In mid-June 2013, unusually severe monsoon rain caused devastating flooding in northern India and Nepal. By June 21, news outlets reported at least 600 people dead and tens of thousands stranded or missing in rugged, inaccessible terrain on the edge of the Himalayas. Extremely high waters, particularly in the state of Uttarakhand, undermined roads and houses, while landslides wiped out others.

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The Moderate Resolution Imaging Spectroradiometer (MODIS) on NASA’s Aqua satellite observed the flooding on June 21, 2013 (top). For comparison, the lower image shows the same area on May 31, 2013. These false-color images use a combination of visible and infrared light to make it easier to distinguish between water and land. Water appears blue and vegetation is bright green. Clouds (lower left) are pale blue-green and cast shadows. Glacier ice and snow in the Himalayas are pale blue to cyan.

Based on the MODIS Terra/Aqua images dated 22 June 2013 the Yamuna and ganges rivers started receding at faster rate compare to the previous two days of images. Flood inundation in Gharhara river is still persistent particularly in districts of Sitapur, Pilibhit, Gorakhpur, Faizabad, where large patches of crop lands and settlements were inundated.

This analysis also used the river line MODIS data from May 2013 to show identity flood water only. Please note that water bodies likely reflect an underestimation and settlements were inundated.