Horn of Africa Flooding and Associated Health Risks

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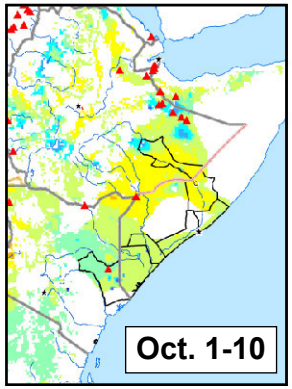
Date: December 8, 2006

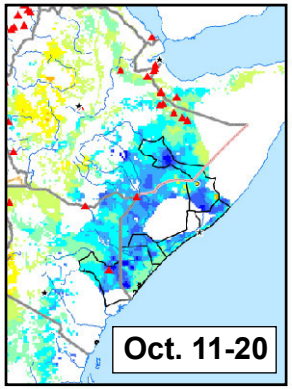
Disaster Summary: "Deyr" season rains (typically Oct-Dec) began two weeks early, pounding the Horn of Africa (HOA) region, inundating parts of Ethiopia, Kenya, and Somalia. Up to 1.8 million people have been affected. The UN estimates the floods could be the worst in 50 years. The greatest obstacle to relief efforts is lack of access to affected populations, due to submerged and damaged roads and damaged bridges.

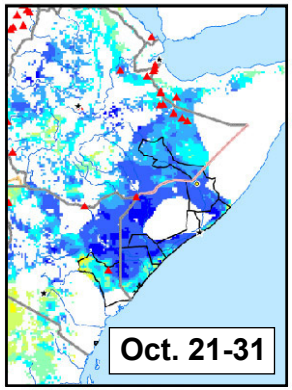
Health Concerns: The risk of cholera is immediate as floods destroy latrines, spread contaminated water, and infect wells. As of November 28, the WHO reports 40,341 cases of acute watery diarrhea in Ethiopia, including 435 deaths. Flooding can saturate typically arid soil, enlarging mosquito breeding grounds, which commonly leads to a spike in malaria infection several weeks later. Outbreaks of livestock disease, as occurred during the floods of 1997/1998, could lead to a ban on cattle export and future economic hardship.

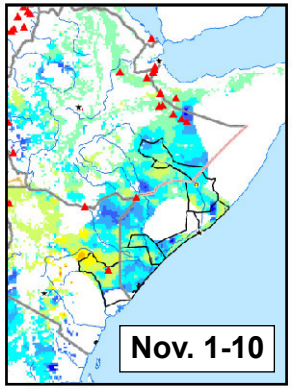
Rainfall Anomalies in Zones with Malaria Epidemic Potential
October 1 - November 30, 2006

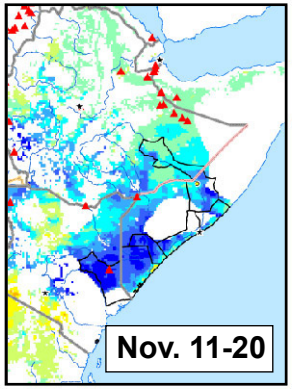
Some areas of the HOA , particularly the Shabeelle and Juba river watersheds, received up to six times the long-term average rainfall since late September. These colored maps show rainfall amounts relative to the long-term average. Regions shown in white are areas considered to have no historical malaria threat. Increased rainfall in malaria-prone regions should be a proxy for future malaria outbreaks as standing water forms mosquito breeding grounds.









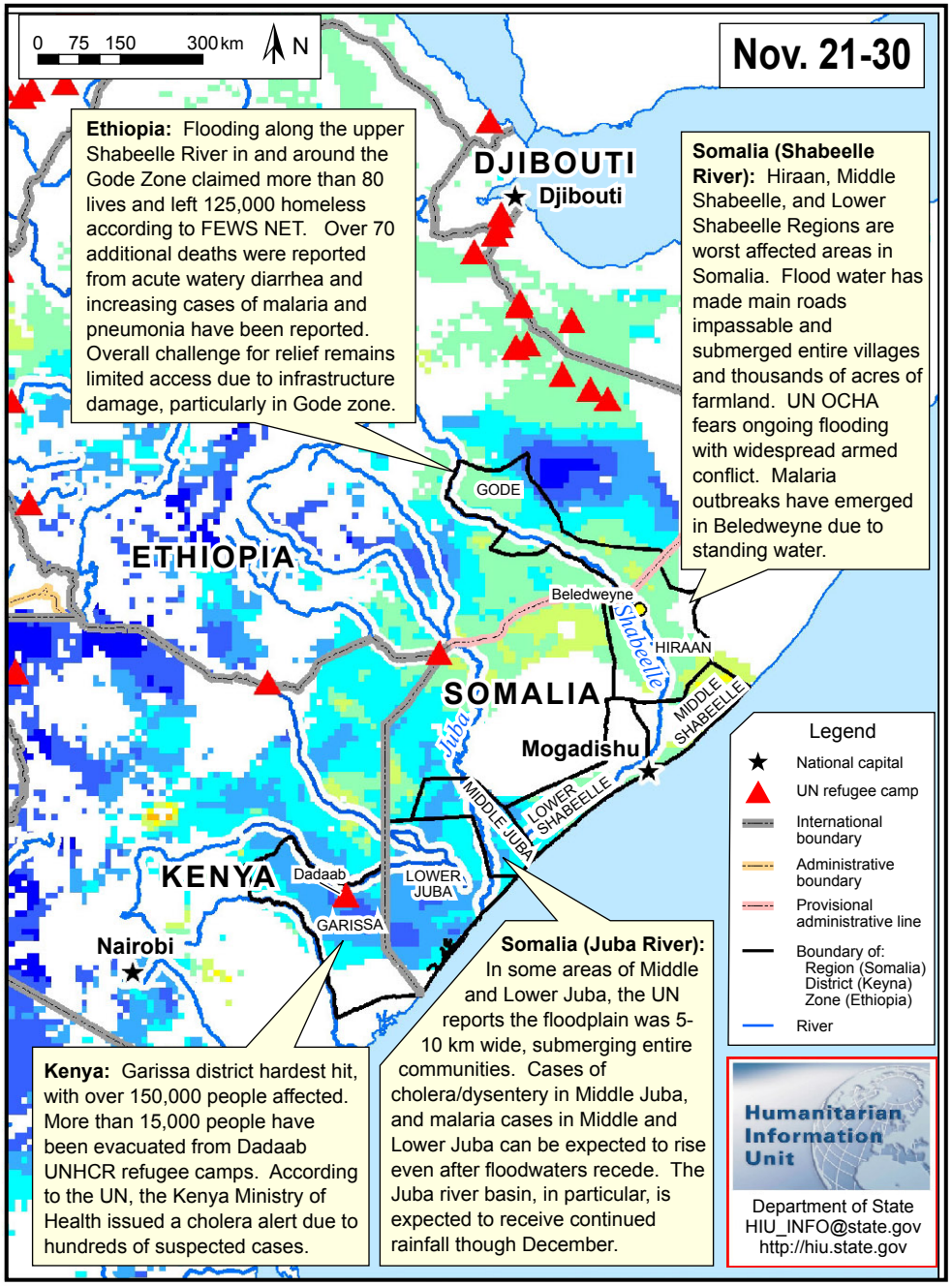


Rainfall Relative to Long-Term Average* (mm):

- < -100
- -100 to -50
- -50 to -25
- -25 to -5
- -5 to 5
- 5 to 25
- 25 to 50
- 50 to 100
- > 100

Less than average (-100 to -25); Greater than average (5 to 100)

*Rainfall over each 10 day period is compared to the average rainfall over the same period from 1998-2002. Data from FEWS NET



Ethiopia: Flooding along the upper Shabeelle River in and around the Gode Zone claimed more than 80 lives and left 125,000 homeless according to FEWS NET. Over 70 additional deaths were reported from acute watery diarrhea and increasing cases of malaria and pneumonia have been reported. Overall challenge for relief remains limited access due to infrastructure damage, particularly in Gode zone.

Somalia (Shabeelle River): Hiraan, Middle Shabeelle, and Lower Shabeelle Regions are worst affected areas in Somalia. Flood water has made main roads impassable and submerged entire villages and thousands of acres of farmland. UN OCHA fears ongoing flooding with widespread armed conflict. Malaria outbreaks have emerged in Beledweyne due to standing water.

Kenya: Garissa district hardest hit, with over 150,000 people affected. More than 15,000 people have been evacuated from Dadaab UNHCR refugee camps. According to the UN, the Kenya Ministry of Health issued a cholera alert due to hundreds of suspected cases.

Somalia (Juba River): In some areas of Middle and Lower Juba, the UN reports the floodplain was 5-10 km wide, submerging entire communities. Cases of cholera/dysentery in Middle Juba, and malaria cases in Middle and Lower Juba can be expected to rise even after floodwaters recede. The Juba river basin, in particular, is expected to receive continued rainfall though December.

Sources: UNHCR=UN Office of the High Commissioner for Refugees, UN OCHA = United Nations Office for the Coordination of Humanitarian Affairs, FEWS NET=Famine Early Warning Systems Network, WHO=World Health Organization

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Names and boundary representation are not necessarily authoritative