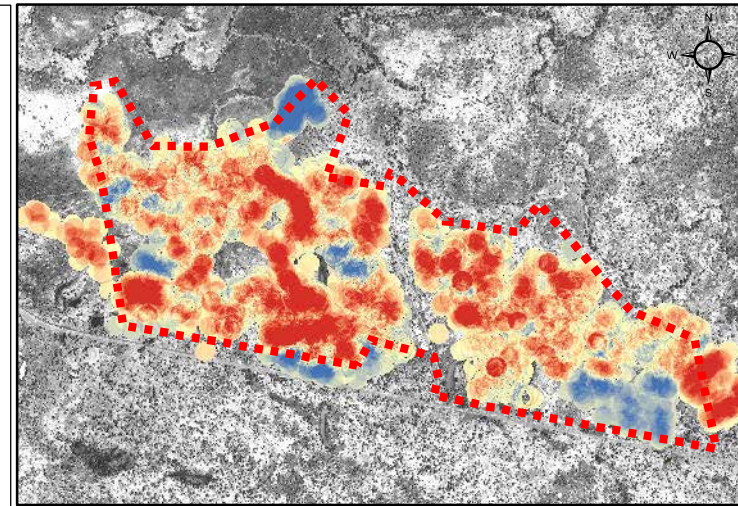


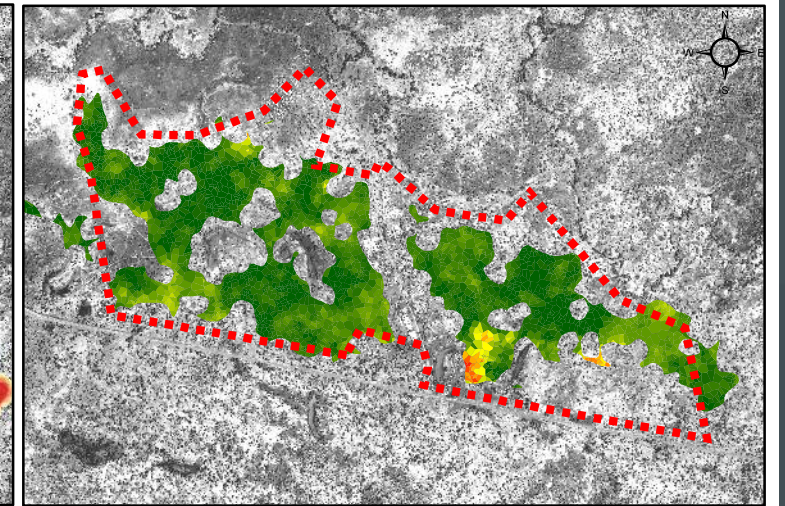
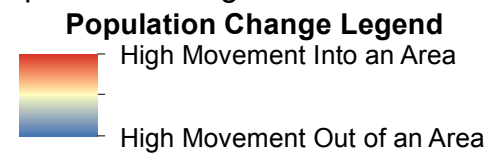
**Introduction:** This map shows a flood severity model that was calculated based on the following two factors: 1) the length of time standing water was reported by households to be present on their plots (inset map B) and 2) population movement around the site between 2012 and 2014 (inset map A). The population movement in Gendrassa has been mainly flood-driven in the past, so it is assumed that the majority of refugees that moved between these dates did so because of flood risk.

**Methodology:** Households were asked during a REACH survey in April 2014 to identify the length of time standing water was on their plot. The possible responses were: 1) Less than one week, 2) one to two weeks, 3) two weeks to one month, 4) one to two months and 5) more than two months. Further to this, the population distribution was mapped by enumerators using GPS equipment in 2012 and 2014 and spatial analysis was then applied to this data to map changes in population between these dates. Using the shift in population from 2012 to 2014 we can show the likely previous flooding locations, and use this population change to give preferential direction to the data from the survey to cover more of the camp where people no longer live. The addition of the data flow direction has given the map a deviation from the original data it is generalizing over a greater area. Using a test sample of 1,456 of the 3,126 surveyed households, the error included in the map is measured with a root-mean-squared error of 0.80 and a mean error 0.013. The survey used a sample size of 3,126 households; with an official number of households of 4,138 this sample ensures a 99% level of confidence and a 1.2% margin of error.

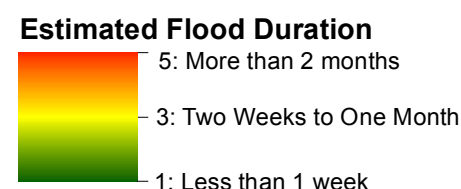
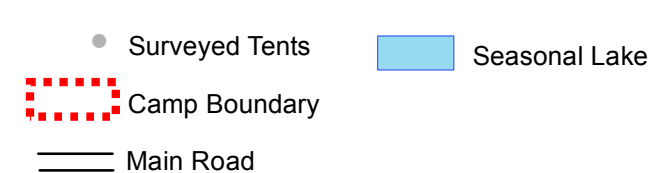
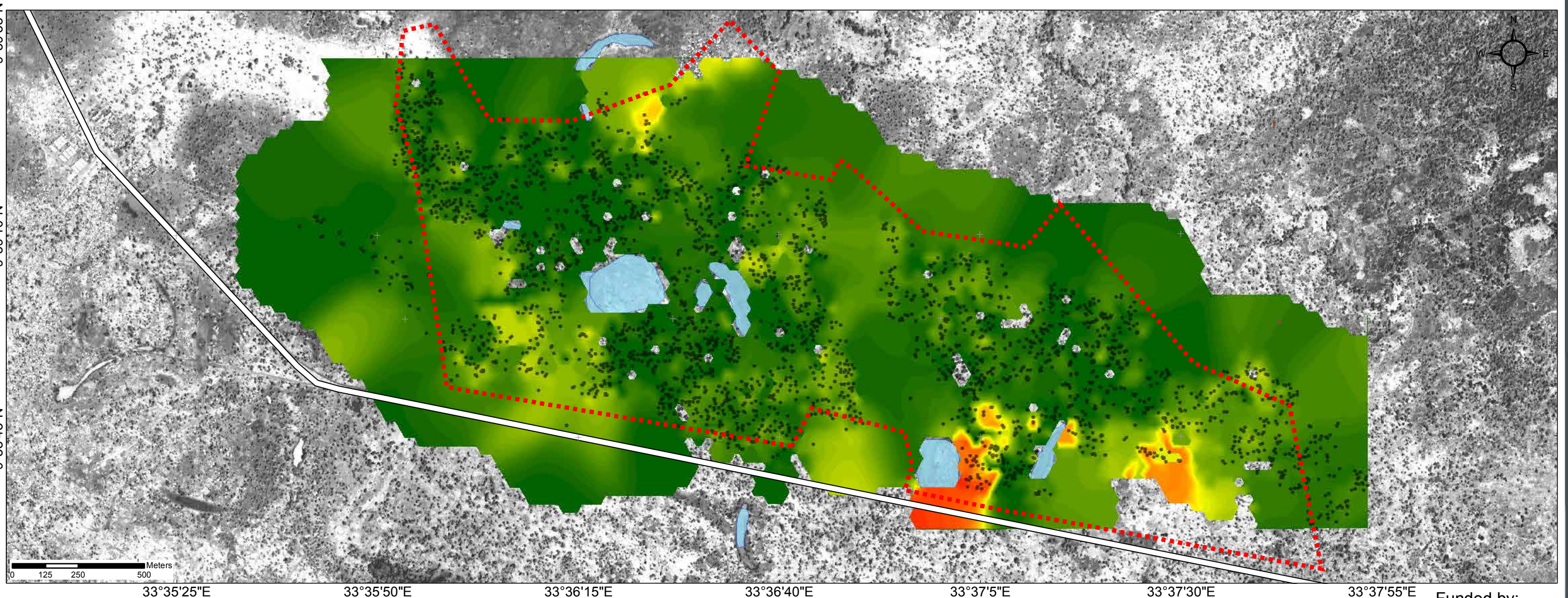
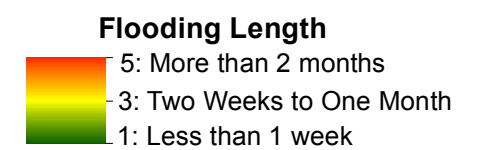
**Results:** The flood severity model shows a number of areas that are likely to suffer from severe flooding. These are areas where households reported standing water for several weeks and/or substantial population movement was observed. One area, shaded red, to the south corresponds to a seasonal lake mapped by camp management in 2013. The zones in yellow do not appear to correlate with known seasonal lakes.



Inset Map A:  
Population Change From 2012 to 2014



Inset Map B:  
Flood Responses Map Without Population Movement



Data Sources: Vector Data - REACH (Tent Data, Survey Data, Population Data, Camp Boundary)  
Satellite Image: Digitalglobe Worldview-2 (December 2013)  
Coordinate System: GCS WGS 1984  
Contact: reach.mapping@impact-initiatives.org  
File: SSD\_CCM\_Flooding\_Gendrassa\_14May2014\_A3

Note: Data, designations and boundaries contained on this map are not warranted to be error-free and do not imply acceptance by REACH or the partners mentioned on this map.

The view expressed in this document are solely the responsibility of REACH. The document should not be taken, in any way, to reflect the official position of the donors