



Mitigation of Glacial Lake Outburst Floods in J&K

Why in News?

The Jammu and Kashmir government is implementing measures to mitigate the risks of [Glacial Lake Outburst Floods \(GLOFs\)](#).

Key Points

- **Geographical Vulnerability to GLOFs:**
 - The region's high-altitude glaciers and lakes make it particularly vulnerable to GLOFs.
 - Rising global temperatures are accelerating [glacier melting](#), leading to the formation of glacial lakes that risk sudden breaches.
 - These breaches can release millions of cubic meters of water and debris, posing severe threats to downstream communities.
- **Comprehensive Mitigation Strategy:**
 - The J&K government has adopted a proactive and technologically advanced approach to address this threat.
 - **Key measures include:**
 - Expeditions and data collection to study glacial lake dynamics.
 - Bathymetric surveys, water sampling, and meteorological data collection for risk assessment.
 - Categorization of glacial lakes based on 17 critical parameters, including size, location, and potential mass movement zones.
- **Formation of Focused Monitoring Committee:**
 - The Focused Glacial Lake Outburst Flood Monitoring Committee (FGMC) oversees the implementation of mitigation strategies.
 - The committee has identified:
 - 14 high-risk glacial lakes
 - 3 moderate-risk lakes
 - 7 low-risk lakes
 - **Expeditions to high-risk lakes like Sheeshnag and Sonsar** have enhanced preparedness and understanding.
- **Future Plans and Preparedness:**
 - The government plans to expand mitigation efforts, improve predictive abilities for heavy rainfall, and train key stakeholders like [National Disaster Response Fund \(NDRF\)](#), [State Disaster Response Fund \(SDRF\)](#), and [Indo-Tibetan Border Police \(ITBP\)](#).
 - **Aapda Mitras (local disaster response volunteers)** are being trained and sensitized for vigilance in vulnerable areas.
- **Scientific Expeditions for Risk Assessment:**
 - The government has conducted specialized expeditions led by Central University of Jammu to study critical glacial lakes.
 - Three high-risk lakes in Kishtwar district were analyzed:
 - [Mundiksar Lake](#)
 - [Hangu Lake](#)
 - An unnamed glacial lake
 - These expeditions provided valuable data on lake conditions, environmental factors, and potential GLOF risks.

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