



Green Nod for Hydro Project in Uttarakhand

Why in News?

Recently, a fresh approval for the [Phata Byung Hydropower Project](#) in Uttarakhand hinges on environmental, forest, and wildlife clearances.

Key Points

- Project:
- It is a 76 MW run-of-the-river project on the [Mandakini River](#) in [Rudraprayag](#).
- The project was extensively damaged during the 2013 floods caused by a [cloudburst](#).
- The [Environment, Forest and Climate Change Ministry](#) stressed **forest** and [National Board for Wildlife \(NBWL\)](#) clearances.
- **Concerns:**
 - [Glacial lake outburst floods](#) are a major concern.
 - There are **24 lakes** near the site and 6 are considered critical.

The Mandakini River

- It is a tributary of the [Alaknanda River in Uttarakhand](#).
- The river runs for approximately 81 kilometers between the [Rudraprayag and Sonprayag](#) areas and emerges from the **Chorabari Glacier**.
- The [Mandakini merges with river Songanga at Sonprayag](#) and flows past the Madhyamaheshwar temple at Ukhimath.
- At the end of its course it drains into the **Alaknanda, which flows into the Ganges**.

Glacial Lake Outburst Flood (GLOF)

- **About:**
 - A **glacial lake outburst flood (GLOF)** is a type of catastrophic flood that occurs when the dam containing a glacial lake fails, releasing a large volume of water.
 - This type of flood is typically caused by rapid melting of glaciers or the buildup of water in the lake due to heavy precipitation or the inflow of meltwater.
 - In February 2021, [Chamoli district in Uttarakhand witnessed flash floods](#) which are suspected to have been caused by GLOFs.
- **Causes:**
 - These floods can be triggered by a number of factors, including changes in the volume of the glacier, changes in the water level of the lake, and earthquakes.
 - According to [NDMA \(National Disaster Management Authority\)](#), glacial retreat due to climate change occurring in most parts of the [Hindu Kush Himalayas](#) has given rise to the formation of numerous new glacial lakes, which are the major cause of GLOFs

