



Gangotri Glacier Retreat Signals Climate Peril

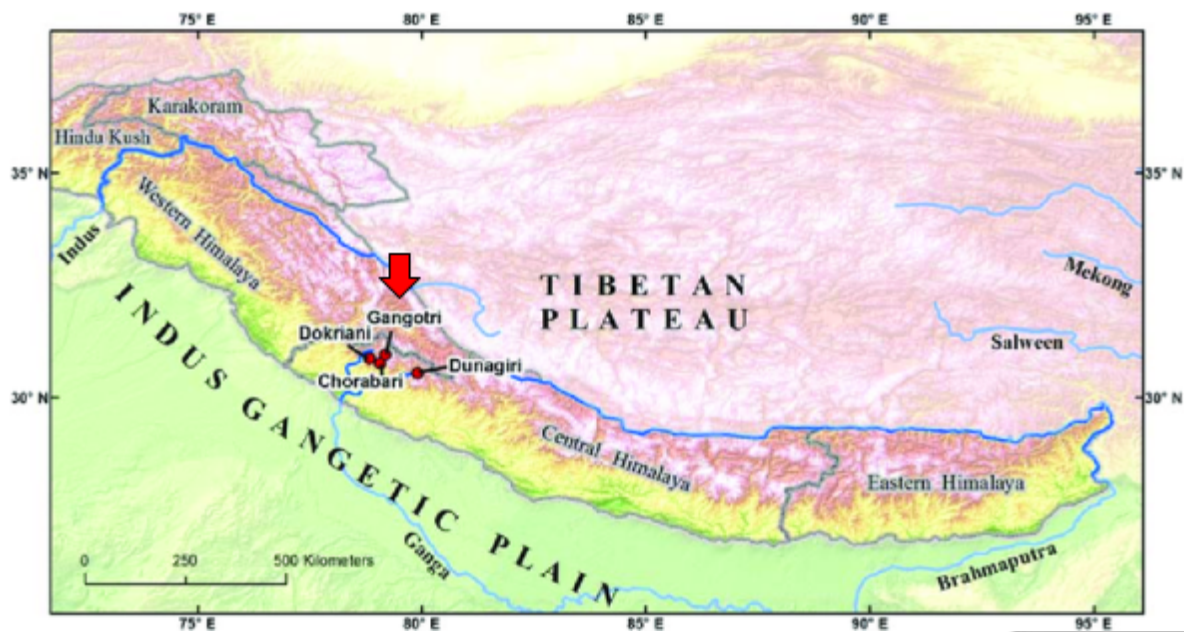
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A study by **IIT Indore** and **ICIMOD (Nepal)** reveals that the [Gangotri Glacier System \(GGS\)](#), the primary source of the [Ganga](#), has **lost 10% of its snowmelt flow over 1980-2020** due to **rising temperatures and climate change**.

- [Himalayan glaciers](#) are thinning at an **average of 46 cm/year**, and Gangotri's snout is steadily receding. Increasing rainfall-runoff and base flow indicate **climate-induced hydrological changes**.
 - [Glacial lakes](#) and other water bodies across the Himalayan region saw a **10.81% increase in area** from **2011 to 2024** due to **climate change (Central Water Commission)**.

Gangotri Glacier

- **About:** Gangotri Glacier, located in **Uttarkashi, Uttarakhand** is one of the **largest Himalayan glaciers** originating from the northern slopes of the **Chaukhamba range**.
 - It is a **compound valley glacier**, fed by several tributary glaciers like **Raktvarn, Chaturangi, and Swachand glaciers**.
 - It is fed by peaks including **Shivling, Thalay Sagar, Meru, and Bhagirathi III** & it terminates at **Gaumukh**, from where the **Bhagirathi River** emerges and later joins the **Alaknanda** to form the **Ganga** at **Devprayag**.
- **Gangotri National Park:** Established in **1989**, it encompasses **Gaumukh**, the source of the Ganga, and the popular **Gaumukh-Tapovan Trek**.
 - It has dense **temperate coniferous forests** including **chirpine, deodar, fir, spruce, oak, and rhododendron**, and is home to **rare and endangered species** such as [Black Bear](#), [Brown Bear](#), [Himalayan Monal](#), **Himalayan Snowcock**, [Himalayan Tahr](#), [Musk Deer](#) and [Snow Leopard](#)



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