Delhi reels as Yamuna swells; North India fights rain chaos

1 min read • 13 Jul 2023, 11:05 PM IST

Puja Das

As of Thursday, a total of 12,11,357 cusec of water has been released from Hathnikund Barrage leading to the water level in Yamuna crossing 208.62-metre level breaching the all-time high level of 207.49-metre experienced in 1978.

A surge in the Yamuna river's water levels, compounded by the release of water from the Hathnikund Barrage by Haryana, has spurred flooding in Punjab and Delhi. (AFP)

New Delhi: North India is grappling with a cascade of weather-induced calamities, wreaking havoc on lives and livelihoods . Torrential rains have triggered landslides in Himachal Pradesh and Uttarakhand, paralyzing daily life and crippling the agricultural sector.

A surge in the Yamuna river's water levels, compounded by the release of water from the Hathnikund Barrage by Haryana, has spurred flooding in Punjab and Delhi.

Forecasters warn that the region may brace for intensified hardship in the days ahead.

As of Thursday, a total of 12,11,357 cusec of water has been released from Hathnikund Barrage leading to the water level in Yamuna crossing 208.62-metre level breaching the all-time high level of 207.49-metre experienced in 1978.

This has led to the closure of 10 schools in low-lying areas of Delhi's Civil Lines zone and seven schools in Shahadra.

The situation this year has been aggravated due to two reasons—a record rainfall of 153 mm between 8 and 9 July breaking a 41-year record and a record release of more than 12 lakh cusecs of water from Hathnikund.

The water level from Yamuna spilled over to major National Highways and roads around ISBT Kashmere Gate, Indira Gandhi Stadium Road, Ring Road near ITO, GT Karnal Road, Old Yamuna bridge in Delhi resulting in disruption in movement of traffic.

The situation in Delhi is expected to get worse as 170,000 cusec of water has been released from Hathnikund on Thursday which will reach Delhi in about 24 hours.

Total number of river sites, including Uttar Pradesh, West Bengal, Assam, Bihar and Tamil Nadu, where water is flowing above the warning level or in flood situation has risen to 35, Central Water Commission said on Thursday.

A recent surge of landslides and rockfalls, precipitated by torrential rainfall in North India, has exacted a significant financial impact. Experts assert that the repercussions of these heavy rains and landslides are far-reaching, inflicting damage to infrastructure, disrupting business operations, causing agricultural deficits, curbing tourism, and escalating emergency response expenditures.

Meanwhile, about 90 people reportedly lost their lives in Himachal Pradesh and 39 in Uttarakhand over the last four days due to torrential rain causing floods and landslides.

The recent spate of landslides and rockfall triggered by heavy rainfall in North Indian states has inflicted a substantial economic toll. Heavy rains and landslides have a multifaceted impact on the economy, resulting in infrastructure damage, business disruptions, agricultural losses, tourism decline, and increased emergency response costs, experts say.

"Despite significant investments by the government in infrastructure development, the substantial funds allocated are all too often washed away by these destructive events, leading to the need for reinvestment and delaying progress, exacerbating the financial burden," said Vikramjiet Roy, Managing Director of Maccaferri India. "Furthermore, the impact on people's livelihoods, coupled with the ensuing transportation blockades, have further deepened the crisis."

Landslides have damaged critical infrastructure such as roads, bridges and houses. The repair and reconstruction of these damaged structures require significant financial resources and time, disrupting transportation networks, disrupting supply chains and hindering economic activities. “Such acts also lead to a decline in tourism activities, impacting local businesses, hotels, restaurants, and the tourism industry leaving a long-lasting effect on the regional economy," Roy added.

Most parts of Himachal Pradesh are relatively at ‘Low’ to ‘Very Low’ levels of landslide risk. Therefore, parts of central and southern Himachal Pradesh are likely to receive significantly high rainfall and are at ‘Moderate’ to ‘High’ risk of landslide from Thursday to Saturday. In the case of Uttarakhand, Dehradun, Uttarkashi, Tehri Garhwal, Rudraprayag, Garhwal. Nainital and Champawat districts are at ‘High’ landslide risk amid IMD’s rainfall forecast of 115.6 to 204.4 mm rainfall from Saturday to Monday in Uttarakhand.

Himachal Pradesh and Uttarakhand received 316% and 92% surplus precipitation in the week ended on 12 July, while Delhi got 200% more rainfall during the same period.

More rainfall may bring a wide impact on lives and livelihoods. An analysis by a global disaster risk management firm RMSI shows over 5,500 km (about 10%) of the road network in Uttarakhand is at risk from landslides due to anticipated heavy rainfall today and in the coming days.
These landslides pose a serious threat to the economic activities of a state, as well as day to day lives and livelihoods of the people living in these regions. Experts say that road network development loosens the rocks due to blasts during construction, and regular vibrations of heavy traffic lead to the alteration of natural drainage patterns contributing to these landslides.

“Landslides create immense damage to infrastructures, vehicles and road network. After any landslide event, there is business interruption leading to losses due to stopping of production, non-accessibility of assets and closure of markets leading to loss of Income. Another immediate and most common impact of a landslide is damage to the road network leading to interruption in movement of rescue and relief services, goods and services, and people evacuation," said Pushpendra Johari, SVP - Sustainability, RMSI.

“Road construction must be accompanied by slope stability actions and retaining structures. This should not be a one-time exercise but a regular one. Similarly, building construction norms should also be enforced, “ Johari opined.

“Considering the recent constant increase in the frequency and severity of extreme weather events, it is the need of the hour to safeguard communities and infrastructure across naturally fragile locations in India," Johari added. “The government must make firm decisions on new construction approvals, construction guidelines, and the movement of vehicles and people into these fragile locations."

India has around 30% of its area covered by mountain ranges. Landslides of different types occur frequently in the geo-dynamically active domains in the Himalayan and North-Eastern parts of the country.

IMD has placed some northeastern parts of India on red alert for the coming two days. IMD expects more than 204.4 mm rainfall in Meghalaya, Sikkim and sub-Himalayan West Bengal and 115.6 to 204.4 mm in Assam.

The Himalayan Mountain ranges and hilly tracts of the North-Eastern region are highly susceptible to slope instability due to the immature and rugged topography, fragile rock conditions, high seismicity resulting from proximity to the plate margins, and high rainfall.

Landslides have the potential to inflict mass damage because the gravitation effect causes sudden movement of heavy mass at very high velocity. Other than the physical losses to structures and assets, landslides cause blockages along the major road network, thus causing business interruption. In a densely populated area, landslides have the potential to wipe out the entire area, thereby causing extreme damage to life and property.