The USAID FEWS-NET

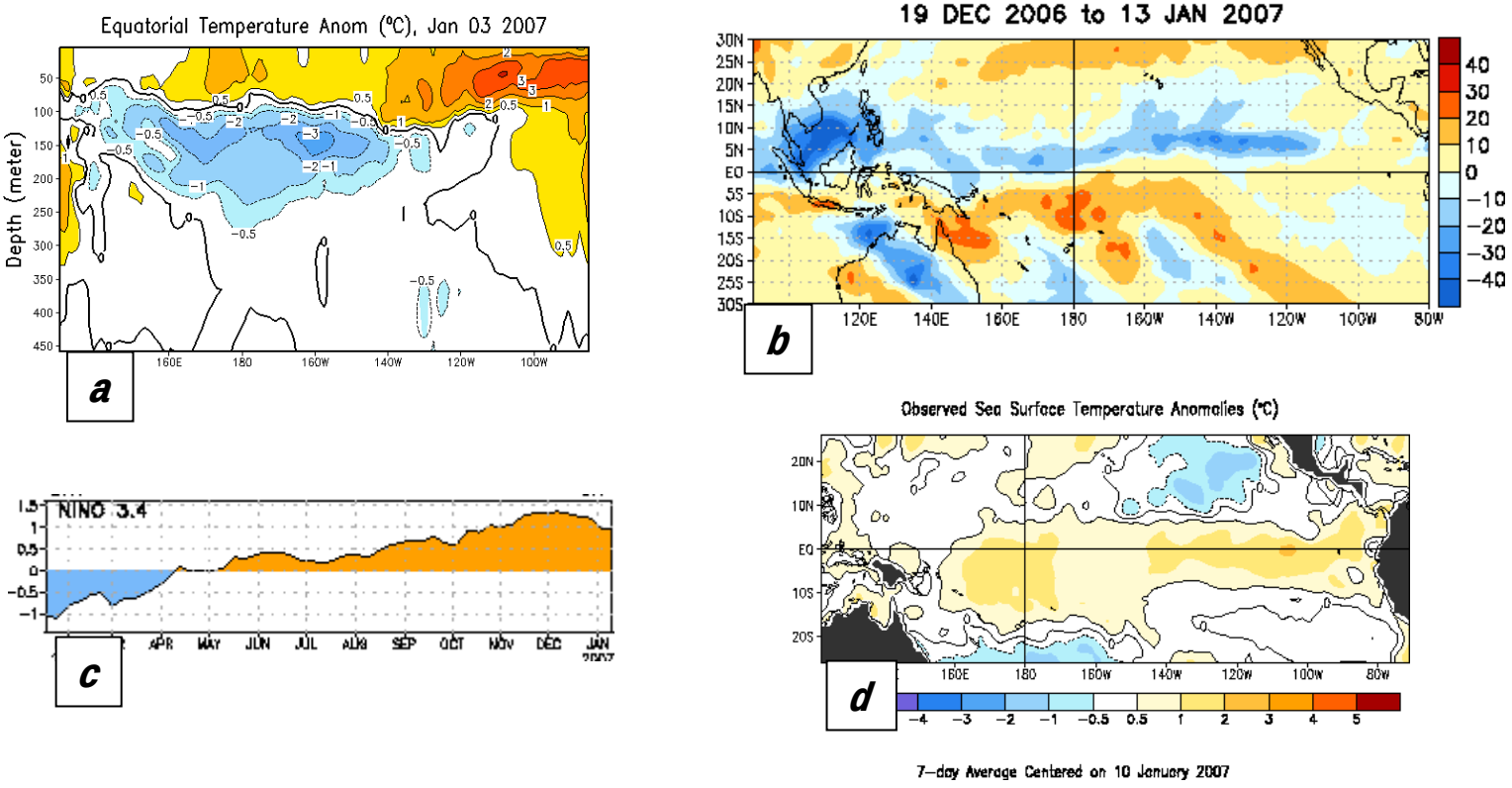
Africa Weather Hazards Assessment

for

January 18 – 24, 2007

Weekly Introduction:

Update of ENSO Conditions:



a) SST anomaly for depth cross-section. Note the cold pool forming where there previously were warmer than normal SST's. Near and shortly before the current El Nino reached its peak, these SSTs were warmer than normal virtually throughout the area depicted. b) OLR anomalies, blue indicating more clouds than normal and red indicating less cloudiness. Note the increased clouds associated with the warm SST's indicating the continuation of El Nino conditions. c) SST anomalies for the Nino 3.4 region of the eastern Pacific. Observe that temperatures have slightly cooled since peaking in December 06. d) Observed SST anomalies for the equatorial Pacific region. While warmer than normal SSTs are evident in much of the area, the magnitude has generally decreased during the past few weeks.

The forecast? Most climatic models are generally forecasting decreased SST's during the next few months, some more rapidly than others. Implications for southern Africa are discussed further in this week's hazards text explanation, Area #2.

Africa Weather Hazards/Benefits Assessment

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) Heavy rains continue in portions of central Mozambique, and areas of localized flooding are evident. Favorable moisture conditions are a positive aspect.

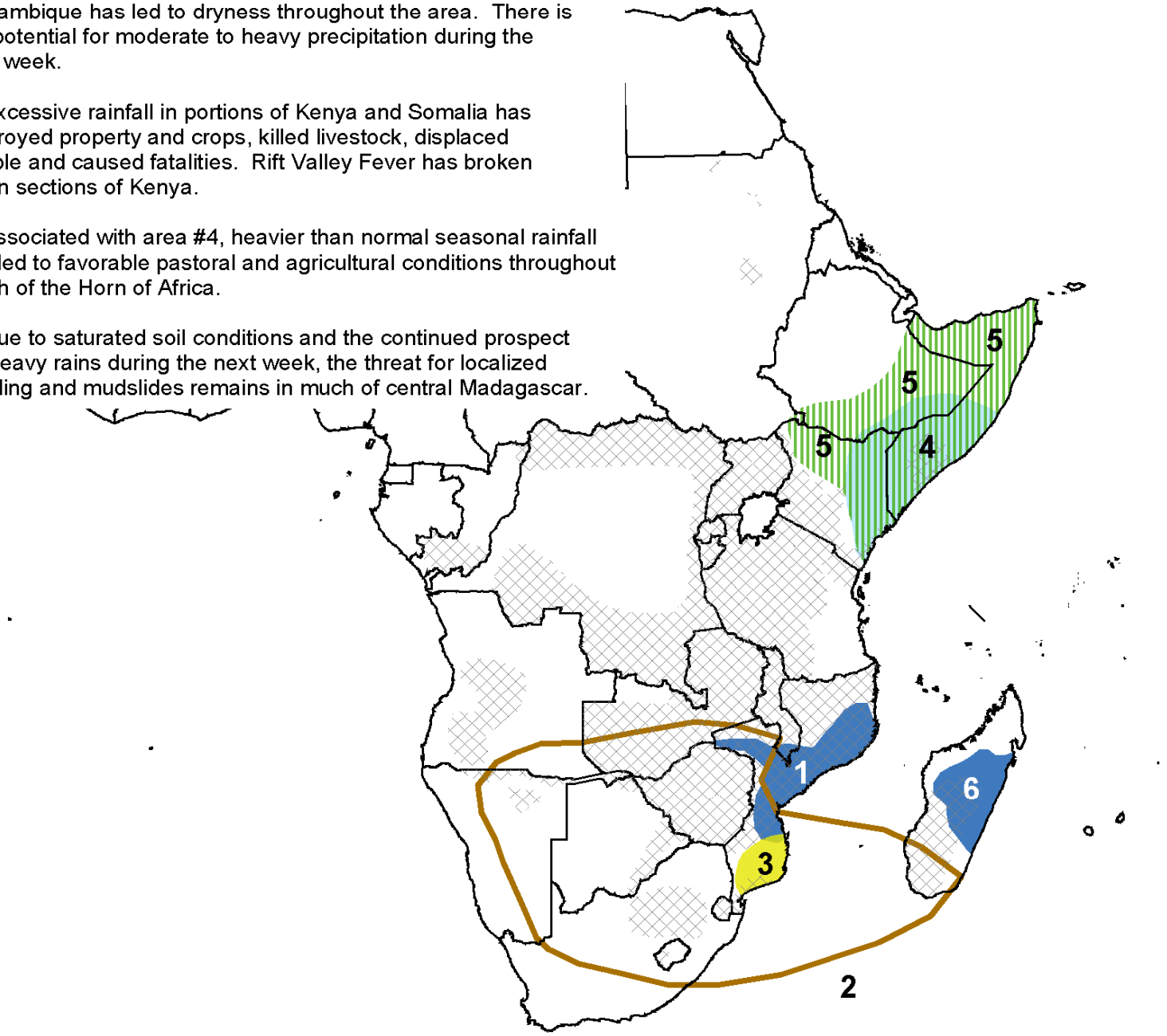
2) Remaining a concern, ENSO-positive (El Nino) conditions may lead to decreased rainfall into February & March across portions of southern Africa.

3) Delayed rainfall and warm temperatures in much of southern Mozambique has led to dryness throughout the area. There is the potential for moderate to heavy precipitation during the next week.

4) Excessive rainfall in portions of Kenya and Somalia has destroyed property and crops, killed livestock, displaced people and caused fatalities. Rift Valley Fever has broken out in sections of Kenya.

5) Associated with area #4, heavier than normal seasonal rainfall has led to favorable pastoral and agricultural conditions throughout much of the Horn of Africa.

6) Due to saturated soil conditions and the continued prospect for heavy rains during the next week, the threat for localized flooding and mudslides remains in much of central Madagascar.



Valid: January 18 - 24, 2007

Weather Hazards Text Explanation:

1) Heavy rainfall is again possible during the next week in areas of Mozambique that have been inundated with precipitation during the past weeks. As a result of currently saturated soil conditions, higher than normal river levels, and forecast heavy rainfall, localized flooding is likely during the period. Fortunately, very few reports of property or crop losses have been reported in the region, and overall the rains have been beneficial for water resource demands. While the stalled frontal system should continue to produce daily rainfall in many locations, it remains too early to speculate whether any negative ENSO-related implications will occur during February-March.

2) ENSO positive (El Nino) conditions are continuing, though the magnitude of abnormally warm sea surface temperatures is decreasing. As of the week of January 10th, SSTs throughout much of the equatorial Pacific region are running between 0.5-1.5 degrees above normal. The aerial averaged SST anomaly in the NINO 3.4 region is approximately +1 degree, which is slightly cooler than the December 06 peak of around +1.5 degree. Most SST forecast models predict continued cooling of the equatorial Pacific waters through the next 6 months, and some indicate a chance for very rapid cooling during the next 1-2 months. With respect to African weather, El Nino conditions are usually associated with warmer & drier conditions in southeastern Africa as well as wetter than normal conditions in The Horn during the December – February period. We have certainly seen wet conditions in The Horn of Africa, though dryness has not generally been observed thus far in much of southern Africa. However; it is too early to state that these conditions will continue for the remainder of the season. Positive correlations do exist between February-March dryness and El Nino, or even ENSO-neutral conditions in southern Africa. Therefore, while conditions have been favorable for much of the area, an extended spell of dryness within the next 2 ½ months could severely lower agricultural production by hitting crops in delicate stages of growth.

3) Season to date rainfall in much of southern Mozambique is running 25-100 mm less than normal which is equivalent to 20-80 percent of normal seasonal rainfall thus far. The most severe dryness is observed to be in eastern, coastal areas of the region where little precipitation has fallen during the past three and a half months. Certainly moisture availability is inadequate for most agricultural purposes in the region, especially considering that temperatures have also been running slightly above normal. A frontal system is currently sliding southward into areas of central Mozambique, and this brings the possibility of some moderate rainfall in the northern portion of the hazard area. Latest models appear to be forecasting slower southward movement of the rains than earlier forecasts.

4) The excessive seasonal rainfall in the Somali region of Ethiopia, central and southern Somalia and eastern Kenya has caused extensive damage to infrastructure due to an extended period of flooding. The rainfall has also allowed an outbreak of Rift Valley Fever in Kenya that threatens to spread in southern Somalia as well. The outbreak in Kenya, which has taken place in the Garissa, Wajir and Kilifi districts, has already caused numerous fatalities. The precipitation has displaced people both locally and internationally with Somali refugees arriving in rain soaked portions of Kenya. Rainfall over the region has been so excessive this season that two to four times normal since October was observed throughout the region. Although most precipitation has decreased in Somalia and Ethiopia, additional moderate rains are continuing in areas of southern and central Kenya.

5) Although the heavy rainfall across much of the Greater Horn of Africa caused flooding damage during the past season, there will be long term benefits including recharged pastures and fulfilled drinking water reserves. These much improved conditions arrived on the heels of what in most areas was a poor 2006 long rainy season. Some areas also observed several consecutive seasons of failed rains.

6) Very heavy rains have fallen during the past month in areas of Madagascar, and many soils remain saturated. A stalled front will remain over the region during the next week and should bring continued heavy rains to many central locations of the country. Localized flooding as well as landslide activity will be common with the heavier thunderstorms, though generally few problems should result.

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