

Glacial lake atlas in Ganga basin

June 30, 2021

In news- The Ministry of Jal Shakti has released an updated atlas of glacial lakes that are part of the Ganga river basin.

Key updates-

- About **4,707 glacial lakes have been mapped** in the Ganga basin.
- Glacial lakes with water spread area greater than 0.25 ha were mapped using **Resourcesat-2 (RS-2) Linear Imaging Self Scanning Sensor-IV (LISS-IV) satellite** data.
- Based on its process of lake formation, location, and type of damming material, glacial lakes are **identified in nine different types**, majorly grouped into four categories.
- The study portion of Ganga River basin **covers part of India and transboundary region**.
- The Atlas is available on the Bhuvan portal of National Remote Sensing Centre (NRSC), ISRO.
- The atlas could be used as reference for carrying out changes in the lakes over time, the spatial extent (expansion/shrinkage), and formation of new lakes.
- The information on glacial lakes including their type, hydrological, topographical, and associated glaciers are useful in **identifying the potential critical glacial lakes and consequent GLOF (Glacial Lake Outburst Flood) events**.
- It can be used as reference data for carrying out change analysis, both with respect to historical and future time periods.
- The atlas can also be used in conjunction with glacier information for their retreat and climate impact

studies.

- Central and State Disaster Management Authorities can make use of the atlas for disaster mitigation planning and related programs.
- In December, 2020, Glacial lakes in the Indus river basin were mapped.