**NASA DEVELOP National Program**

****Goddard Space Flight Center

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**Himalayan Disasters II**

**Updated Abstract**

Nepal and the Himalayan region are hotspots for landslide activity due to mountainous topography, complex terrain, and monsoon rains. This study combined NASA EOS data from Landsat 8, MODIS, SRTM, ASTER, TRMM and GPM with various ancillary datasets to create two products for use in the region: the Sudden Landslide Identification Product (SLIP), and Detecting Real-time Increased Precipitation (DRIP). SLIP will help identify landslides in near real-time using Landsat 8 and elevation products, as well as provide damage assessments by mapping landslides automatically after a disaster such as the Gorkha earthquake in May 2015. DRIP will monitor precipitation levels extracted from the GPM-IMERG 30-minute product to create alerts when current rainfall levels exceed calculated threshold values. SLIP and DRIP were also integrated to provide a more comprehensive landslide notification system for the region. The DRIP-SLIP model combination will be used by the International Centre for Integrated Mountain Development (ICIMOD) to protect and manage ecosystems and villages in Nepal, prevent future loss of life due to landslides, and to reduce poverty through integrated natural resource management and regional cooperation.