



# Cold Facts

The CryoSCOPE Newsletter

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## Tracking Change and Sharing Insights

In this edition of Cold Facts, we provide early insights into Field Site visits by our Partners where research tools are being deployed for monitoring and measuring the effects of climate change. You will also find highlights of CryoSCOPE participation at events and exciting media coverage of our work in Europe and India.

– Rakesh Hooda, CryoSCOPE Coordinator and Senior Principal Scientist at the [Finnish Meteorological Institute \(FMI\)](#).

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## Field Visits

CryoSCOPE research is advancing with new field instrument deployments across Europe and India, capturing real-time data to better understand cryosphere–atmosphere–hydrosphere interactions.



Photo: Saurabh Vijay

### Chalong Catchment and Panikhar Village, India

(August 2025)

CryoSCOPE partners in India installed two time-lapse cameras above 3,300 meters altitude in Ladakh to track snow depth at hourly intervals. The sites – Chalong catchment outwash and Panikhar Village – will also host a winter field campaign to measure snow density and water equivalent (SWE). These observations will help calibrate satellite-based estimates and scale monitoring across the Himalaya.

## Weissfluhjoch, Switzerland

(February - April 2025)

At Weissfluhjoch, CryoSCOPE researchers led by Isabella Anglin (ETHZ, SLF) sampled snow to study whether stable water isotopes can be used to estimate sublimation, as part of a series of field campaigns that took place in early 2025. Preliminary findings indicate isotopes can trace sublimation during snowfall-free periods, advancing CryoSCOPE's understanding of cryosphere-atmosphere interactions.



Photo: Isabella Anglin

## Dischmabach, Switzerland

(February - September 2025)

In the Dischmabach catchment, ETH researchers Harsh Beria and Marius Floriancic have launched an isotope sampling campaign to trace how precipitation becomes streamflow, groundwater, and evapotranspiration. By calibrating an isotope-enabled hydrological model, the team aims to reveal water partitioning in snow-dominated alpine landscapes. Fieldwork involves bimonthly visits to the site.



Photo: Harsh Beria

## Scott Turnerbreen Forefield, Svalbard

This summer, CryoSCOPE partners monitored the hydrology of the Scott Turnerbreen forefield, where a rare groundwater spring flows alongside glacial meltwater. Three gauging stations were installed to record conductivity, pressure, temperature, turbidity, and discharge on an hourly basis. These measurements were complemented by water and gas sampling, salt dilution discharge measurements, and meteorological monitoring. Together, the data provide new insights into how recently deglaciated landscapes store and release water.



Photo: Marjolaine Verret



## Events

### International Mountain Conference

(10 - 14 September 2025)

At the [International Mountain Conference](#), CryoSCOPE led a session on **"Integrating cryosphere-atmosphere-hydrosphere dynamics: from process-level insights to large-scale modelling"**, convened by Harsh Beria with co-conveners Mathieu Gravey, Marius Floriancic, Shaakir Dar, and Rakesh Hooda, presenting highlights on:

- ▲ Global estimates of snow sublimation
- ▲ Estimating sublimation with stable water isotopes & eddy covariance in the Swiss Alps
- ▲ Light-absorbing particles in Himalayan snowmelt
- ▲ Modelling subglacial & groundwater flow in Svalbard



Photo: Mathieu Gravey

## In the Press



Everything Is Changing (podcast)

[The Vanishing Ice and What It Means for Us All](#) (30 July 2025)



[India Responds to Melting Cryosphere](#) (19 August 2025)



[Scientists Unveil CryoSCOPE To Tackle Accelerating Glacier Melt Threatening Global Water Security](#) (19 August 2025)



[India, Europe Launch Cryosphere Research Project as Himalayan Glaciers Melt](#) (19 August 2025)



[Urgent action, bold innovation: The race to rescue India's disappearing glaciers](#) (31 August 2025)



**Funded by  
the European Union**

CryoSCOPE is funded by the European Union under Grant Agreement n. 101184736. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor CINEA can be held responsible for them. This project has also received funding from the Swiss State Secretariat for Education Research and Innovation (SERI) and the Indian Ministry of Earth Sciences



**पृथ्वी विज्ञान मंत्रालय  
Ministry of Earth Sciences  
Government of India**

#### Project funded by



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,  
Education and Research EAER  
**State Secretariat for Education,  
Research and Innovation SERI**