Matching Needs and Response Capacity
Projected Famine Risk in South Sudanese IDP Settlements and How the Humanitarian Community Can Access Those in Need

Introduction

The civil war in South Sudan escalated in early 2015, resulting in ongoing large scale displacement. Jonglei, Upper Nile, and Unity States are most affected by the current conflict, exacerbating insecurity in general and food insecurity in particular. People are displaced from their homes, unable to farm, and/or deprived access to markets. Additionally, deprecating currency has increased the cost of food imports and internal displaced persons (IDPs) rely on kinship networks to gain access to resources, straining the already limited capacity of host communities. The Integrated Food Security Phase Classification estimated that 2.5 million people would face crisis and Emergency level food insecurity between January and March 2015 and that 40% of the population in Greater Upper Nile would face significant nutrition deficits.

How can food aid get to the people most in need? The purpose of this project is to show 1) the IDP settlements in South Sudan that are most likely to be in need of food assistance January -March 2015, and 2) of those, which are also most accessible to humanitarian actors. Identifying potential delivery routes (UNDP airfields and road networks) will enable humanitarians to address the impending need in demand for their services.

Research Questions

1. How many IDP settlements in need of response are in each of the FEWS NET risk areas?
2. How far are IDP settlements from UNDP Airfields?
3. Which IDP settlements are most in need and most accessible?

Research Methodology

I created a 2 kilometer buffer around all the roads in the crisis area and then selected by location to determine the settlements that are categorized as “no response” are in each risk area (pie chart). Second, I again the select by location tool to determine all the IDP settlements within 2 kilometers of a road, however, should not be ignored. The UNDP sometimes uses airdrops to deliver aid to inaccessible areas, and considering the prevalence of airfields and flight radii of UNDP aircraft, every settlement in South Sudan is accessible in some way.

Discussion

The pie chart shows that there are 82 IDP settlements in crisis zones that are not being responded to by the humanitarian community. While significantly more of the settlements with no response are in the stressed areas (157), they are less likely to have acute need in the near future and thus should be monitored but not prioritized for response.

This analysis (in response to question 2) determined that an IDP settlement’s proximity to a UNDP airfield does not affect its likelihood of receiving humanitarian assistance. The chart in response to question 3, as well as the top right map, show that there are 7 IDP settlements that are most likely to be in need as well as most accessible (as determined by their position in a crisis zone and distance from a road). The map also shows UNDP airfields that are within 2 kilometers of a road (28 total), providing a guide for where humanitarians might fly in supplies to then deliver to settlements over land. Settlements that are not within 2 kilometers of a road, however, should not be ignored. The UNDP sometimes uses airdrops to deliver aid to inaccessible areas, and considering the prevalence of airfields and flight radii of UNDP aircraft, every settlement in South Sudan is accessible in some way.

Further research is required to determine what factors make a settlement more likely to receive a humanitarian response. Additionally, incomplete data on the conditions of airfields and the quality of roads might affect the utility of this analysis. In deciding which IDP settlements to target for immediate assistance, humanitarians should consider the size of the population in need (in addition to its accessibility). Sites listed as “no caseload at the moment” should be monitored for influxes of IDPs as well as UNDP airfields in the crisis area that are also within 2 kilometers of a road.

Methodology

First I mapped the FEWS NET risk projections (minimal, stressed, and crisis) and all IDP settlements throughout South Sudan (bottom left map). I used the spatial join tool to determine how many IDP settlements that are categorized as "no response" are in each risk area (pie chart). Second, I again the select by location tool to determine all the IDP settlements within the crisis area that are not currently being serviced by the humanitarian aid community (bottom right map). Third, I conducted a point distance analysis to determine whether an IDP settlement’s distance from a UNDP airfield affects the likelihood that the settlement is being serviced (middle left table). Finally, I used the buffer tool to create a 2 kilometer buffer around all the roads in the crisis area and then selected by location to determine the settlements that will be most in need and are also most accessible by air and road. The final map (top right) shows IDP settlements in projected crisis areas that are not being serviced by the humanitarian community and are within 2 kilometers of a road, as well as UNDP airfields in the crisis area that are also within 2 kilometers of a road.