The USAID FEWS-NET

Africa Weather Hazards Assessment

for

December 16 - 22, 2004

Weekly Introduction:

Update of El Nino

Synopsis: Weak warm-episode (El Niño) conditions are expected to continue into early 2005.

Positive sea surface temperature (SST) anomalies greater than +0.5°C (~1°F) persisted across most of the central and western equatorial Pacific during November 2004. By early December, positive equatorial SST anomalies greater than +1°C (~2°F) were found from 160°E eastward to 155°W and locally in areas between 155°W and the South American coast. The pattern of anomalous warmth in the equatorial Pacific in recent months and the most recent 5-month running mean value of the Southern Oscillation Index (-0.6) indicate that a weak warm (El Niño) episode has developed.

Based on the recent evolution of oceanic and atmospheric conditions and on a majority of the statistical and coupled model forecasts, it seems most likely that weak warm episode (El Niño) conditions will persist through early 2005. However, there is considerable uncertainty concerning future developments in the extreme eastern equatorial Pacific (the classical El Niño region).

Expected global impacts include drier-than-average conditions over Indonesia (through early 2005), northern and northeastern Australia (December 2004-February 2005), and southeastern Africa (December 2004-March 2005). If the warming in the tropical Pacific strengthens and spreads eastward to the South American coast, then wetter-than-average conditions would be expected in coastal sections of Ecuador and northern Peru during the first few months of 2005, and drier-than-average conditions would be expected to develop in the eastern Amazon late this year and spread to Northeast Brazil during February through April 2005.

The actual forecasts for the regions in Africa will be provided next week. This discussion is a consolidated effort of NOAA and its funded institutions.

Locust Update

The report from the Food and Agriculture Organization (FAO) of the United Nations on the locust situation in western Africa was last updated on December 13 (http://www.fao.org/NEWS/GLOBAL/locusts/Locuhome.htm). The situation remains serious and widespread throughout the region. Additional details can be found at the USAID web site for Assistance for Emergency Locust/Grasshopper Abatement (AELGA) at http://www.aelga.net and the AGRHYMET site at http://www.agrhymet.ne.

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NOTE: Black hatched regions depict combined wheat, maize, sorghum, and millet crop zones which are active (sowing to harvest) during the current month. (from FAO)

1. Long cycle rains were less than normal in areas of eastern Ethiopia and west central Somalia, near the Ethiopia-Sudan-Kenya border region, and from south central Kenya to north central Tanzania. Moderate rainfall was observed during the past week in southern Kenya.

2. More severe, long term dryness remains in parts of southern Kenya despite erratic moderate rainfall during the current season.

3. Dryness remains in north central Ethiopia in and around the Afar Province due to poor rainfall during the 2004 long rainy season. Ongoing water resource issues will continue through the dry season.

4. Rainfall during the last season was lighter than normal in Darfur and Kurdofan, Sudan. This has led to low drinking water levels, poor irigation, and dry pastures. No relief is expected until the next seasonal onset of rains next year.

5. Seasonal rains have been slow to start in an area of South Africa, northwest of Lesotho. Improvement has been seen during the past three weeks, though areas of local dryness do remain.

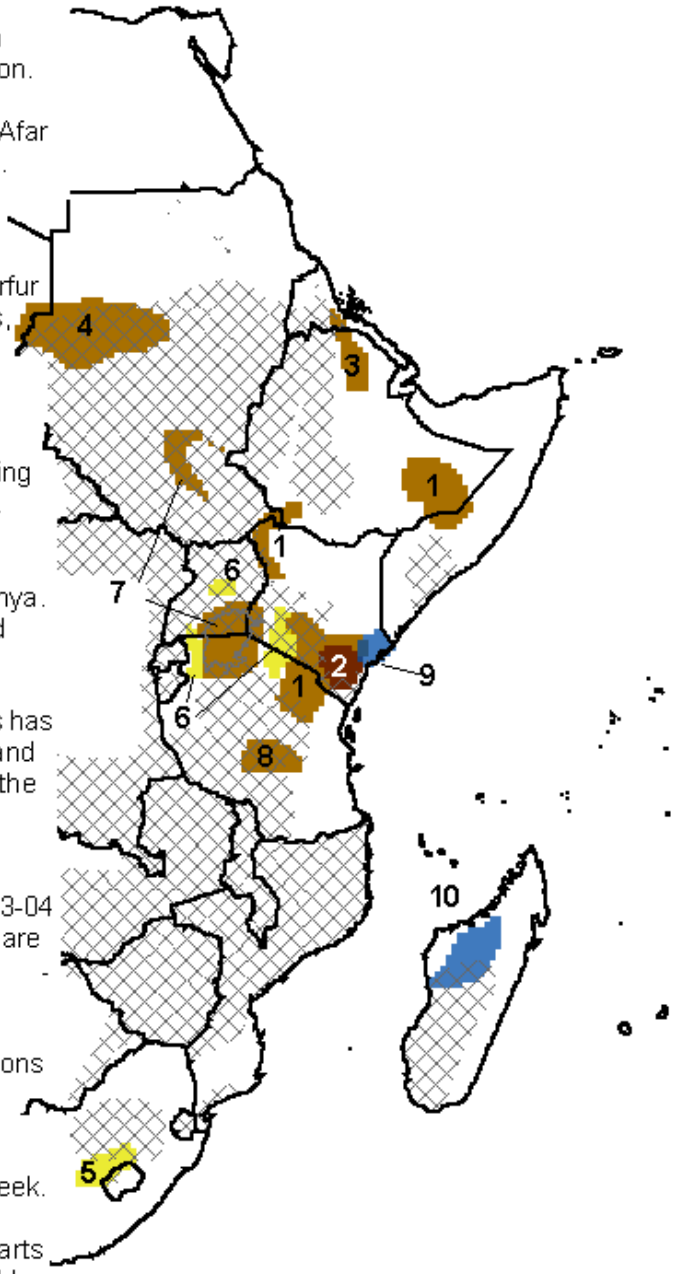
6. Erratic seasonal precipitation has led to areas of short term dryness in Uganda, northwest Tanzania, and southwestern Kenya. Rains were again lighter than normal during the past week, and dryness may be expanding in the region.

7. Lake Victoria water levels are much lower than normal. This has led to problems downstream in the form of irrigation concerns and a lack of drinking water. A few showers were observed during the past week over the lake.

8. Some rainfall was observed during the past week in southwestern Tanzania, near the upper Rufiji basin, where 2003-04 rainfall was less than normal. Though no agriculture problems are anticipated, hydrologically generated power from the Mtera Reservoir has been suspended.

9. Heavy rains fell once again during the previous week in portions of southern and eastern Kenya, with weekly totals exceeding 150 mm in some locations. This has led to areas of flooding problems along the Tana and Ijara River districts. Additional precipitation is expected throughout the area during the next week.

10. Very heavy rains exceeding 200 mm locally were seen in parts of central-northwestern Madagascar during the past week. Cold frontal rains during the next five days may lead to areas of sustained flooding.



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Weather Hazards Text Explanation:

1. Several seasons of below normal precipitation in east central Ethiopia and over two years of dry conditions in the adjacent parts of west central Somalia have reduced water resources. Significant dryness near the Sudan/Ethiopia/Kenya border intersection is the result of below normal rains this year. Meanwhile, in a large part of southern Kenya and northern Tanzania, precipitation deficits from the last one to two years have reduced soil moisture. However, recent rains in this area have helped to improve conditions. Some thunderstorm activity is possible across southern Kenya and northern Tanzania, while the rest of the area is expected to remain relatively dry.

2. On the eastern side of area (1) in inland southeastern Kenya, a multi-year drought continues. While the short rains were slow to start, conditions are improving. Recent heavy rain may have caused some localized flooding in the Tana River basin. Moderate rainfall is expected during the next period.

3. In the Afar region of north central Ethiopia, seasonal precipitation was not adequate to prevent low drinking water levels and pasture degradation. With the monsoon season having ended, little moisture is expected, leaving the area with moisture deficits until the next wet season that begins in April 2005.

4. Light seasonal rains in Darfur and Kurdofan, Sudan during the 2004 rainy season continues to negatively affect the area currently dealing with a humanitarian crisis. The dryness is the result of rains that began late, and ended early. During the shortened season, precipitation was erratic, stressing irrigated agriculture, lowering water supplies, drying out wells, and producing unfavorable pasture conditions. The next hope for significant rain should arrive in July 2005.

5. To the north of Lesotho in South Africa, rainfall has continued to pick up from the short-term dryness seen earlier in the season. Rainfall during the coming period is expected to continue to improve soil moisture in the area. If the rains continue during the next few weeks, they will balance earlier deficits.

6. Short-term dryness continues to impact parts of central Uganda, northwestern Tanzania and along the Kenya/Tanzania border east of Lake Victoria. While significant rains fell in northwestern Tanzania, only light showers fell on the rest of the area. Light showers are expected in affected parts of Kenya and Uganda, while Tanzania may see some slightly heavier rains.

7. Lake Victoria continues to have below normal water levels. Ten-year low lake levels are a result of below normal rainfall in the catchment basin. This is impacting irrigated agriculture and drinking water downstream along the Nile River in Unity, El Buheirat and Longlet states in Sudan. As much as 50 mm of rain fell over parts of Lake Victoria during the past week, though lighter totals are expected during the coming period.

8. As a result of lack of water in the Mtera Reservoir, hydroelectric power generation has been suspended; however, this has not affected local agriculture. Central and southwestern Tanzania, including the headwaters of the Rufiji River Basin, has received lighter than normal rainfall during 2004. Light showers have fallen in the area during the past three weeks, and are expected to continue to fall during the coming week.

9. Heavy rainfall has continued during the past week along the lower part of the Tana and Ijara River Districts. Accumulations over the past two weeks have exceeded 350 mm in some locations, causing localized flooding. The coming period will bring more moderate rains.

10. In Madagascar recent heavy rains have resulted in localized flooding. Last week, rainfall up to and exceeding 200 mm have fallen in southern Mahajanga, western Antanarivo and northern Oliara. Heavy rains are expected to continue as a front moves through the region.

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