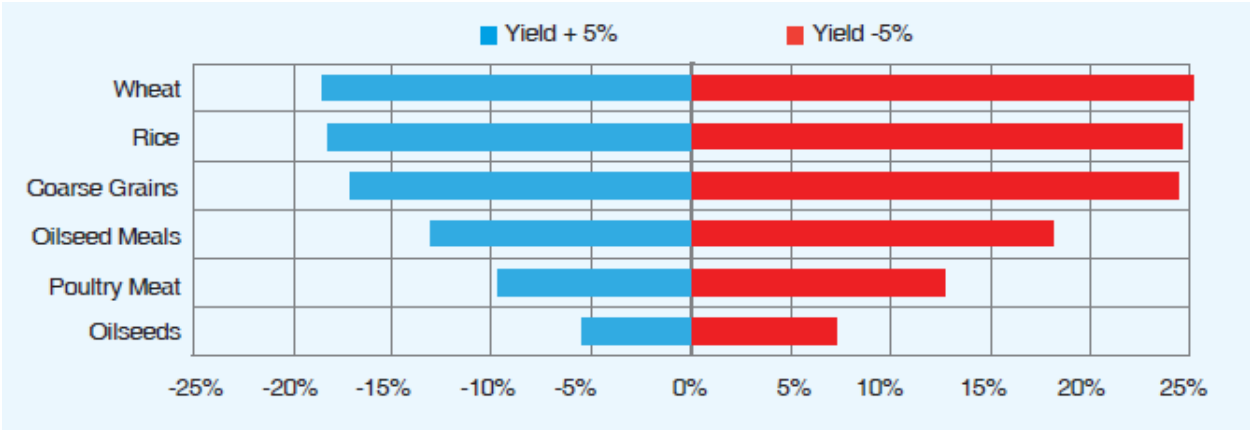
The significant increases in global cereal prices during the 2007/08 and 2010/11 food price episodes were largely weather related, sometimes exacerbated by government policies. Droughts in large cereal producing countries, namely the Russia Federation and Ukraine, coincided with the start of the most recent price increases. These increases were compounded by subsequent floods in Pakistan, and then in Australia and the USA, which all contributed to concerns about global supplies, putting further upward pressure on prices.

There have always been weather-induced supply side shocks in agriculture, given its inherent dependence on weather and other environmental conditions. The situation is aggravated by several other factors, including longer-term demand growth due to increasing incomes, changing consumption patterns and greater use of food staples in biofuel production, which have hit against slowing growth in production as countries draw on increasingly finite natural resources and as a result of insufficient investment in the sector over the past few decades. This scenario is likely to keep upward pressure on prices into the future, which will increase the incidence of high price episodes and price fluctuations due to weather-related shocks.

Analysis reported in the OECD-FAO Agricultural Outlook 2011-2020 confirms that yield-induced production fluctuations (usually due to weather) in major crop exporting countries have been a

prime source of international price volatility. It also demonstrates the uncertainty of price projections and suggests that the risk of higher prices is greater than lower prices, with weather-related crop yield variations expected to become an even more critical driver of price volatility in the future. The graph below reports the effect on food commodity prices (in percentage) due to a 5 percent increase or decrease in yields. The results show that the price effect for all commodity groups would be larger in the case of a yield decrease than in the case of a yield increase.

Impact of a 5% increase/decrease of annual yield of cereals on world commodity prices (average over 2011-2020 projection period)



Source: OECD-FAO Agricultural Outlook 2011-2020

The Situation in the Horn of Africa

Eastern parts of the Horn of Africa are experiencing the worst drought in several decades which represents the most severe food security emergency in the world, being mainly driven by a combination of food availability and access issues. Two consecutive seasons of significantly below-average rainfall have resulted in failed crop production, depletion of grazing resources and significant livestock mortality. The current drought started in April 2011, when below normal rainfall was reported in Ethiopia, Kenya and Somalia, leading to a delay of the main cropping season. Maize sowing was delayed by 10-30 days throughout the region. Following the 2010 La Niña event resulting in lower rainfalls, the 2011 drought prolongs the period of stress, particularly on pastoralists who depend on natural vegetation. According to the latest meteorological forecast, most parts of Somalia and Kenya as well as southern Ethiopia are expected to remain dry until September 2011 when the Haggaa rains are likely to start.

The estimated number of people requiring emergency assistance in Djibouti, Ethiopia, Kenya and Somalia has almost doubled since the beginning of the year, reaching about 11.5 million by mid-July, and is expected to rise further through the lean season until the next harvest from late 2011. In addition, the number of Somali refugees that fled in camps of Kenya and Ethiopia, being displaced by conflict and drought has reached the unprecedented figure of about 517 000 people.

In western parts of the Horn of Africa, despite being spared from the current severe drought, food security conditions remain difficult in Northern Uganda (especially in Karamoja region), in North Sudan (especially Darfur) and in most parts of South Sudan, but mainly along the northern border due to disruption of trade activities and the extra burden of internally displaced persons and returnees that followed the referendum in January 2011. In the main crop producing areas of central and northern Ethiopia, western Kenya and central North Sudan, the expected average to above-average rainfall in the July to September period may bring some relief to the overall food security situation of the region, but not until late this year and the beginning of next year.

Factors that are likely to cause a further deterioration include: further increases in staple food prices and levels of ongoing conflict, further decreased levels of yield in the upcoming harvests and further loss of livestock. The levels of rainfall during October-November will also be a contributing factor.

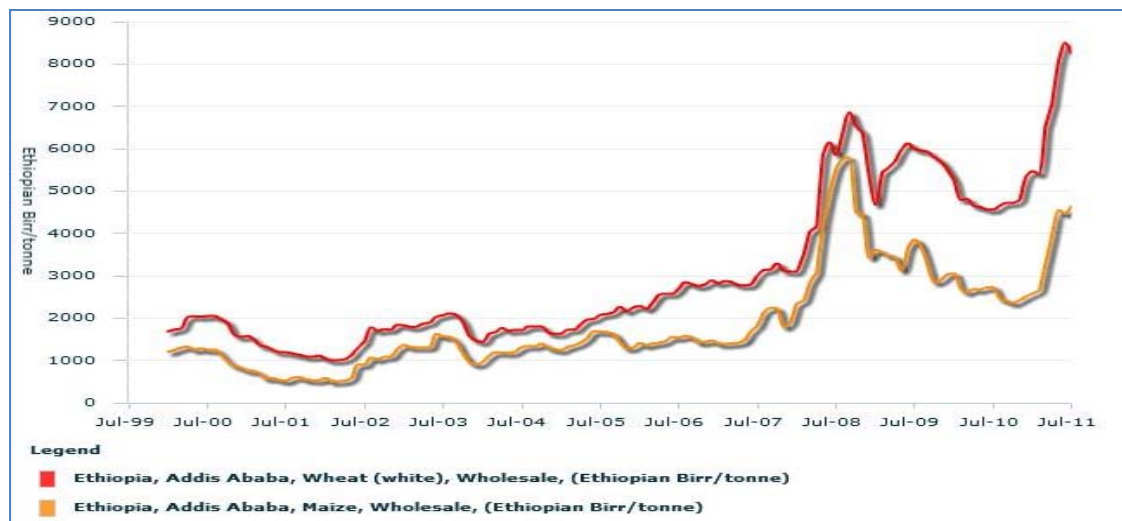
Food prices are generally very high, with new record levels registered in several markets of Kenya, Ethiopia, Djibouti and Somalia. The increase in prices essentially follows the poor crop production in the secondary season harvests of 2011, coupled with sharply increased fuel and transport costs, and high international prices of imported wheat.

In June 2011, maize and red sorghum were traded in Mogadishu retail market at record prices of USD 660 and USD 670 per tonne respectively, with increases of 106 percent and 180 percent on an annual basis. In Ethiopia, wheat wholesale prices in Addis Ababa market have reached the record level of 8500 birr per tonne, about 85 percent more than one year earlier. Similarly, maize prices were in June 2011 at record USD 450 per tonne in Nairobi in Kenya, about 55 percent higher than in June 2010.

Maize and Sorghum price: Mogadishu June 2009 – June 2011



Wheat and Maize prices: Addis Ababa July 1999 – July 2011



Hotter than normal temperatures are expected in the coming months, and the water available for crop development remains critically low. This means livestock mortalities will increase; intensified migration will occur; conflict over resources will increase; and emergency levels of acute malnutrition will become widespread unless adequate measures are put in place.

Overall, in eastern Africa, the total estimated number of people in need of food assistance is set at 17.5 million, with an increase of about 13 percent in the last month. Current Global Acute Malnutrition (GAM) rates often are well above the WHO emergency threshold of 15 percent, with worrisome peaks of 37 and 33 percent respectively in refugees camps of Dadaab in Kenya and Dolo Addo in Ethiopia.

The food insecurity situation is predicted to remain at critical levels through September and even deteriorate in some areas. This scenario is based on forecasted hazards (climatic and economic), in combination with high vulnerability to all types of shocks for the already highly stressed regional populations. Prices for key locally-produced staple grains are expected to continue to increase in all areas. The rainfall expected during this period would not be sufficient to supply water needs in the region, and is likely to lead to water scarcity from December 2011 and into early 2012.

Situation Update: As of July 20th, based on the latest food security and nutrition data, FSNAU and FEWSNET have jointly declared an ongoing famine in two areas of southern Somalia: the Bakool agropastoral livelihood zones and all areas of Lower Shabelle. A humanitarian emergency currently exists across all other regions of the south, and current humanitarian response is inadequate to meet emergency needs. As a result, famine is expected to spread across all regions of south Somalia in the coming 1-2 months

As on date, while the current food security crisis is regional, and lifesaving assistance is also needed in Kenya and Ethiopia, famine and risk of famine are only present in southern Somalia

Monitoring the situation

The situation in the Horn of Africa region is monitored by several international institutions, (see Box on the Role of IPC). However the capacities and influence of national institutions are very weak in the region, causing delays in decision-making and action by authorities. The region has inadequate density of meteorological observations, partially due to armed conflicts. Seasonal forecasts at the local level are lacking, leaving farmers and stakeholders without critical decision tools.

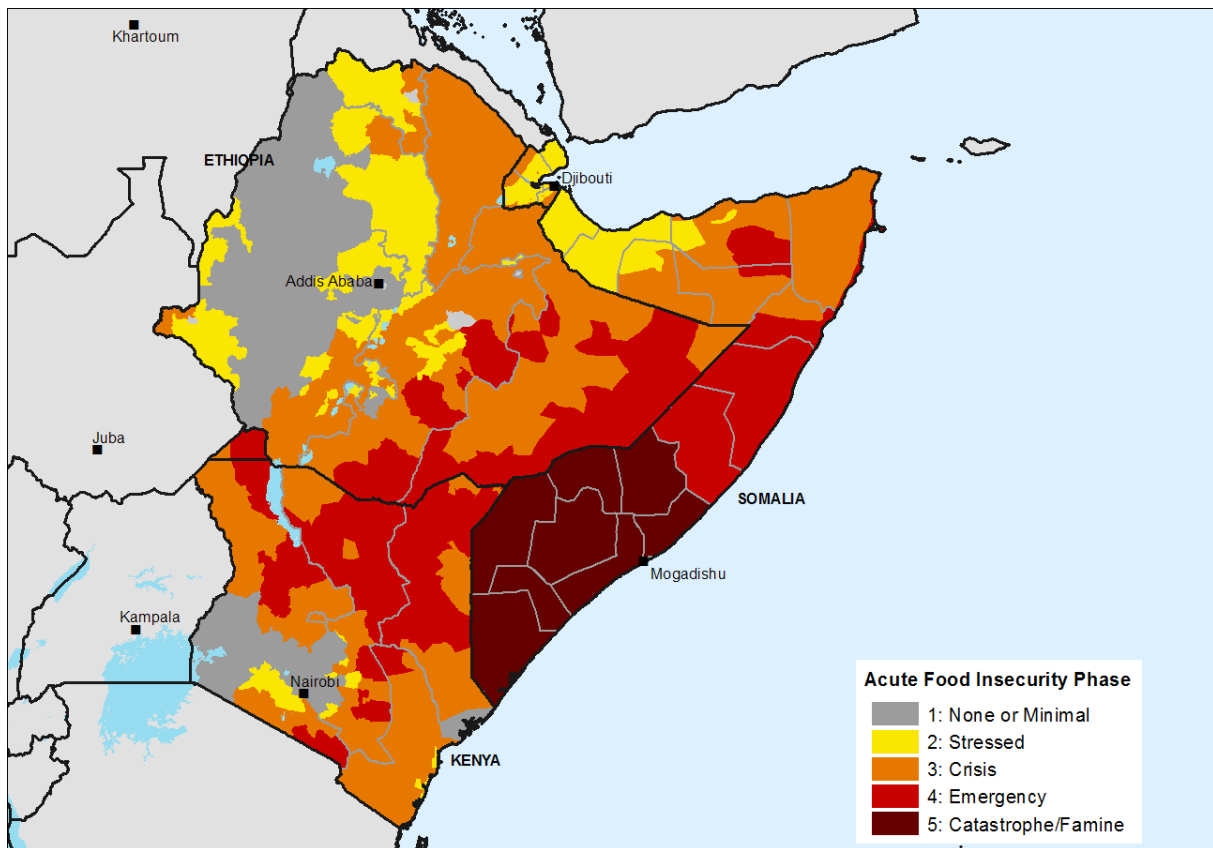
The role of the IPC in informing on the drought situation in the Greater Horn

The IPC (Integrated Food Security Phase Classification) classifies the severity of food security and humanitarian situations into varying phases based on a widely accepted set of indicators. The phase classification describes the current situation for a given area, while also communicating the likelihood and severity of further deterioration of the situation. The IPC is divided into five **Phases—Generally Food Secure (1A and 1B), Moderately/Borderline Food Insecure, Acute Food and Livelihood Crisis, Humanitarian Emergency, and Famine/Humanitarian Catastrophe**

The inter-agency regional Food Security and Nutrition Working Group (FSNWG), hosted by the FAO Sub-Regional Emergency Office based in Nairobi, is comprised of technical staff from UN agencies, FEWSNET, ECTAD (FAO Emergency Centre for Transboundary Animal Diseases), NGOs, the Red Cross/Red Crescent movement, research centers, and other development institutions.

By building a consensual food security situation analysis, the ultimate objective of both the IPC and the FSNWG is to provide a comprehensive picture of the food security and humanitarian situation in the Greater Horn of Africa.

Most likely scenario (July –September 2011)
Projected regional food security outcomes



Note: FEWSNET maps are now aligned to IPC scale.

Source: Famine in Southern Somalia – Joint FSNAU/ FEWSNET Declaration in Nairobi – 19th July 2011