**NASA DEVELOP National Program**

****Wise County Clerk of Court’s Office

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**Peru Disasters II: Identifying and mapping flood-prone regions in the La Libertad Region of Peru using NASA’s Earth Observations**

**Updated Abstract**

In recent years, natural disasters have severely affected the rural regions of Peru. Large flooding events in 2008, 2013, and 2014 disrupted central highlands districts, including the Cascas district of the Gran Chimu province about 110 km inland from the coastal city of Trujillo. The primary study area for this project was the Ochape river sub-basin near the city of Cascas, the capital of the Gran Chimu province. In partnership with Water for People and the Instituto Nacional de Defensa Civil Del Peru (INDECI), this project aimed to create resources and tools necessary for flood risk assessment projects in the Cascas district of Peru. NASA Earth observations were used in this project to provide input datasets for the Coupled Routing and Excess Storage (CREST) Distributed Hydrological Model, which was developed by the University of Oklahoma in collaboration with NASA SERVIR. These inputs included Digital Elevation Models (DEMs) and related data from the HydroSHEDS portfolio of NASA’s Shuttle Radar Topography Mission (SRTM), rainfall data collected by Tropical Rainfall Measuring Mission (TRMM), and Landsat 8 imagery. All final maps, models, datasets, and tutorials developed in this project will enable Water for People and the Peruvian government to better prepare for flooding based on historical examples.