



GLACIAL LAKE OUTBURST MITIGATION : ENVIRONMENT

NEWS : NDMA to monitor 189 high-risk glacial lakes to prevent disasters

WHAT'S IN THE NEWS ?

National Disaster Management Authority (NDMA) and Glacial Lake Risk Mitigation:

- **High-Risk Glacial Lakes:**
 - NDMA has identified 189 high-risk glacial lakes in the Himalayas for targeted mitigation efforts.
 - Mitigation includes investigating lakes and implementing “lake-lowering measures” to prevent overflows and downstream damage.
- **India's Glacial Lakes:**
 - India has around 7,500 glacial lakes, with 902 being monitored by the Central Water Commission (CWC) via satellite.
 - Full assessments of these lakes are challenging, requiring site visits during limited accessible months (July-September).

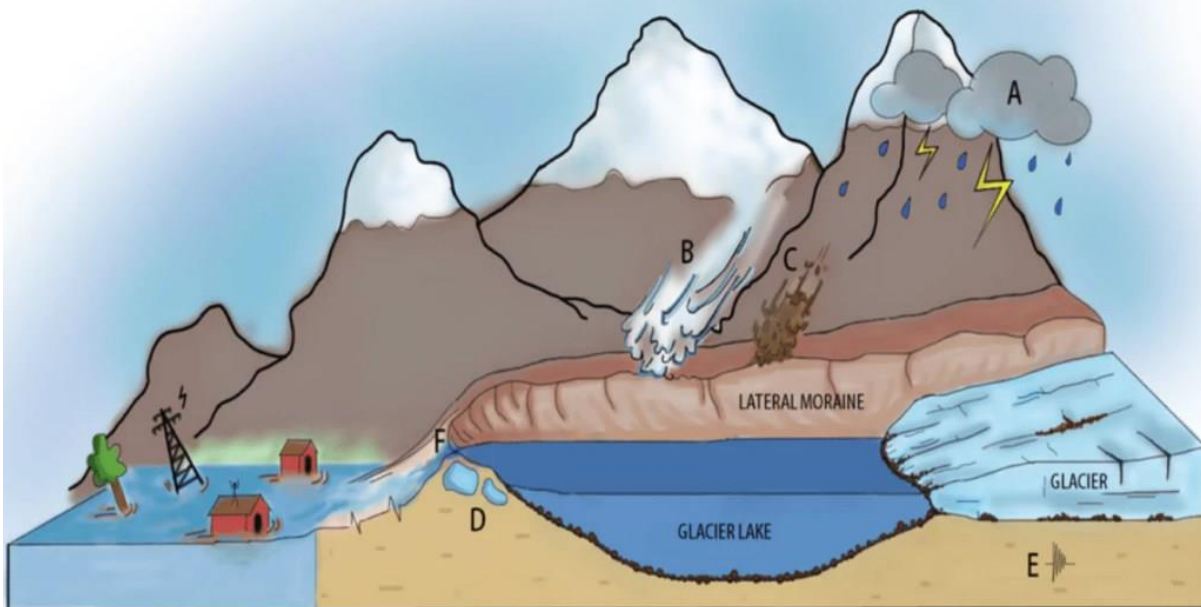


Figure-1: Illustrative graphic showing various reasons for GLOF occurrence
(A) Cloudburst (B) Snow avalanche (C) Landslide (D) Melting of ice in moraine
(E) Earthquake (F) Overflow

- **Ongoing Efforts:**
 - Arunachal Pradesh State Disaster Management Authority is studying six high-risk lakes in Tawang and Dibang Valley districts.
 - Efforts include technical hazard assessments, installation of Automated Weather and Water Level Monitoring Stations (AWWS), and Early Warning Systems (EWS).



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- 15 expeditions completed across Sikkim, Ladakh, Himachal Pradesh, and Jammu and Kashmir; seven more are ongoing.
- **National Glacial Lake Outburst Floods Risk Mitigation Programme (NGRMP):**
 - Launched with a ₹150 crore budget to address glacial lake risks in the Himalayas.
 - **Component 1:** GLOF hazard and risk assessment (15% budget) – Create and update a glacial lake inventory.
 - **Component 2:** GLOF monitoring and early warning systems (35% budget) – Implement remote sensing, water level sensors, and early warning systems.
 - **Component 3:** GLOF mitigation measures (40% budget) – Reinforce moraine dams, drain lakes, controlled blasting, and excavation of artificial drainage channels.
 - **Component 4:** Awareness generation and capacity building – Focus on community-centric plans, R&D on glacial recession, and GLOF.

Source : <https://www.thehindu.com/sci-tech/energy-and-environment/top-disaster-management-body-identifies-189-glacier-lakes-for-monitoring/article68554937.ece>

