

Cryosphere, Mountains, and Adaptation: Key priorities to help implement “fit-for-purpose” systematic observations.

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Objectives:

This World Café station (table) provides an opportunity to actively engage with stakeholders on progress, needs and opportunities around the themes introduced at Earth Information Day 2023, specifically as they relate to mountains and the cryosphere. The table discussion seeks to contribute to the following expected outcomes:

- Raise awareness with all interested stakeholders on what is being done in this area.
- Allow for stakeholders (delegates and NPS) to express their ideas, concerns, and needs.
- Build on engagement with stakeholders through four rounds of discussions.
- Result in several key recommendations to improve access, understandability, and uptake of information from systematic observation by decision-makers and organizations in support of climate actions.

Scenario

Observations play a key role in detecting and tracking climate change and its impacts in mountains and the cryosphere, in turn helping society derive information to respond and plan to address associated risks. Notwithstanding that in situ monitoring infrastructure and remotely sensed data volumes are increasing, data availability and accessibility to address mountain-specific knowledge needs vary considerably according to region and discipline, and major gaps remain¹.

To support more globally consistent and inter-comparable assessments of climate change and its impacts in mountain regions (including cryosphere), observation campaigns need to focus on agreed priority variables and protocols at the relevant scales. Furthermore, in addition to instrument-based measurements, complementarity with other types of data, information, and knowledge – including Indigenous knowledge – ensures that responses are comprehensive, relevant and “fit-for-purpose” in supporting communities with their adaptation and resilience needs.

In view of what is now known, this World Café will initiate discussions particularly on priorities that need attention to help close the observation gaps in mountains and the cryosphere, including climate-related services that respond to the risks associated with fast changes already seen in mountains and the cryosphere. The specificity in the question does not mean that broader issues cannot be raised by participants.

Questions for scene-setting:

1. What is the current availability and use of data and information to address specific climate-related risks in mountains and the cryosphere? Concrete examples of actions already taken?
2. Where do you see major gaps and challenges in terms of observations and observatories?
3. Where are there opportunities to strengthen these efforts, and how to enhance or support them?

Additional questions to help explore options for closing observation gaps:

1. What specific roles or actions could various groups take (e.g. academia and research, coordination networks, NGOs, communities and civil society groups, governments, and international organizations), to help close observations gaps?
2. How can capacity building and capacity sharing be fostered, between mountain regions?
3. How to achieve effective coordination of mountain observatories and observations efforts at the global and regional scales, while also considering “grassroots” and community efforts at local and national levels?

¹ GEO Mountains (2022). Mountain Observations: Monitoring, Data, and Information for Science, Policy, and Society. Policy Brief - International Year of Sustainable Mountain Development 2022. Bern: Mountain Research Initiative, doi: [10.48350/175341](https://doi.org/10.48350/175341)