National Disaster Management Authority

Government of India

Press Release – October 4, 2023

In the early hours of October 4, there was a sudden surge in water flow in the Teesta river, which washed away several bridges, parts of NH-10, the Chungthang Dam and has impacted several small villages, towns and infrastructure projects in the upper reaches of the river valley. The main districts affected are Mangan, Gangtok, Pakyong and Namchi.

While scientists are investigating the exact cause of the flash flood, the primary reason for the sudden surge appears to be a likely combination of excess rainfall and a GLOF (Glacial Lake Outburst Flood) event at South Lhonak lake in North Sikkim. The lake is at a height of 5,200 metres, with a towering ice-capped feature at about 6,800 metres to the north of and in close proximity to the lake.

Satellite images received from NRSC (ISRO) at 0600 hrs today, reveal the draining out of more than half the lake. CWC's monitoring stations revealed that the first surge of water was 19 metres above the maximum water level at Sangkalang at 0130 hrs and 4 metres above the maximum water level at Melli at 0400 hrs.

As soon as news was received, alerts were issued to downstream habitations and Relief & Rescue Operations were initiated by NDRF, SDRF, ITBP, Army, and Sikkim civil administration. Several persons, including 23 Army men are missing. Continued snowfall in upper reaches and rainfall and clouds in lower reaches is hampering deployment of helicopters and relief operations. However, consistent efforts are underway to assist the State Government in all manner possible. Relief camps have been set up at several locations in the affected areas.

The Himalayan Ranges are host to many glacial lakes, estimated through remote sensing techniques at about 7,500. Of these, Sikkim has about 10%, of which nearly 25 are assessed to be at-risk. Recently, in order to mitigate the impact of a GLOF

event in these lakes, an NDMA-led expedition in the first week of September 2023 had surveyed two at-risk lakes in order to eventually deploy early warning systems for real-time alerts. At the next stage, NDMA has planned to instal early warning systems for real-time alerts at most of 56 at-risk glacial lakes in India.

Efforts to expand the mitigation programme are being expedited, while sustained investigations into the causes of this event are underway. Further, this region is known for highly localised heavy rainfall events. Therefore, efforts to improve the predictive ability for such events will also be intensified in collaboration with relevant agencies.

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