

Inter- and transdisciplinary mountain data across Central Asia: Identifying user requirements and access preferences

A joint workshop coordinated by GEO Mountains



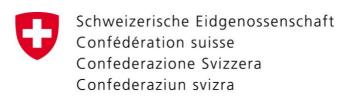








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Location: Remote, via Zoom

**Duration: 2.5 hours** 

Language: English, Russian

Key Words: mountain observations and data; interdisciplinary, in situ; remote sensing; GEO

Mountains; information gaps

#### Abstract:

The discoverability, accessibility, and usability of a wide range of environmental and socio-economic data are crucial prerequisites to both the advancement of science and a range of more practical applications related to sustainable development, climate change adaptation, and natural hazard mitigation in the world's mountainous regions.

By drawing upon the contributions of regional experts including research scientists, practitioners, local and regional authorities, and other stakeholders, and acknowledging all previous and ongoing efforts and initiatives in the region, this workshop sought to develop a broad, interdisciplinary, and systematic understanding of the current "data situation" across a range of relevant disciplines in the Central Asian region. It was co-convened by the Mountain Research Initiative (MRI), GEO Mountains, the University of Reading, and several local partner organisations under the umbrella of the Swiss Agency for Development and Cooperation's Adaptation at Altitude Programme (<a href="https://adaptationataltitude.org/adaptation-at-altitude">https://adaptationataltitude.org/adaptation-at-altitude</a>).

Following two introductory presentations, the principal objective of the workshop was addressed initially via open discussion. The following questions are of particular interest:

- 1. What requirements do users of mountain data have with respect to online database(s)/portal(s) through which mountain data is made searchable and downloadable?
- 2. Which organizations and institutions are major providers of relevant data in the region?
- 3. What disciplines / regions currently benefit from a good or satisfactory coverage and availability of data (i.e. examples of good practice)?
- 4. What are the major gaps in terms of data discoverability, accessibility, and usability that are currently experienced by data users?

Thereafter, attendees were invited to complete a survey to allow information to be captured in a more systematic fashion. Since this workshop is one of a series that GEO Mountains is conducting across the world's mountains in conjunction with regional partners, the survey element specifically intends to ensure that comparisons can be made between these regions. This should ultimately enable us to target our subsequent efforts to improve the situation most appropriately, i.e. by focusing on disciplines / regions where critical information is most lacking.

More generally, through this dialogue, crucial data-dependent applications and efforts were identified and strengthened. For instance, we expanded our data and resource inventories (currently under development) with contributions from the region and identified opportunities collaborations and exchanges that support the overlapping objectives of local stakeholders, the MRI, GEO Mountains, and local partner organisations.

### Agenda:

Welcome, introductions & workshop aims	MRI & GEO Mountains
Monitoring mountains in Central Asia: The current state of knowledge	Maria Shahgedanova, University of Reading
The GEO Mountains data inventories	James Thornton, MRI & GEO Mountains
Mountain Observatories: The concept and examples from Central Asia	Maria Shahgedanova (MRI Mountain Observatories Working Group Lead)
Open discussion of the questions	All
Begin the survey	All
Summary and identification of next steps	All

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# **Key points from discussion:**

- The region has good data coverage for glaciology, hydrology, and meteorology, but lacks socio-economic, ecological, and biological data.
- Despite extensive monitoring in the 1950s-1980s, much historical data has yet to be digitized.
- The 1990s-2000s suffered from interruptions in data collection.
- In terms of mountain ranges, the Northern and Central Tien Shan have better data coverage than that of the Pamir and Pamir-Alay.
- Sharing data among researchers, institutions, state agencies, and local governments is challenging.
- It is important to connect short-term research projects to long-term monitoring programs and find funding mechanisms to enable such transitions.
- Users may struggle to discover available data due to paywalls, language barriers, or lack of standardization.

#### **Outputs:**

Participants responded to the question "What do you consider to be the main barrier(s) to the wider generating, sharing, and re-use of interdisciplinary data across the mountains of Central Asia?" interactively.

Data collection for the regional data needs survey, <u>Inter- and transdisciplinary mountain data</u> <u>across Central Asia: Identifying user requirements and access preferences</u>, is ongoing. Survey results will be appended in due course.

News articles on the GEO Mountains and MRI websites describe the workshop in greater detail.

A recording of the workshop is available on request. Please contact geomountains@mountainresearchinitiative.org.