



GREATER HORN OF AFRICA (GHA) FOOD SECURITY BULLETIN – October 2006

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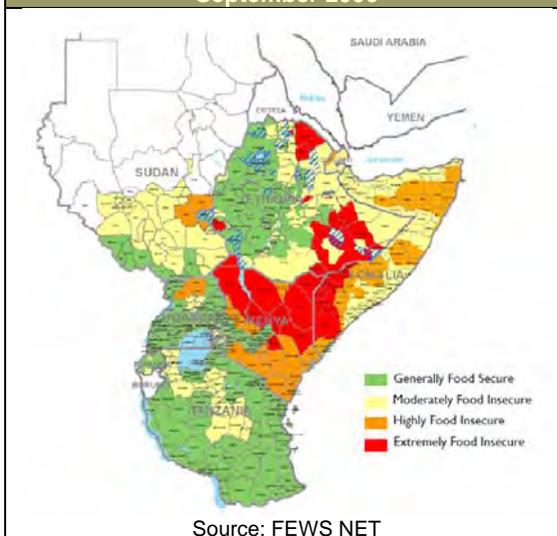
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Summary

Heavy rains since October have caused severe flooding in areas already suffering from high levels of food insecurity. In the medium term, however, the rains will allow an improvement in crop and livestock production and food security in previously drought affected areas, which had suffered a drought that left a large population dependent on humanitarian aid.

Average to above-average crop production is either expected or has already been achieved. In most of the areas affected by the 2005/06 drought, improvements in livestock production, initial crop harvests, and humanitarian assistance have helped bring about marginal improvements in both food security and nutrition conditions. Heavy rains received so far this season are expected to bring about further improvements in food security in the coming months. However, the rains have also caused severe flooding in the riverine areas of southern Ethiopia, riverine areas of Somalia and coastal districts in Kenya. Heavy rains are expected to continue given current global climate conditions, including a moderate El Niño, predicted to last into early 2007. This could cause additional flooding that will have severe short-term and possibly longer term impacts including disruption of transportation and trade through the destruction of road infrastructure, food shortages, and possible disease outbreaks. Thus, contingency plans for additional flooding should be immediately put in place.

Figure 1: Current Food Security Status – September 2006



Food security highlights from the GHA

In **Somalia**, 1.8million food insecure people continue to need humanitarian support. Heavy rains in October caused damaging floods along the Juba and Shabelle rivers, causing destruction and displacement which has added to the population in need of emergency support. More rains are forecast, implying more floods, which are likely to result in further impacts on food security. However, the rains have also alleviated widespread water shortages and are expected to improve pasture conditions. This will improve livestock production and crop production prospects in the agropastoral areas. Civil insecurity continues to cause human displacement. About 32,000 Somalis had fled to Kenya between January and October 2006, due to the rising insecurity and economic hardship. Smaller numbers of refugees are entering other neighboring countries. The breakdown of the latest peace talks in Khartoum raises the risk of more conflict, which would worsen the already serious food security and humanitarian crisis in the country.

The eastern Somali Region of **Ethiopia**, which was seriously affected by the 2005/06 drought, received heavier than normal rains in October 2006. The rains resulted in serious flooding particularly along the Shabelle River, causing human deaths and displacement. The current floods come barely two months after the widespread flooding that killed over 600 people and displaced thousands in August 2006 in other parts of the country. The rains have nevertheless been largely beneficial, immediately replenishing water sources and improving pastures and thus livestock production, raising hopes for the recovery of pastoral groups. Crop production in the *meher* growing areas has continued to benefit from abundant rains in the Ethiopian highlands, promising a good harvest that will make this one of the best recent cropping years. Cereal prices remain above the historical average, and this continues to limit access by poor households, although prices fell marginally in November. Insecurity and official border closure are disrupting cross-border trade, which is particularly important for livestock exportation and food importation by the population in the east of the country. Tribal and resource-based conflicts in July and September 2006 occurred in Somali and Oromiya regions disrupting normal livelihood

activities. About 3 million people still depend on emergency food aid while 7.3 million continue to be targeted through the Productive Safety Nets Program.

In **Kenya**, the northeastern pastoral areas have received heavier than normal rains in October. Although the rains are expected to bring improvements, the immediate effect has been to cut off key supply routes and cause food shortages. Floods have also caused human deaths and widespread destruction of property, affecting some 80,000 people, particularly in the coastal areas. In the marginal cropping areas, planting has started, and farmers are optimistic that crop production will be better than in the last 3 to 4 seasons. Although livestock prices have been improving, the disruption of cereals markets due to the heavy rains is likely to keep pastoralist terms of trade unfavorable. Rates of malnutrition increased in most pastoral areas during October, which marked the end of a difficult dry season. About 2.4 million people continue to need emergency humanitarian assistance, due to the effects of drought, chronic food shortages and high malnutrition rates. Given the favorable rainfall received so far in food insecure areas and expected improvements in production, a reduction in this number is expected in 2007.

In **Rwanda**, declining household food stocks and increasing prices are negatively affecting food security, particularly in the Congo-Nile ridge and the southern livelihood zones. The rains have been late and erratic causing delays in the start of the 2007A (or first) season crop. Forced returnees from Tanzania of Rwandan refugees and their livestock are expected to increase population pressure on land and other resources – over 10,000 have arrived to date and more than 50,000 are expected in the coming months.

In **Djibouti** the *karan/karma* rains have been good, improving livestock production and rural food security. Urban households continue to face high consumer prices due to increases in the price of kerosene, which is used as cooking fuel, making food access difficult for the large urban poor population. Increased use of firewood as fuel is causing serious environmental concerns. Currently, 47,500 people depend on WFP food aid, but numbers could be revised depending on the performance and impact of the expected *hays* rains (October to December).

In **Southern Sudan**, food supply and access have improved as a result of the harvest of the main June to September crop, improved market access and a government subsidy on sorghum. Crop performance was affected by localized flooding, dry spells and civil insecurity, but provisional assessment findings indicate that harvests should be better than last year's. This is expected to reduce food aid needs next year. Concerns over a possible increase in civil insecurity related to the Ugandan peace process could affect food security in Juba County, while insecurity related to disarmament and inter-ethnic tensions could worsen food security in Jonglei State. Returnees from both the north and south are expected to start arriving again at the end of the rainy season, and this will continue to increase pressure on existing food and other resources. An estimated 300,000 people returned this year.

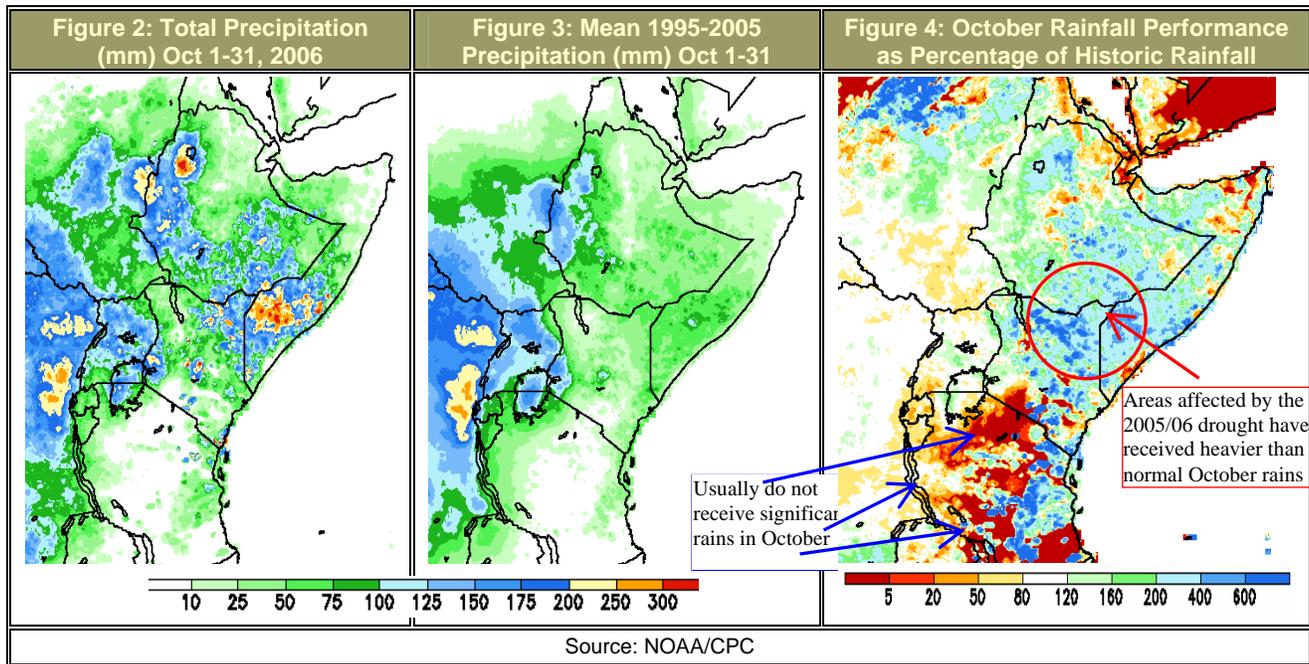
In **Tanzania**, despite an overall surplus in food production in 2006, some 650,000 people in 29 districts where production was below average, are expected to face food shortages in November and December 2006. The *vuli* (September to January) rains were delayed slightly in some northeastern districts, while they were heavier in the eastern coastal areas. The government has restocked its strategic grain reserves by buying from areas with surplus production, and is setting up an agricultural input subsidy scheme to boost production in the coming *masika* (March to May) and *musimu* (November to May) growing seasons. Banana production in Kagera Region is still seriously affected by the Banana Bacterial Wilt.

In **Uganda**, crop production was below average in 2006 but unlikely to cause a food security crisis. A significant delay and an erratic start of the rains are causing concerns over crop establishment in the bimodal rainfall areas. In Karamoja, harvests were poorer and food deficits are expected for about 500,000 people as early as January, two months earlier than normal. Food security and humanitarian conditions in Gulu, Kitgum and Pader districts are heavily dependent on the peace process, which appears to be progressing but is still fragile. Foot and mouth disease and banana bacterial wilt are still present but are largely under control as farmer awareness has risen. About 1.45 million internally displaced persons and refugees continue to depend on humanitarian aid.

In **Burundi** the 2006C (third) growing season has been normal, but the 2007A (first) growing season is expected to be mixed, given the late start and erratic nature of the September and October 2006 rains. The delayed rains and declining food stocks are worsening the food security situation of populations in the northern and eastern provinces. Burundians expelled from Tanzania are coming into the country in increasing numbers, straining available resources.

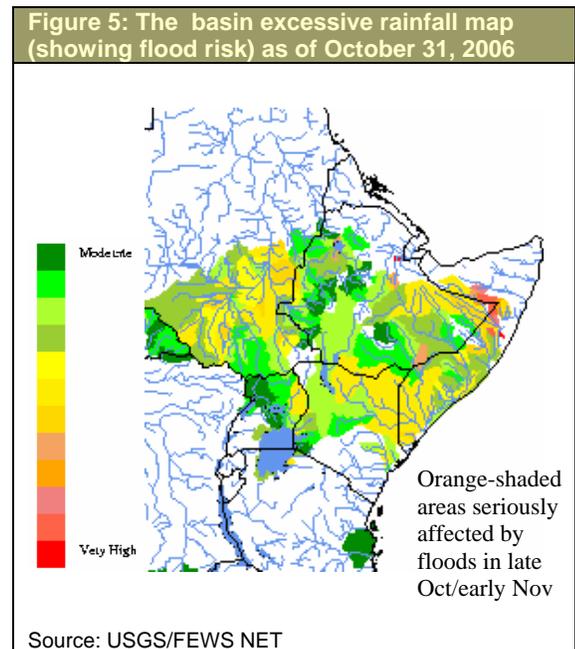
Performance to date of the October to December rainfall

Rainfall has been heavy in most areas that normally receive October to December rains. Figures 2, 3 and 4 below illustrate the progress of the season so far. Figure 2 shows the total amount of rainfall (in mm) received in the GHA region in October. Figure 3 provides rainfall amounts (in mm) for the same period averaged over 1995-2005. Figure 4 provides the percentage deviation of this year's October rains from the 1995-2005 average October rains.



Rainfall estimates for October 2006 (figures 2, 3 and 4) show excessive rainfall ranging between 100 mm to 300 mm (200 to 600 percent greater than normal) in northeastern Kenya, central and southern Somalia, southeastern Ethiopia and the coastal areas around the border of Kenya and Tanzania. In some of these areas, rains have occurred almost daily since the second week of October, causing damaging floods. Some of the heaviest rains have been received over pastoral and agropastoral areas that experienced the 2005/06 drought (shown by the red circle in Figure 4).

For the rest of the areas in the region that often benefit from the October to December rains, the rains have been largely on time and generally beneficial. Normally heavy and beneficial rains have continued in western Ethiopian highlands, most of southern Sudan and Uganda and Kenya's Lake Victoria basin. The exceptions were Burundi, Rwanda, northwestern Tanzania and the southwestern tip of Uganda, where the October rains were below average and erratic – in some cases, raising concerns over the seasonal crop production. Lowland districts in southwestern Kenya (except coastal areas) and most of Tanzania (northeast, all south-central parts) do not usually receive significant rains in October and were largely dry during the month.



Due to the heavy rains, flooding occurred in southeastern Ethiopia, northeastern and coastal areas of Kenya and southern Somalia (Figure 5). All the shaded areas in the figure indicate the existence of flooding risk, with green being moderate risk and red being very high risk. Floods have caused loss of human life (Kenya's southern-coast and along the Shabelle River in Ethiopia), damage to property, displacement of thousands of people and increased incidences of diarrheal diseases. Flooding along the Juba and Shabelle rivers in southern Somalia has also occurred but was relatively less severe by the end of October. Figure 5 depicts flood risk areas and locations where there are reports of serious flooding. The floods have also rendered major roads in the affected areas impassable, creating food shortages and subsequently fueling

food price hikes. If the heavy rains continue in these areas (as forecast), they will have serious food security and humanitarian impacts in the immediate term. There is therefore a need to activate flood contingency plans. As the season is ongoing, it is still too early to provide a conclusive statement on the eventual food security implications of the current heavy rains. More on the rainfall hazards and benefits can be found in www.fews.net/weather.

EL NIÑO SUPPLEMENT

Moderate El Niño: Early warning opportunities and threats in the GHA

Understanding El Niño

For most people living in the eastern area of the GHA, El Niño means excessive rainfall, widespread flooding, transportation problems and increased water-borne diseases. For the rest of the region, it means a bumper harvest, especially in marginal agricultural areas. These impacts were seen in the 1997/98 El Niño experience.

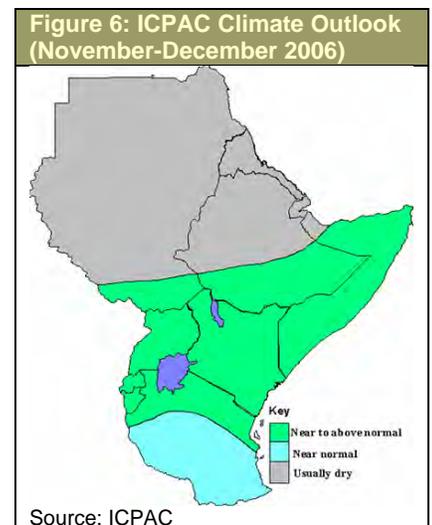
In meteorological terms, El Niño can be defined as the appearance of warm surface water in the central and eastern Pacific Ocean off the coast of Peru and Ecuador. El Niños are recurrent weather phenomena, occurring approximately every four to seven years and usually lasting between 12 and 18 months. The anomalous warming of sea surface temperature (SST) affects global atmospheric circulations that drive significant but varied weather and climate fluctuations around the globe, which in turn have major food security implications. In GHA, the abnormal warming of adjacent Indian Ocean waters (known as Indian Ocean Dipole – IOD) coupled with the occurrence of an El Niño event indicates good rainfall prospects or potential excessive rainfall in Eastern Africa, depending on the strength of the event. Understanding these scientific relationships and linking this knowledge to improved climate forecasting are valuable early warning tools.

Climate implications of a moderate El-Niño for the GHA

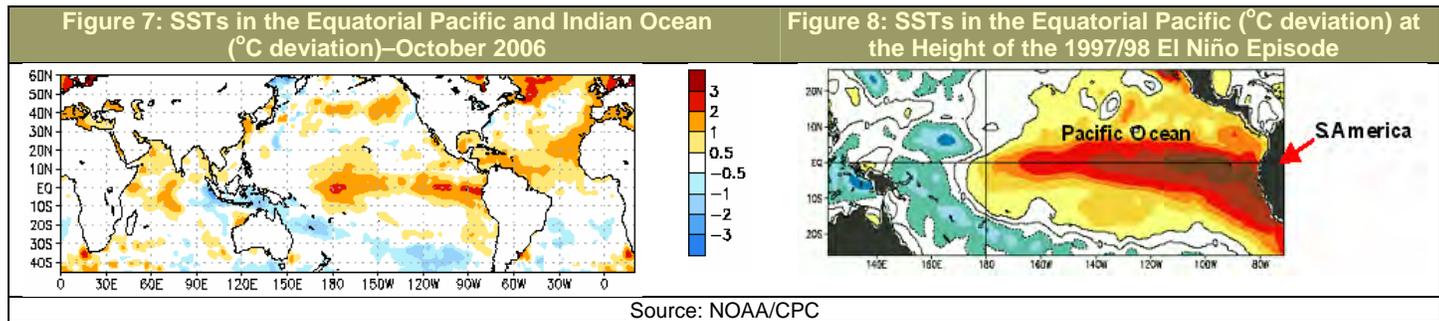
This section of the report analyses the updated November to December 2006 seasonal forecast by IGAD¹ Climate Prediction and Applications Center (ICPAC), provides an expert contextual interpretation of the unfolding event and recommends contingency and mitigation strategies.

In September 2006 ICPAC released a climate forecast for the September to December period and it was largely interpreted as favorable. In late October, ICPAC released an updated forecast for rainfall performance in the GHA for the November to December 2006 period (Figure 6). This latest forecast depicts increased probabilities for normal to above-normal rainfall over much of the equatorial sector of the GHA, which often benefits most from these short rains (areas shaded green in Figure 6). For the same period of forecast, Tanzania is likely to receive near average rainfall amounts. This latest forecast is significantly different from the earlier September to December 2006 forecast and is based on the developing moderate El Niño event, which is consistent with predictions from advanced global climate centers. The period prior to an El Niño event is typically marked by drier than normal rainfall seasons, followed by intense rainfall in the areas shaded green in the ICPAC forecast.

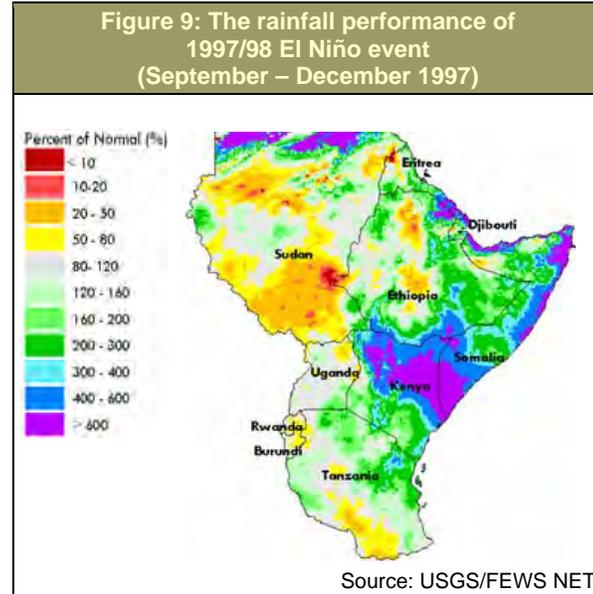
There is currently a global consensus among climate scientists that a moderate El Niño event is developing. Figures 7 and 8 compare the 1997/98 El Niño and the current level and extent of SST warming in the oceans. These figures clearly indicate that the current abnormal warming of the SSTs off the coast of Peru and Ecuador is only about half of the major 1997/98 deviation, suggesting that the current El Niño effect will be less severe. (The 1997/98 event was the strongest event with the most global impact in the last 50 years, with abnormal warming of more than 4° C in the Equatorial Pacific.) Other past El Niño events have been less warm, with SST anomalies of less than 3° above normal. However, of significant concern is the potential impact of the positive Indian Ocean dipole which usually means above average rainfall on the eastern sector of the GHA as is currently being witnessed in parts of the Kenyan coast, northeastern Kenya and the neighboring south and central Somalia (Juba and Shabelle river valleys), and southeastern Ethiopia.



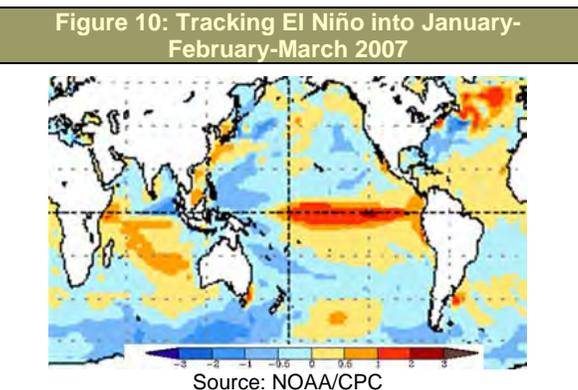
¹ IGAD – Intergovernmental Authority on Development, a regional grouping of the Greater Horn of Africa countries.



This climatic episode is already starting to manifest itself through excessive rainfall and flooding along parts of the East African coastal strip, the northern frontier of Kenya and neighboring southern Somalia and eastern Ethiopia. In meteorological terms the current episode is relatively weak compared to the 1997/98 El Niño and subsequently its impact may be more beneficial in terms of better agricultural production, increased water levels in the hydro-electric dams, regeneration of pasture and water replenishment for the drought-affected pastoralists in the Horn of Africa. However, as with such large scale climatic events, its impact could result in serious threats to food security due to the potential risks of flooding, transportation problems and increased animal and human diseases as was witnessed during the 1997/98 El Niño episode in this region.



The intensity of the forecast rains in time and space is expected to vary as in the case of the 1997/98 episode. In the 1997/98 event the rains were over 400 percent of normal in the northeastern districts of Kenya, the neighboring Somalia and Ethiopia districts and along the Kenya/Somalia coastal strip (see Figure 9). The relatively high-intensity rains seen in October 2006 in the same areas that were worst affected by the 1997/8 El Niño reflects a similarity between the 1997/8 El Niño event and the current season (see figures 9 and 4). However, the current season is still in its early months and therefore a complete comparison between the two seasons is not yet possible. Furthermore given the difference in SSTs, it is unlikely that a full El Niño event will be seen during the current season. Another apparent similarity, though yet to emerge fully, is the current below-normal and erratic rainfall performance in Rwanda, Burundi and southern Sudan, which is also similar to the 1997/98 poor rainfall performance in these areas. This will also require close monitoring as the 2006/07 season progresses.



According to NOAA/CPC the effect of the moderate El Niño is expected to extend into March 2007, due to the predicted continued warming of the SSTs in both the Equatorial Pacific and the Indian Oceans (Figure 10). This will mean the continuation of the rains into the normally dry January-March period for most of the GHA countries. The moderate El Niño could have both beneficial and negative effects on the food security situation in the region. As a result it is important to continue tracking the developing event. The references given in Box 1 provide some resources for tracking how the climate develops.

Implications for food security and contingency planning

A moderate El Niño normally means heavier than normal rains that will eventually be largely beneficial for both crop and livestock production but could also have immediate severe negative consequences. Already the impact of the moderate El Niño and the Indian Ocean Dipole on the rains in the region has been felt and is expected to continue into early 2007. Thus it is important to prepare for their continued impact. Although the current El Niño is moderate, relative to that in 1997/98, it is still important to prepare for the worst case scenario – downpours that will cause flooding and disease and

disrupt food production, trade and human movement. In such a scenario, the following may happen and contingency plans will need to be activated to prevent or mitigate their effects:

1. **Flooding:** Continued severe flooding is likely to be seen, particularly along the coastal strips of Kenya and Somalia; along the riverine and inter-riverine areas of Shabelle, Ganale and Dawa in Ethiopia; and along the Juba and Shabelle rivers in Somalia. Floods are also expected along the Tana and Ewaso Ngiro rivers of Kenya and along all seasonal rivers in northeastern and coastal Kenya, southern Somalia, and southeastern Ethiopia. The severity of floods already seen along the Shabelle River in Ferfer, Kelafo, Mustahil, East and West Imey is already worse than seen in recent years (see Figure 5 above). This is expected to spill over to the Shabelle valley in Somalia by the end of the first week of November 2006. Severe flooding could cause the following:
 - a. **Immediate loss of life and property:** Loss of human life (from drowning and crocodile attacks), loss of livestock, damage to property, and displacement of humans and destruction of food stocks including seeds, thereby causing immediate food shortages.
 - b. **Delay in the planting season and/or crop failure:** Crop production may be delayed or fail as a result of submerged farmland during the growing season, serious infestation of weeds, lack of seeds, lack of food and funds to till the land, and other problems. Already maturing crops such as those in the Ethiopian highlands may be destroyed if the rains spread over these areas during the harvest season (November and December), although in general most of these areas are less likely to be affected by the downpours.
2. **Spread of human and livestock diseases:** In the 1997/98 El Niño there was a serious break out of Rift Valley Fever, which caused both human and livestock deaths. This fever also resulted in the Gulf Arab states banning livestock imports from the Horn of Africa, a ban that is still largely in effect and which has caused serious economic difficulties. There is therefore a risk of the emergence and spread of vector-borne and other epidemic diseases resulting from floods and poor drainage. Malaria, diarrheal diseases and respiratory tract infections are obvious examples. This is expected to create serious socio-economic difficulties that may have medium to longer term effects on the population. It is important to stockpile and preposition essential human and veterinary medicines and personnel and surveillance should be intensified using all available transportation means, as people and livestock could die before being noticed in the event that transport and communication links are cut.

Box 1: Further References

 1. ICPAC <http://www.icpac.net> (seasonal, monthly and ten day forecasts)
 2. International Research Institute for Climate Prediction (IRI): <http://iri.columbia.edu/climate/ENSO/index.html>
 3. National Oceanic and Atmospheric Administration (NOAA): <http://www.cpc.ncep.noaa.gov/products>
 4. USGS/FEWSNET: <http://earlywarning.usgs.gov/ADDS>
 5. Websites of the Meteorological & Hydrological Services of the different countries
3. **Disruption of trade and human movement:** In most of the areas likely to face El Niño the road network is already poor. Heavier than normal and continued downpours will further cut off most of these areas, making human movement and trade even more difficult. It will be difficult to move food and other essentials, including medicines, worsening already prevalent food insecurity and malnutrition, particularly in the pastoral areas. Roads have already become largely impassable in most of southern Somalia, northeastern Kenya and southeastern Ethiopia. It is important to closely monitor the weekly weather forecasts so that opportunities to move essential supplies can be timed with the relatively drier weeks. Other means of reaching cut-off populations should also be made ready and put into action.
4. **Destruction of water resources:** Heavy rains may damage or destroy reservoirs, river banks and hydroelectric generating dams, and cause silting of water catchments. This is expected to cause serious economic hardships. Protective measures should be attempted, although this requires longer term preparation.
5. **Environmental damage and spread of invasive plant species:** Heavy rains could worsen soil erosion and gully formation, thereby worsening environmental problems already existent in most parts of the region. Invasive plant species, already a problem in most arid and semi arid areas, are likely to be propagated and spread to areas previously unaffected. Little can be done about these impacts in the short run, but efforts should be put to control and mitigate them as much as possible.

These immediate effects of an above-normal or moderate El Niño event are largely negative. However, FEWS NET also expects some positive effects, particularly after the rains have ceased. These include:

1. Improved crop and livestock production: During the past several seasons, in most pastoral and agropastoral areas rains have largely been below normal and insufficient to fully regenerate pasture and replenish water points. Crop and livestock production have therefore been below normal. With heavier than normal rains across most areas, there is likely to be abundant supplies of browse (leaves and twigs) for camels and goats and grazing for all species, as well as water for the short and medium term. Ground water reservoirs may also benefit. Off-season crop production (particularly short cycle) is expected to thrive after the rains as soils will have soaked sufficient moisture, compensating for delayed and failed crops, particularly in the agropastoral and marginal agricultural areas, which grow short-cycle crops. Given that the serious 2005/06 drought devastated most pastoral areas in Kenya, Ethiopia and Somalia, the expected heavy and prolonged rains are expected to help these populations start their recovery processes. However, because the road infrastructure has been seriously damaged and seed and food stocks are in short supply, these populations may need support to make maximum benefit of the heavy rains.
2. Improvement in biodiversity: Plant species whose growth has been suppressed by lack of moisture are now likely to re-emerge, improving pasture and browse for animals, even in the medium term. It may be a good time to provide seedlings of appropriate plants and trees in order to promote reforestation programs.

Conclusions

- The term “El Niño” has become a very threatening term, associated with extreme climatic events across the globe. Therefore, simply focusing on El Niño as an “event” may be counter-productive and lead to inappropriate pre-emptive actions. At the same time, monitoring El Niño’s development offers critical opportunities for early warning. For most users *interpreted products*, specifically updated climate forecasts, are probably more useful than attempting to track the onset of El Niño itself.
- Country level Meteorological and Hydrological Services and ICPAC should provide rainfall and flood advisories as frequently as possible and publicize these widely to provide early warning. River levels should be monitored and agencies should collaborate to share information with communities downstream in time. Ministries of health and health and nutrition agencies should redouble their disease surveillance efforts and report the emergence of any disease or the increase in the incidences of any diseases that may be related to the increase in rainfall. In general there should be more information sharing on rainfall, flooding, diseases, and other events related to the climate.
- As the moderate El Niño develops, it will be essential that governments, donors, UN agencies, NGOs and communities take all necessary action to prevent/minimize the negative effects of this event. All actors should utilize the experience and knowledge gained from the 1997/98 El Niño event in designing such prevention and mitigation activities.

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