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International Emergency Response to Natural Disasters

The U.S. Geological Survey (USGS) provides geospatial technical support in response to natural hazards worldwide. The USGS Rocky Mountain Geographic Science Center (RMGSC) provides integrated geospatial data from Remotely Sensed and GIS data sources. The geospatial datasets are derived from multiple sources of remotely sensed information. The data is distributed via web-enabled mapping applications, as spatial datasets, and in the form of custom digital map products distributed for printing.

Pakistan Earthquake & Landslides – In response to a M 7.6 earthquake near Muzaffarabad, Pakistan, the RMGSC in collaboration with the USGS Geological Division have supported post risk assessment analysis of landslides. Efforts have focused on deriving post event geospatial data and analysis over the Hattian Landslide area southeast of Muzaffarabad. The landslide is nearly 2.4 kilometers long that travelled northeastward off a high point in the topography filling about 120 meters of the valley bottom. As a result, The main drainage in the valley and a smaller tributary valley were blocked forming two small lakes. It is not clear if the material in the landslide is weak enough to fail catastrophically; however, given the potential consequences to inhabitants downstream, USGS geologists and other authorities have been monitoring and analyzing the situation.

DigitalGlobe Quickbird II Satellite Image: Massive Landslide in Pakistan - The massive earthquake that shattered Pakistan on October 8, 2005, was centered in the steep mountains of Kashmir. Communities already hard to reach because of the treacherous mountain topography were cut off entirely when landslides slumped over roads. The multispectral sensor on the QuickBird satellite captured this image of one such landslide on October 27, 2005.

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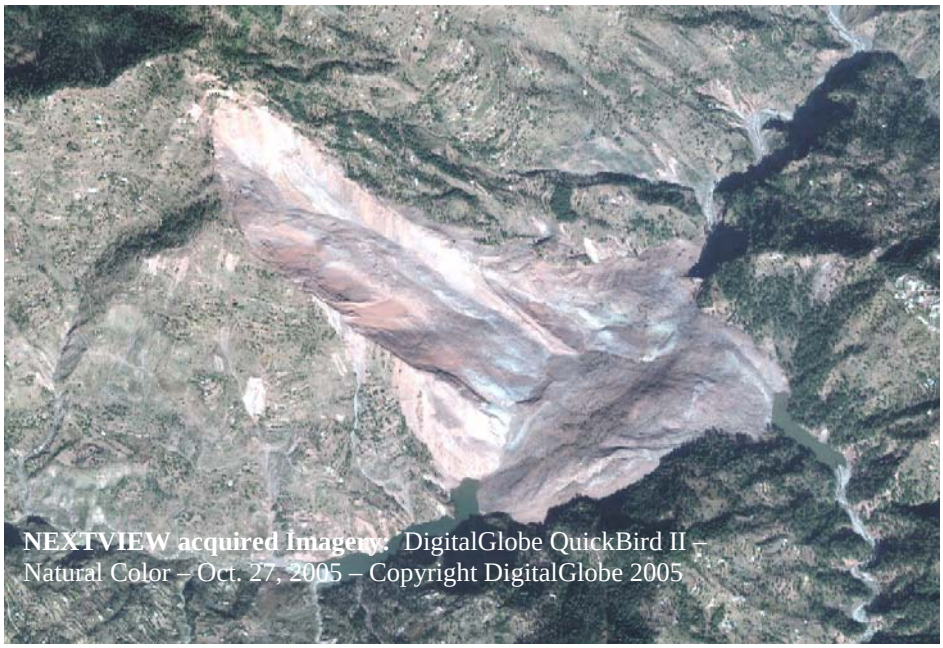
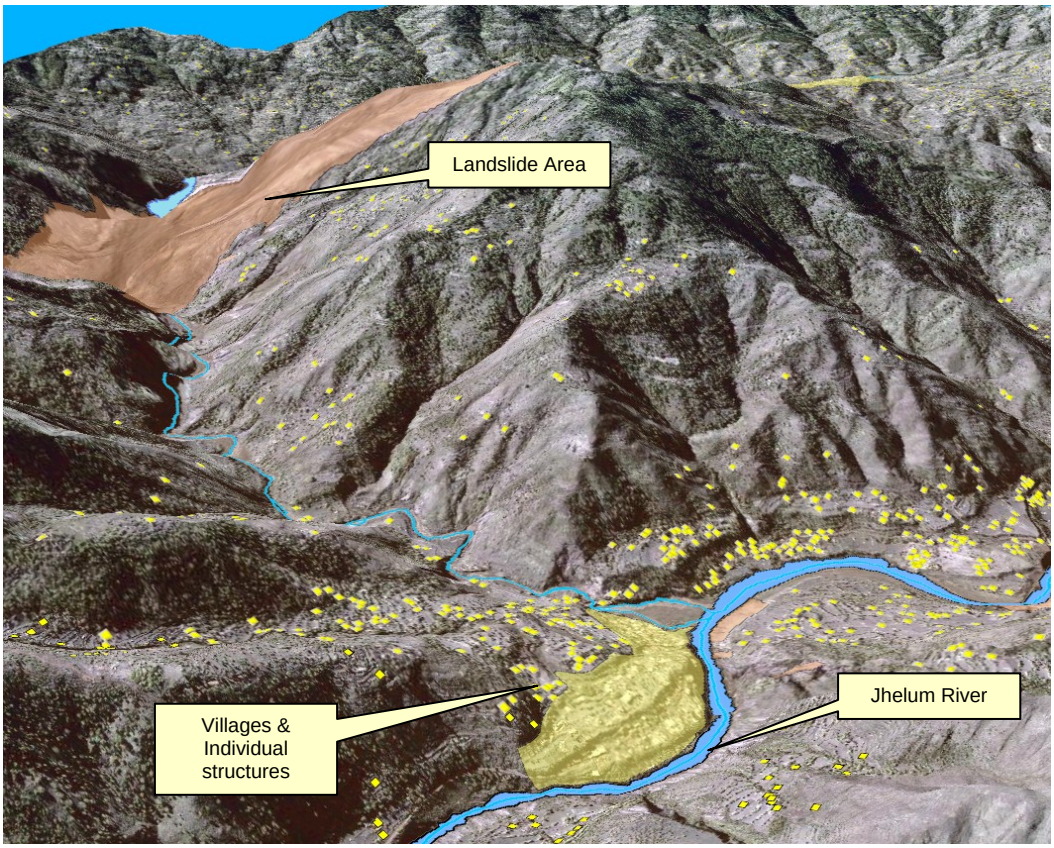
Post event geospatial datasets were collected (via NGA), cataloged and processed from multiple sources of remotely sensed data over areas impacted by landslides. DigitalGlobe QuickBird II imagery was collected over the landslide that was analyzed and several image map products were generated and distributed to various authorities. Digital Elevation Models (DEMs) were also generated to reflect the current topography. Additional data, including transportation networks, hydrography and structures were generated for use in flood modeling and visualization products.



NEXTVIEW acquired Imagery: DigitalGlobe QuickBird II – Natural Color – Oct. 27, 2005 – Copyright DigitalGlobe 2005



NEXTVIEW acquired Imagery: DigitalGlobe QuickBird II – Natural Color – Oct. 27, 2005 draped over SRTM elevation data – Copyright DigitalGlobe 2005 – Map features collected from the imagery and symbolized in 3D visualization.

For more information:
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