



This map shows daily variation in flood water extent along the Indus rivers in Sindh, Punjab, Balochistan and KPK provinces based on time-series MODIS Terra and Aqua datasets from August 17 to August 21, 2010.

Result show that the flood extent is continuously increasing during the last 5 days as observed in Shahdad Kot Tehsil of Sindh and Balochistan provinces covering villages of Shahdad, Jamali, Rahoja, Sira. In the Punjab provinces flood has partially increased further in Shujabad Tehsil villages of Bajuwala Tibba, Faizpur, Isanwali, Mullanajias. Over 1000 villages and 100 towns were identified as severely affected by flood waters and analysis was performed using geospatial database received from University of Georgia, google earth and GIS data of NIMA (USGS). Approx. 800 kilometres stretch of national highway and link roads are submerged or partially inundated by flood water.

This analysis also used Pre river line MODIS data for September 19, 2009 to show identify flood water only. Please note that water bodies likely reflect an underestimation of all flood-affected areas within the map extent due to cloud, atmospheric variations and other reasons. This analysis has not yet been validated in the field. Please send ground feedback to ICIMOD / MENRIS.

Crisis Satellite data : MODIS Terra / Aqua
 Resolution : 250m
 Image date : August 18-22, 2010
 Source : NASA
 Pre-flood Image : MODIS Terra / Aqua
 Resolution : 250m
 Image date : September 19, 2009
 Source : NASA
 Baseline Imagery : MODIS Aqua Aug 22, 2010
 Source : NASA
 GIS Data : University of Georgia, USA
 Flood Analysis : ICIMOD
 Projection : Geographic, WGS84

Legend

- Pre-Flood River Line (2009)
- Flood Water extent (Aug 18)
- Flood Water extent (Aug 19)
- Flood Water extent (Aug 20)
- Flood Water extent (Aug 21)
- Flood Water extent (Aug 22)
- Airport
- Heliport
- Major airfield
- Minor airport
- Division / Tehsil
- Villages/towns
- Rivers
- Rural road
- Urban road
- Railways
- Urbanized area
- Administration boundary

Map Scale for 1:1,000,000
 0 25 50 100 Kilometres
 Map layout designed for A1 Printing (36 x 24 inch)

Map prepared by: **ICIMOD**
 Supported by: **USAID**, **SERVIR Himalaya**, **NASA**

The depiction and use of international boundaries, geographic names and related data shown in these maps are based on the sources they have been drawn from and quoted; these are neither error-free nor do they imply official endorsement or the position of ICIMOD

