**NASA DEVELOP National Program**

****NASA Marshall Space Flight Center

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**Short Title: East Africa Disasters**

**Updated Abstract**

There are several hotspots for landslides throughout Rwanda and Uganda. This is due to local conditions such as topography, intense rainfall events, soil type, and deforestation. Data for individual countries are poorly tracked, but a total of 2,620 fatal landslides caused the death of 32,322 people worldwide between 2004 and 2010. There has been very little research that utilizes satellite imagery to collect information regarding landslides in order to help estimate areas susceptible to landslides in this region. This project utilized Landsat 8 Operational Land Imager (OLI) sensor to depict landslides that were then added to SERVIR’s Global Landslide Catalog (GLC). Landsat 8 OLI, the Tropical Rainfall Measuring Mission (TRMM), the Global Precipitation Measurement (GPM), and Shuttle Radar Topography Mission-Level Version 2 (SRTMv.2) were used to create a Landslide Susceptibility Map. A preliminary assessment of the relative performance of GPM and TRMM in identifying landslide conditions was performed. The additions to the GLC, the Landslide Susceptibility Map, and the preliminary assessment of satellite rainfall performance will be used by SERVIR and the Regional Centre for Mapping of Resources for Development (RCMRD) for disaster risk management, land use planning, and determining landslide conditions and moisture thresholds.