

ICIMOD REPORT

NEWS: Recently ICIMOD report reveals declines in **snow persistence across the Hindu Kush Himalayas (HKH)**.

- The **Report** monitors snow persistence across **12 major river basins** in the HKH region using 23 years (2003–2025) of satellite data.

WHAT'S IN THE NEWS?

About ICIMOD: A Regional Knowledge Hub for Mountain Development

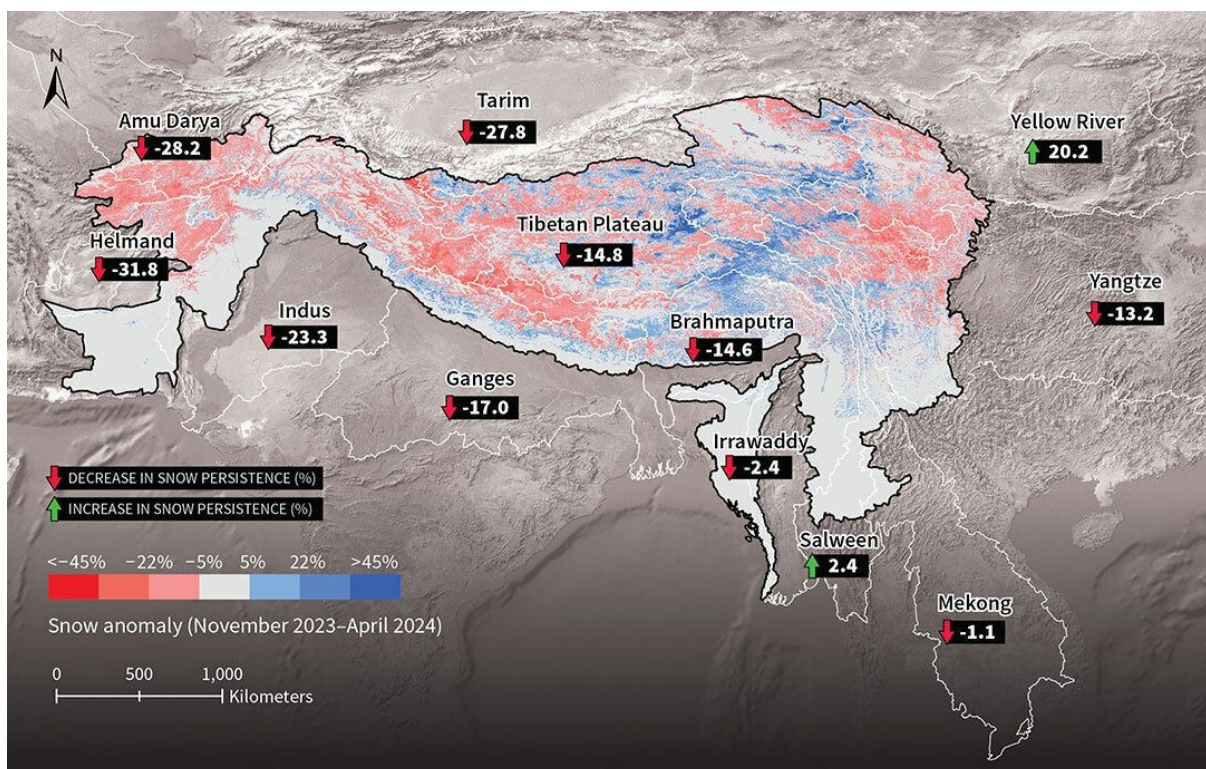
- **Nature and Purpose:** ICIMOD is an **intergovernmental knowledge and learning centre** that promotes **sustainable development** and **environmental conservation** across the Hindu Kush Himalaya (HKH) region.
- **Headquarters:** The organisation is **based in Kathmandu, Nepal**, strategically located in the heart of the HKH region.
- **Member Countries:** Its **eight regional member countries** are **Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan**—all of which share ecological and developmental interdependencies in the HKH.

Geographic and Ecological Importance of the Hindu Kush Himalaya (HKH)

- **Geographical Extent:** The HKH stretches **3,500 kilometers across eight countries**, encompassing some of the world's most **rugged mountain terrains** and **dynamic ecosystems**.
- **Biodiversity Significance:** It is **one of the most biodiverse regions** on Earth, home to:
 - **4 out of 36 global biodiversity hotspots.**
 - **2 of the 200 Global Ecoregions** identified by WWF.
 - **575 Protected Areas** and **335 Important Bird Areas**, reflecting vast ecological value.
- **Dependency of Local Communities:** Nearly **85% of mountain communities** rely directly on local biodiversity for **food, water, flood protection, and cultural identity**.
- **The Third Pole:** HKH is dubbed the **Third Pole** because it holds the **largest reserves of ice** outside of the **Arctic and Antarctica**.
- **Water Tower of Asia:** It is the **source of 12 major Asian river systems**, including the **Ganga, Indus, Brahmaputra, Mekong, and Salween**, earning the title **“Water Tower of Asia”**.

Key Highlights of ICIMOD's Recent Report on Snow Persistence (2024–25)

- **Severe Snow Decline:** The region witnessed **snow persistence levels that were 23.6% below normal**—the **lowest in 23 years**, showing an alarming reduction in the **duration of snow retention** after snowfall.
- **Consecutive Low Years:** This decline marks the **third straight year of below-normal snow seasons**, indicating a **worrying trend** rather than a one-off anomaly.
- **Basin-Wise Snow Decline:**
 - **Ganga River Basin:** Snow persistence was **24.1% below normal**, the **lowest in 23 years**, threatening water availability for agriculture.
 - **Indus River Basin:** Experienced a **24.5% drop**, reversing from **+19.5% in 2020**, showing sharp climatic fluctuation.
 - **Brahmaputra River Basin:** Also showed significant reductions, with cascading effects downstream.
 - **Mekong and Salween Basins:** Saw extreme declines of **51.9% and 48.3%**, respectively—critical indicators for Southeast Asia.



Consequences of Reduced Snow Persistence

- **Threat to River Flows:** The decline undermines **early summer water flow** which is essential for **agriculture, hydropower generation, and ecosystem stability**.

- **Increased Drought Risk:** With less snowmelt, there is heightened **risk of seasonal drought**, especially in downstream regions that rely on **glacial and snow-fed rivers**.
- **Rising Groundwater Dependency:** The shortfall in natural surface water availability forces communities to depend more heavily on **groundwater extraction**, which is **unsustainable** in the long term.
- **Broader Climate Alarm:** This trend reflects the **accelerating impact of climate change**, intensifying vulnerabilities in already fragile mountain ecosystems.

Climate Change Attribution and Warnings

- **Link to Carbon Emissions:** ICIMOD directly attributes these anomalies to **rising carbon emissions and global warming** trends, stating that the impacts are **irreversible** without transformative climate action.
- **Call for Urgency:** The report warns that without **bold, science-driven policies**, the region risks entering a **permanent state of water and ecological insecurity**.

ICIMOD's Strategic Recommendations

- **Policy Interventions:**
 - Advocate for **science-based, forward-looking policies** that are **climate-resilient** and **region-specific**.
 - Strengthen **disaster preparedness, resource management, and ecosystem restoration** efforts.
- **Transboundary Cooperation:**
 - Foster **transboundary water governance mechanisms** among the eight HKH countries.
 - Promote **shared data platforms, joint action plans, and early warning systems**.
- **Emission Mitigation:**
 - Urges both **regional governments and global actors** to accelerate **green transitions**, reduce **fossil fuel dependence**, and promote **renewable energy** adoption.
 - Recognises **emissions mitigation** as vital to ensure long-term **food, water, and energy security** in South and Southeast Asia.

Source: <http://newsonair.gov.in/snow-persistence-in-hindu-kush-himalaya-hits-record-low-23-6-below-normal-icimod-report/>

