

China-Pakistan Joint Research Center on Earth Sciences

**Pakistan Flood Emergency Investigation
and Assessment Project**

Disaster Rapid Report

Office of Expert Group

Issue 1

August 31, 2022

**Pakistan Flooding Disaster Latest Situation and
Remote Sensing Observations of Worst-hit Areas
in the South**

Since June this year, multiple periods of heavy rainfall in the Indus Valley have caused widespread flooding in Pakistan, which has entered its eighth cycle with no sign of abating. Data show that in the upcoming September, Pakistan is likely to enter another round of monsoon rains. On the 27, August, National Disaster Management Authority of Pakistan declared Pakistan entered a state of emergency. China-Pakistan Joint Research Center on Earth Sciences actively responds to the needs of major disaster mitigation in Pakistan, and organizes scientists of its related co- construction units and research institutes to form a joint project team with Pakistani scientists to

launch the *Pakistan Flood Emergency Investigation and Assessment Project*.

According to statistics, as of August 30, 1,162 deaths and 3,554 injuries have been caused, and even 1057388 houses have been destroyed, 243 bridges damaged, and various types of livestock 730,483 heads lost. At present, more than 33 million people have been affected by floods in Pakistan, with 460,000 people in temporary resettlement camps.

According to the synthetic images monitoring results of Sentinel-1 for the most affected southern provinces of Sindh, Punjab, and Balochistan in the two periods of May 25, 2022-June 6, and August 23, 2022-August 30, it suggests that the water area in these three provinces shows an increase of 85.1%, from 18113.88km² to 33532.25km². Among them, the water area of Sindh province has increased from 8214.26km² to 20912.29km², with an increase of 157.7%.

The floods have destroyed large amounts of unharvested crops in the lower Indus, particularly in Sindh, southwestern Punjab and northeastern Balochistan. As of August 30, the floods have inundated 2,459,900 hectares of farmland, with 29.63%, 4.21% and 30.71% of farmland in these three provinces affected, covering 1,467,200, 486,400 and 506,100 hectares respectively. Main roads in Sindh,

Punjab and Balochistan have been flooded by 181.08km, with 117.54km, 27.93km and 35.61km of major roads in these three provinces respectively.

Annexes:

1. Inundation range of floods in three southern provinces in Pakistan;
2. Distribution range of flood-affected roads;
3. Distribution range of flood-affected arable land.

Submitted to: Bureau of International Cooperation, Chinese Academy of Sciences,
Embassy of the People's Republic of China in the Islamic Republic of Pakistan, Higher
Education Commission of Pakistan

Prof. WANG Juanle, YAN Xinrong, LI Kai

Date: August 31, 2022

Contact: Prof. Hong Tianhua +92-318 5001269; 86-13717995928
hongth@aircas.ac.cn

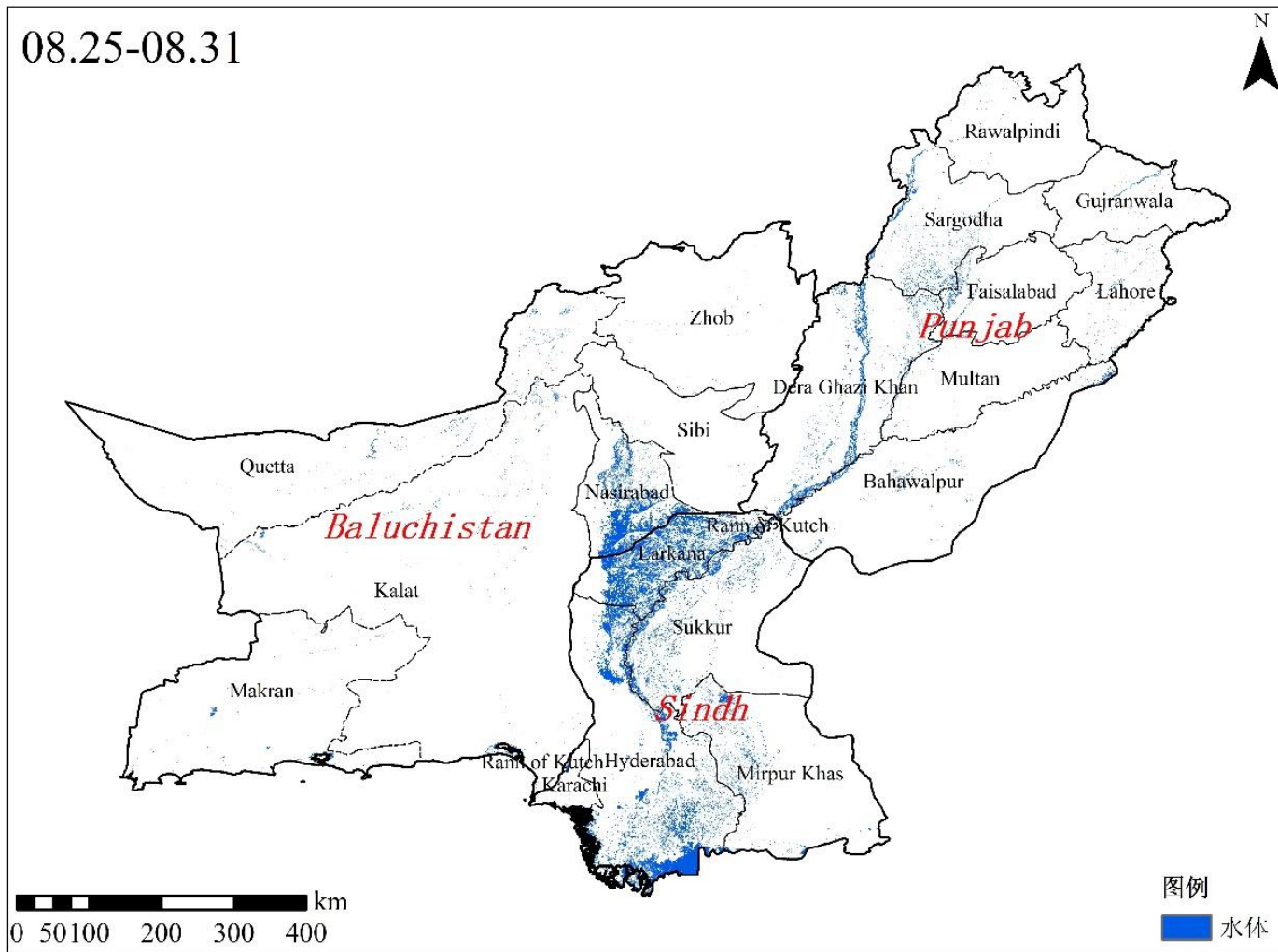


Figure 1 Inundation range of floods in three southern provinces in Pakistan (August 25- August 30)

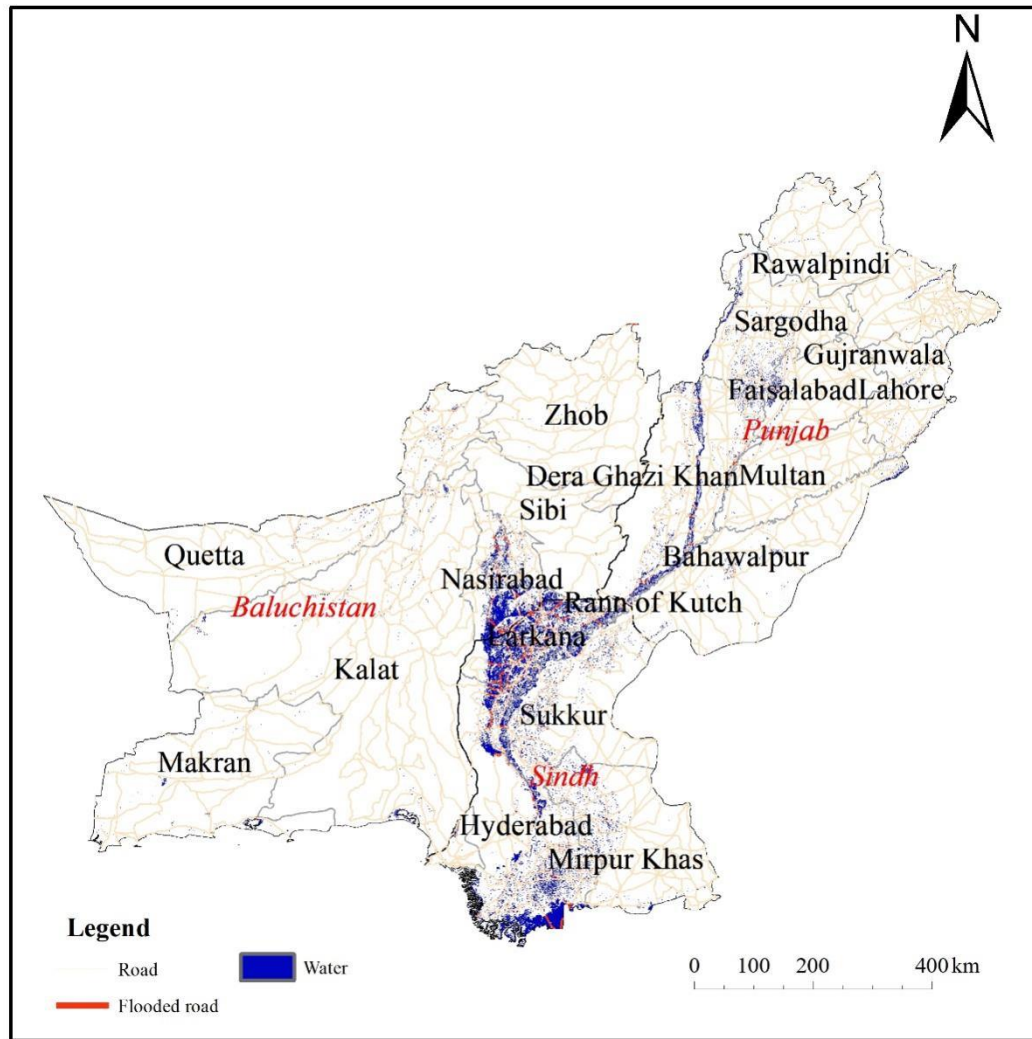


Figure 2 Distribution range of flood-affected roads in southern Pakistan

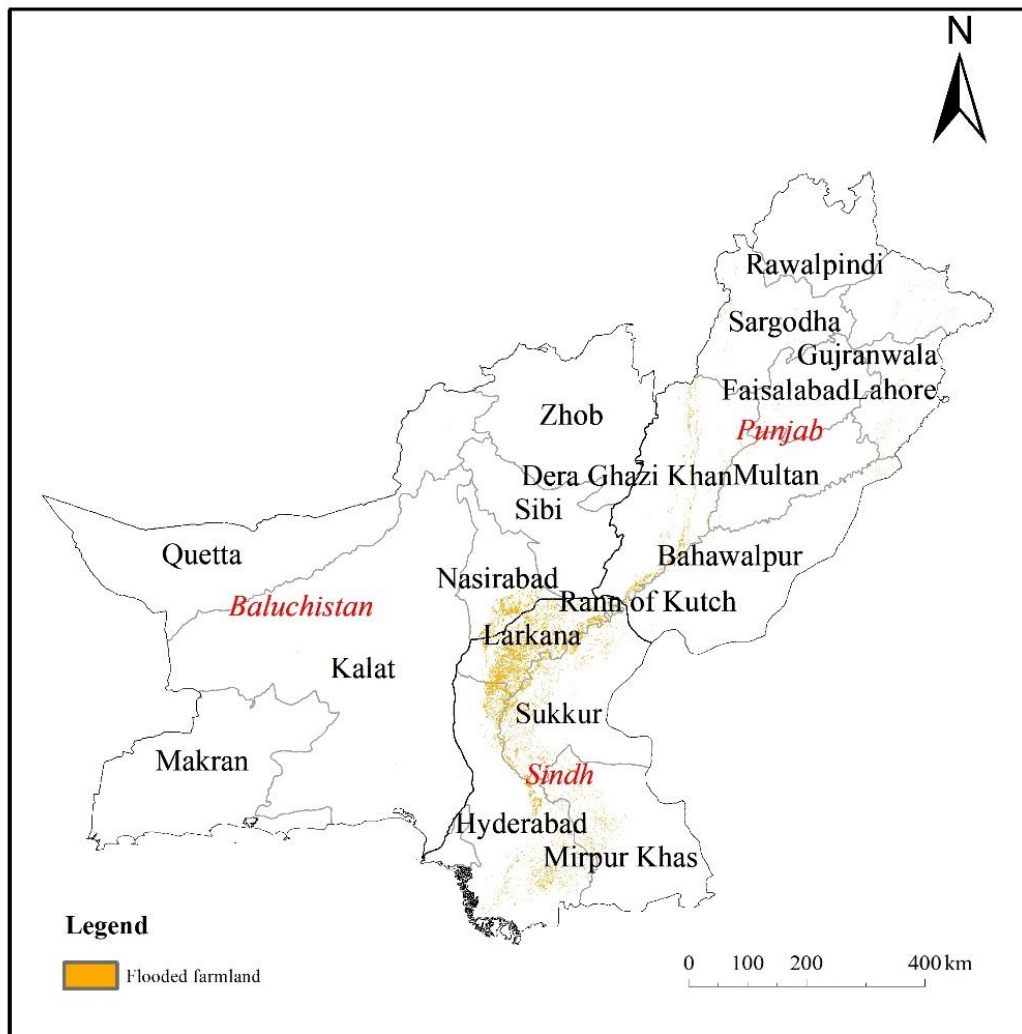


Figure 3 Distribution range of flood-affected arable land in southern Pakistan