

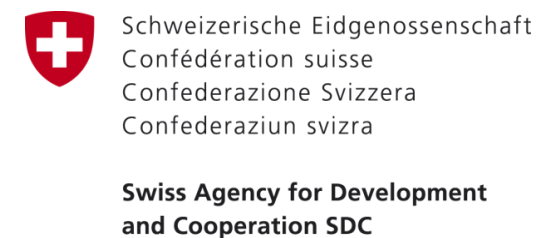
GEO Mountains General Meeting 2026 #1



29 May 2026

www.geomountains.org

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Housekeeping

- ☐ Please **raise your hand** to request the floor
- ☐ Any comments can be made / questions asked **in the chat**
- ☐ **The meeting is being recorded** – if you have any concerns about this, please let me know;
the recording may be made available upon request
- ☐ **The slides will be circulated** to registered participants afterwards

Agenda



- | | |
|---|--|
| 1. Welcome & Introduction | Carolina Adler, Alex Massot & Glenn Hunt, MRI |
| 2. Updates on (past & ongoing) GEO Mountains activities + Q&A/discussion | Alex Massot & Glenn Hunt, MRI |
| 3. Driving Earth Intelligence for Mountain Regions: Empowering Youth and Leveraging the GEO Knowledge Hub | Rui Kotani and Kalamkas Yassimkhanova, GEO Secretariat |
| 4. The World Meteorological Organisation (WMO) on the Global Cryosphere Watch | Narelle van der Wel, WMO |
| 5. GEO Mountains Small Grants Updates #1, REACH Project: Risk Assessment for Hydropower Projects from Rock-Ice | Yan Zhong, University of Geneva (UNIGE) |
| 6. GEO Mountains Small Grants Updates #2, Reanalyzing glacier mass balance along the Andes cordillera | Ruben Basantes (online), Universidad de Tecnología Experimental YachayTech (Ecuador) |
| 7. Coffee break | |
| 8. GEO Mountains Community Input # 1, Assessing the effectiveness and sustainability of mountain adaptation: Lessons from the Andean region | Julia Aguilera Rodriguez, UNIGE |
| 9. GEO Mountains Community Input # 2, Adaptation at Altitude: communicating climate change in mountains to policy-makers | Alex Mackey, ZOÏ Environment Network, |
| 10. The World Overview of Conservation Approaches and Technologies (WOCAT), on their Database and the use of Google Earth Engine | Tatenda Lemann, WOCAT |
| 11. Joint Discussion, knowledge exchange, wrap-up & next steps | All |

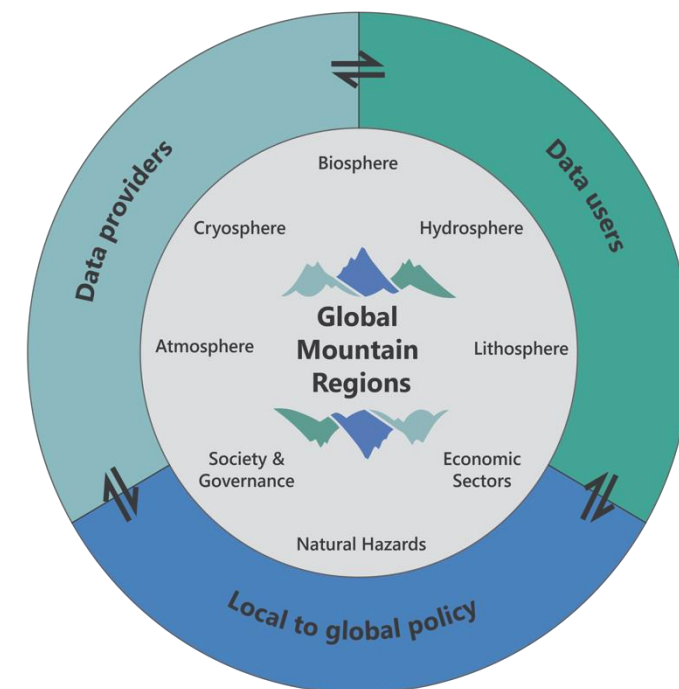


GEO Mountains

The Global Network for Observations and Information in Mountain Environments

A Group on Earth Observations (GEO) Work Programme Initiative, co-led by the Mountain Research Initiative (MRI) & the National Research Council of Italy (CNR), since 2016

- ❑ To **increase** the **discoverability**, **accessibility**, and **usability** of a wide range of **data and information** pertaining to **mountains globally**
- ❑ To **integrate** and **apply** such data and information for **scientific**, **policy**, and **practical impact**
- ❑ To **build**, **connect**, **coordinate**, and **share capacity** across a **community** of mountain researchers, practitioners, and policy makers



Adaptation at Altitude

- ❑ Together with the MRI, the **Swiss Agency for Development and Cooperation (SDC)** continues to support the GEO Mountains Secretariat and network activities as part of the second phase of the Adaptation at Altitude Programme **2024 – 2027**.
- ❑ Under Outcome 1 of this programme, GEO Mountains works to support bridging data & information gaps in the Andes, East Africa, HKH, South Caucasus and Central Asia.



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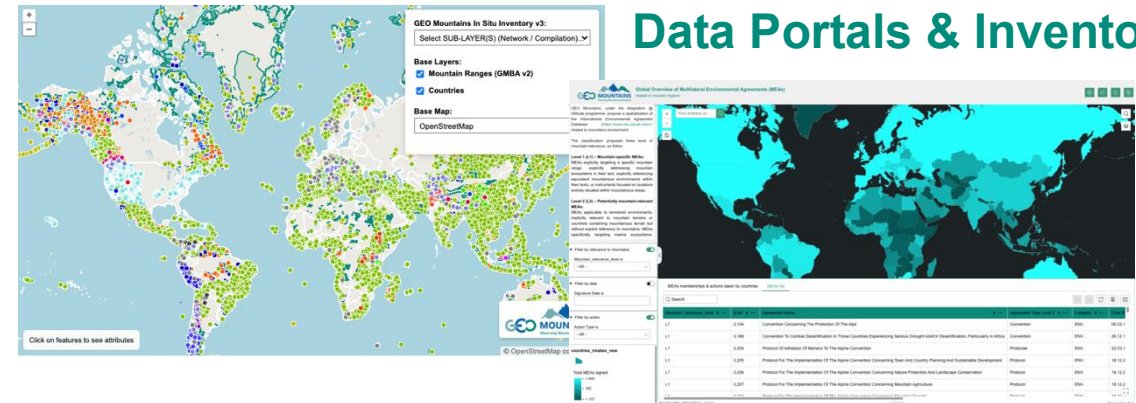
GEO Mountains Activities at a Glance

Our work spans data generation, policy analysis, communication, knowledge sharing and community engagement.

- ❑ Developing and maintaining inventories of long-term mountain measurement sites and gridded datasets/data portals.
- ❑ Convening members online and in regional workshops to share challenges, solutions, and best practices.
- ❑ Contributing to scientific debates and activities on mountain monitoring and data generation, including the development of Mountain Observatories and Essential Variables for mountain systems;
- ❑ Providing mountain data and information in formats that support global assessments (e.g., IPCC) and policy processes.

<https://geomountains.org>

Data Portals & Inventories



Publications & Policy Briefs



Workshops & Regional Engagements



GEO Mountains & GEO Work Programme Post-2025



- ❑ At the GEO-20 Plenary, held 5-9 May 2025 in Rome, Italy, the GEO Post-2025 Work Programme was adopted, with GEO Mountains confirmed as a GEO Initiative, starting with a first 3-year phase 2026-2028.
- ❑ In 2026, further elaborated the GEO Mountains Implementation Plan, for the GEO-21 Plenary in Geneva, plus its harmonisation with the MRI's extension period to 2028, and activities listed as part of the Adaptation at Altitude Programme (for 2026-2027).
- ❑ **Emphasis and focus for GEO Mountains in the 2026-2028 period:**
 - ❑ Elaborate on **methodologies and variables for greater integration** of various sources of data and information, such as socio-economic data and other indicators of change in mountains.
 - ❑ Provide **inputs to help operationalise interoperability** and utility of data and information on mountains e.g on in-situ monitoring infrastructure in collaboration with the WMO.
 - ❑ Develop outputs and provide **contributions and results to substantiate advocacy of mountain data and information** at upcoming policy milestones and dialogues: e.g. UNFCCC NAPs and COPs, 2nd Global Mountain Dialogue 2027, Post-Agenda 2030, etc.
 - ❑ Develop and enhance **youth and Early Career engagement and participation**.
 - ❑ Clarify and define a roadmap for **GEO Mountains' prospects post-2028** (e.g. on co-leadership, governance model, and continuity for the GEO Mountains Secretariat and the network).



Small Grants Updates

❑ To date we've helped support **20 small grant projects**:

- 2023: Ten projects in East Africa, Central Asia, Andes, HKH.
- 2024-2025: Ten projects in East Africa, Andes, HKH, Caucasus.

❑ Topics cover areas such as:

- Cryospheric & hydrometeorological monitoring
- Risks assessment
- Rescue historical data, development of mountain observatories, data repositories, etc.

❑ Small grants are also be closely linked with MRI and GEO Mountains activities, where we can showcase small grants.

- Tamlar glacier observation station at Mountains Connect in Bhutan
- Mt Kilimanjaro research at the EGU

❑ **Next small grants 2026-2027** (Call Nov. 2025): A large number of >300 proposals received. Ten selected projects will be announced in Q3 2026.

Small grant to Meteo Swiss used by GEO Mountains to showcase innovative solutions during global mountain conference - Mountains Connect - April 2026

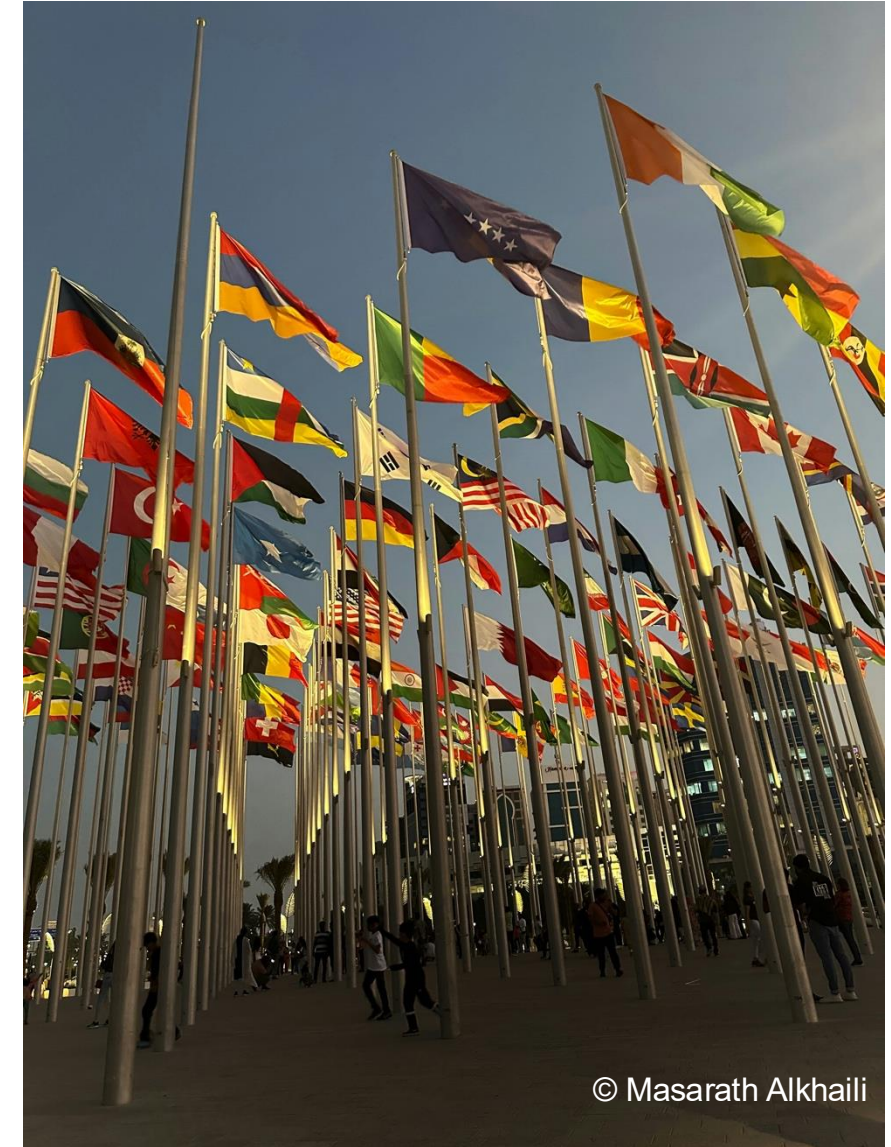


Spatialised Multilateral Environmental Agreements (MEAs) Database – What governance frameworks exist for mountain regions?

The Aim

Understanding which international legal frameworks support mountain protection, where governance gaps exist, and how countries engage with these MEAs is critical for advancing global commitments such as SDG 15.4 on mountain ecosystems, and climate adaptation strategies.

- ❑ Supports policy integration: Enables evidence-based advocacy by showing where existing treaties can be leveraged for mountain conservation
- ❑ Reveals governance gaps: Identifies which mountain regions have strong legal frameworks and which lack mountain-specific protections
- ❑ Facilitates transboundary cooperation: Maps which countries share commitments under specific MEAs, supporting coordinated action



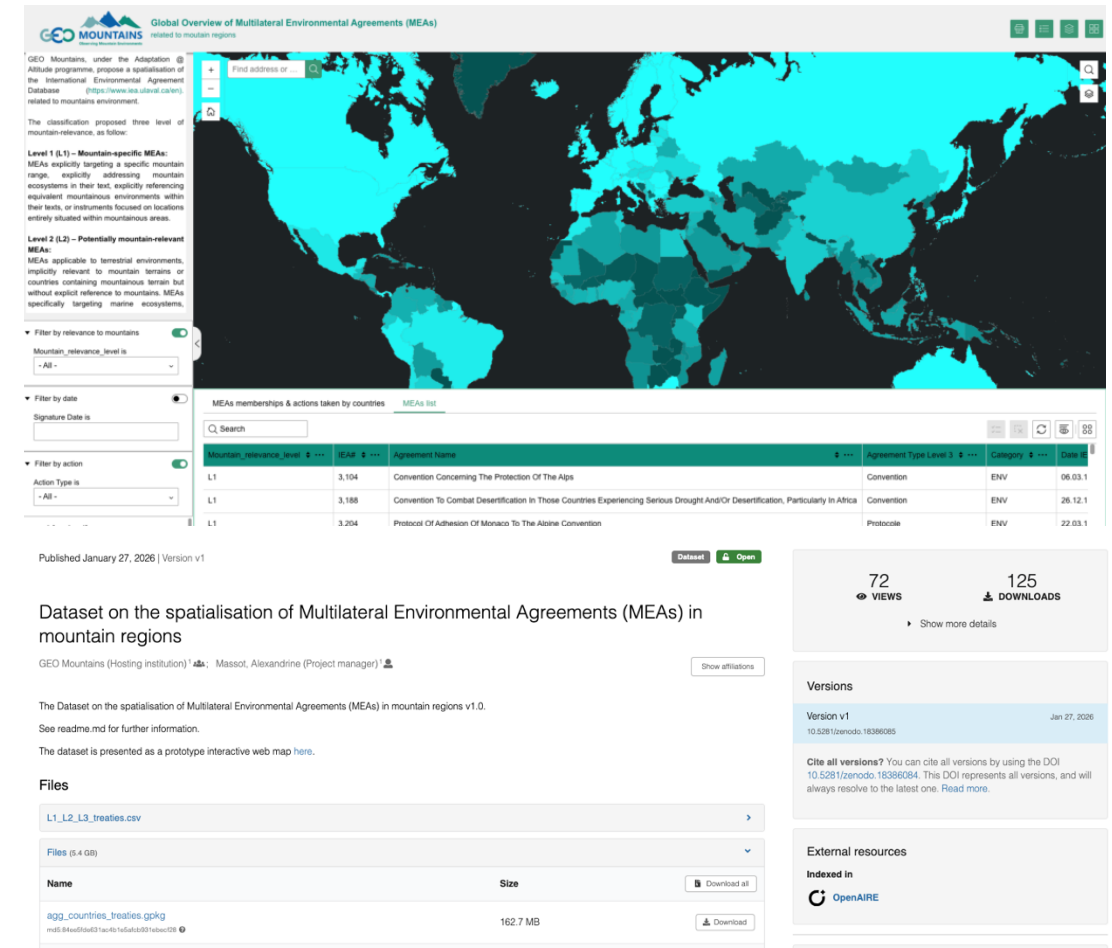
Spatialised Multilateral Environmental Agreements (MEAs) Database

What the dataset offer

The dataset integrates metadata from over 1,400 MEAs sourced from the International Environmental Agreements Database (hosted by Université Laval) with global mountain delineations and country-level spatial data. Each MEA has been systematically classified into three levels of mountain relevance:

Key features:

- ❑ Over 1,400 MEAs classified by mountain relevance
- ❑ Geospatial layers for each MEAs showing signatory countries
- ❑ Mountain-specific spatial coverage for 25 Level 1 MEAs
- ❑ Country-level statistics on MEA participation



The image displays two screenshots related to the Spatialised Multilateral Environmental Agreements (MEAs) Database. The left screenshot shows a web map interface with a world map and a sidebar containing filters for mountain relevance, date, and action. The right screenshot shows the Zenodo inventory page for the dataset, including a table of MEAs, a file download section, and a versions section.

Figure 1 (left): Screenshot of the prototype inventory web map interface.

Figure 2 (right): Screenshot of the inventory page, available on Zenodo.

Table 1: MEAs list (from Figure 2)

Mountain relevance level	MEAs	Agreement Name	Agreement Type Level 3	Category	Date
L1	3,104	Convention Concerning The Protection Of The Alps	Convention	ENV	06.03.1
L1	3,188	Convention To Combat Desertification In Those Countries Experiencing Serious Drought And/Or Desertification, Particularly In Africa	Convention	ENV	26.12.1
L1	3,204	Protocol Of Adhesion Of Monaco To The Alpine Convention	Protocol	ENV	22.03.1

Table 2: Files (from Figure 2)

Name	Size
L1_L2_L3_treaties.csv	162.7 MB

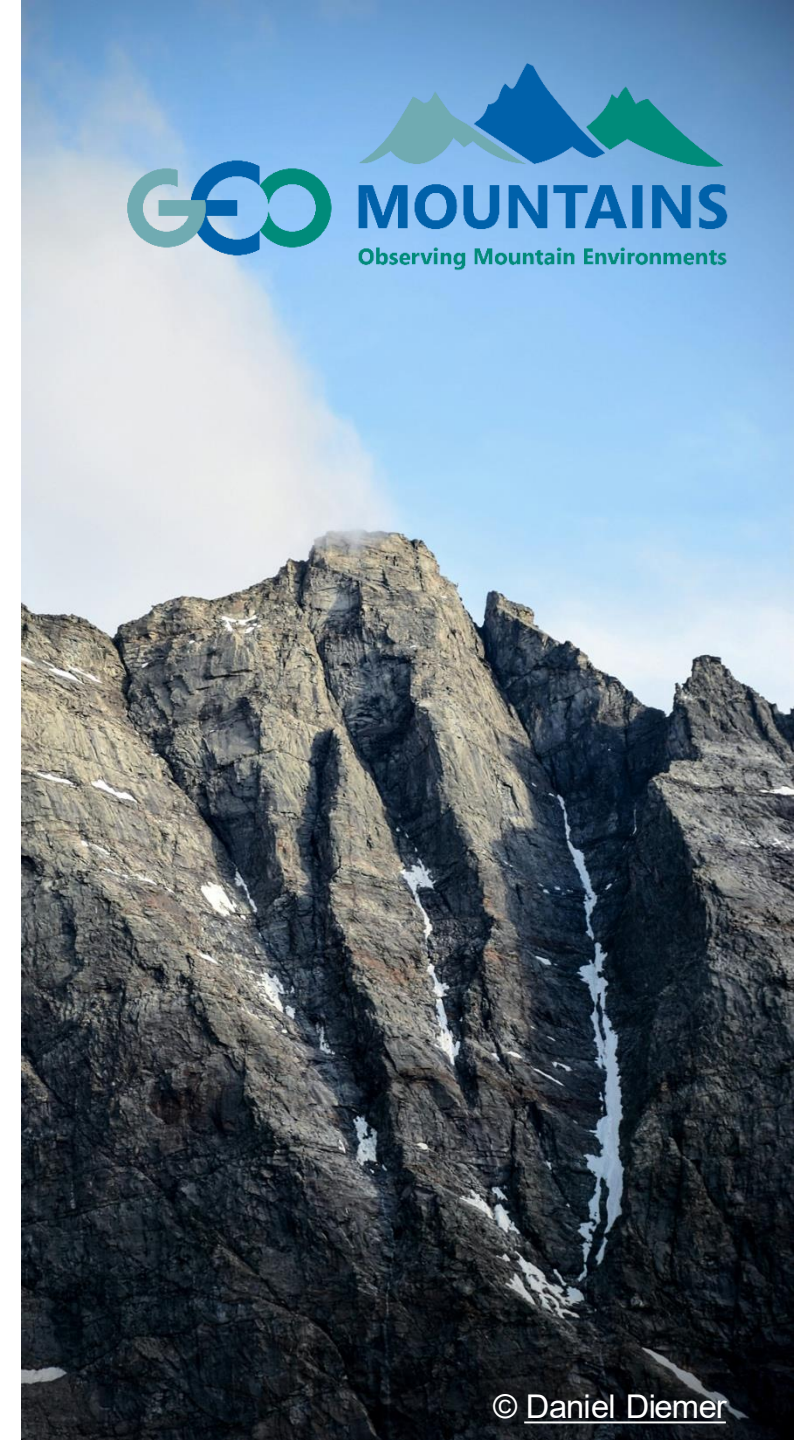
Figure 1 (left). Screenshot of the prototype inventory web map interface.

Figure 2 (right). Screenshot of the inventory page, available on Zenodo.

<https://geomountains.org/projects-impact-stories/spatializing-environmental-treaties-in-mountainous-areas-2020-present/>

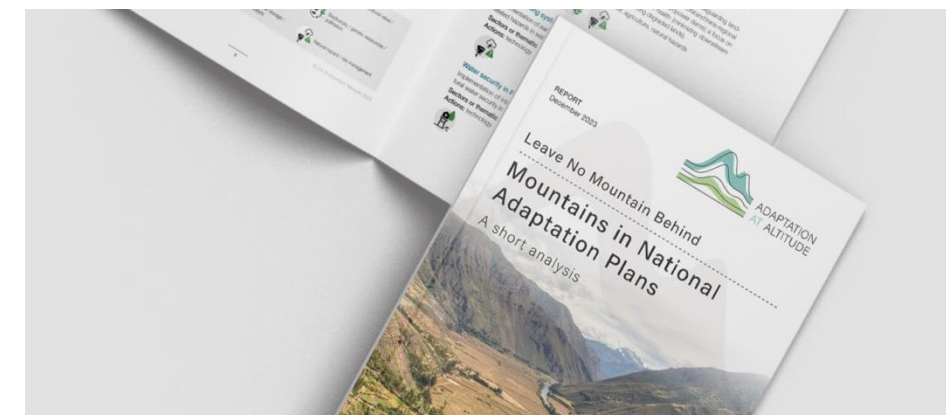
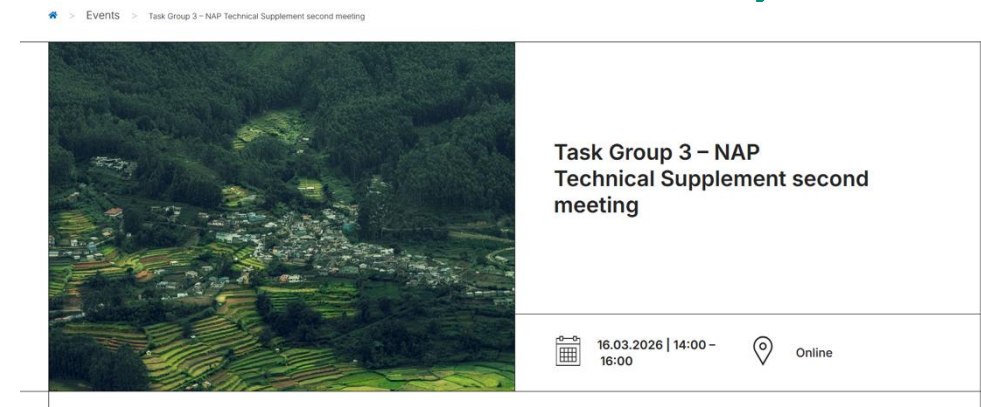
GEO Mountains Youth Ideathon – Updates

- ❑ **Concept:** Bring together ~12 early-career researchers and young professionals (age ≤ 35) from the research community, practitioners and government to collaboratively design innovative, data-informed solutions to disaster risk reduction in mountain environments. The programme includes field visits, technical training, and a micro-ideathon where participants will co-develop actionable projects with mentorship from experts in EO, governance, and stakeholder engagement.
- ❑ **Format:** 2–3 days of technical and field engagement and ideathon-style challenge, followed by a conference, where participants can learn on ongoing initiatives, network and engage with stakeholders.
- ❑ **Date:** 2 – 8 July 2026
- ❑ **Location:** Obergurgl, Austria
- ❑ **Current status:** Participants are selected, challenges ready. We're waiting to be there! Outputs will be shared in a dedicated workshop at RMC & via MRI Newsletter.



Task Group 3 – NAP Technical Guidelines Mountain Supplement Updates

- ❑ Workstream launch in 2025. GEO Mountains is developing a Supplemental Material to the UNFCCC National Adaptation Plans (NAP) Technical Guidelines on the topic of **Mountains and Earth Observations for National Adaptation Plans**
- ❑ MRI CO attended the International Space Science Institute workshop on Opening up Earth Observations for Climate Adaptation to incorporate messages into the supplement
- ❑ MRI CO has been reviewing existing NAPs and consulting on an updated structure
- ❑ A second TG3 meeting took place in March 2026 to update GEO Mountains members around the framing and structure of the NAP.
- ❑ Core group has been convened to drive the process forward.
- ❑ Currently soliciting feed back from core group
- ❑ Contacting prospective authors for certain sections
- ❑ Launch target: early 2027.



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Updates on recent events

Mountain Partnership 7th Global Meeting, 26-28 March 2026, Andorra.

- ❑ As a member of the Mountain Partnership (MP), the Mountain Research Initiative (MRI) played an active role at its Seventh Global Meeting, held from 26-28 March 2026 in Andorra, at which GEO Mountains was also represented.
- ❑ Key outcomes were the adoption of the [Andorra Declaration ‘Elevating Mountain Action Beyond 2030’](#), and the MP Governance, Advocacy, and Communications Strategies for the next four years.
- ❑ Looking ahead, commitments made under the UN-declared ***Five Years of Action for the Development of Mountain Regions (2023-2027)*** including on data and information under GEO Mountains, will be revisited at the 2nd Global Mountain Summit ‘Bishkek+25’, 21-23 October 2027 in Bishkek, Kyrgyzstan.



Updates on recent events

Mountain Partnership 7th Global Meeting, 26-28 March 2026, Andorra (cont.)

- At the Adaptation at Altitude side event, a brief input was presented on GEO Mountains, depicting the many **pathways** and avenues to **bring results to various policy dialogues and promote further opportunities for uptake and impact**.
- Participants expressed needs and opportunities to continue building on these outcomes and bring these achievements at the global level for action in, and for the benefit of, the regions.

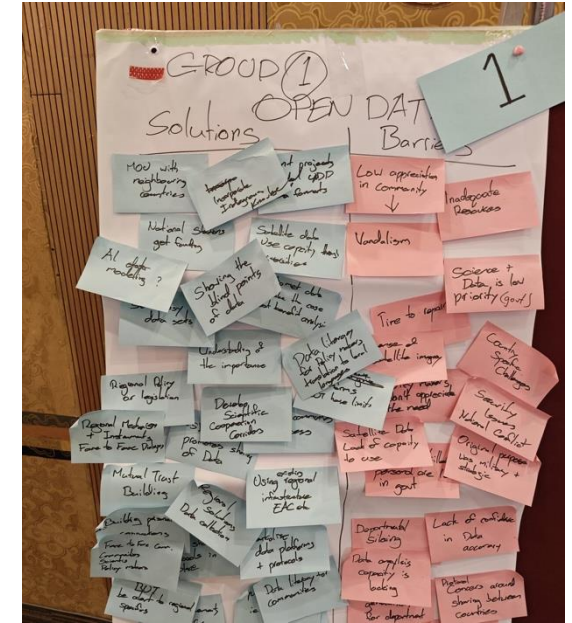
1. What's been **achieved?** (work in progress)



Updates on recent events

Mountains Connect Workshop (Thimphu Bhutan, April 2026)

- ❑ Second Mountains Connect Inter-regional Workshop under the Adaptation at Altitude (A@A) programme for multiple mountain regions.
- ❑ GEO Mountains facilitated the “Data, Monitoring & Governance” Base Camp session, discussions highlighting that challenges to open mountain data are often linked not only to technical issues, but also to governance, long-term financing, institutional culture, trust, and sustainability of monitoring systems.
- ❑ Supported A@A partners for the Tamkar Simulation exercise to share understanding of how different actors respond to cross border pressures on mountain ranges.



GEO Mountains / WOCAT community event on Land Degradation in Mountains (Geneva, May 26, 2026)

- ❑ GEO Mountains and WOCAT convened a community event at the GEO Symposium on the challenges of monitoring land degradation and restoration in mountain regions, bringing different parties together to share experiences.
- ❑ Discussions highlighted both the opportunities and limitations of Earth Observation (EO) for mountain SDG reporting,
- ❑ Emphasising the importance of ground-truthing, participatory approaches, and local/Indigenous knowledge to interpret complex mountain landscapes.



MRI Community Survey – Preliminary results on GEO Mountains



- ❑ GEO Mountains communication is generally well received. Several respondents explicitly said they appreciate receiving updates through the MRI newsletter, with some preferring a mixed approach that combines newsletter coverage with occasional dedicated updates.

GEO Mountains Feedback

Community priorities for GEO Mountains moving forward:

- Long-term monitoring and observations
- Capacity building
- Events/workshops
- Mountain data and information exchange
- Thematic task groups and collaboration spaces

MRI Community Survey Respondents by Region

Geographic distribution of survey respondents across primary regions of work.



● Africa ● Asia ● Europe ● Global ● Latin America

GEO Mountains is viewed as highly relevant by the community, with strong demand for continued focus on monitoring, data products, policy engagement, and clearer communication around mountain data and information.

News from the network

- ❑ **Regional Mountain Conference** (RMC2026): 5-8 July Obergurgl: <https://rmc2026.my-event-manager.org/>
 - ❑ GEO Mountains Youth Ideathon Session: <https://rmc2026.my-event-manager.org/program/sessions/youth-led-data-solutions-for-mountain-disaster-risk-reduction-presentations-and-dialogue-with-the-geo-mountains-ideathon-participants/>
- ❑ **Adaptation at Altitude Knowledge Network**, “How can digital technologies contribute to adaptation in mountains?”, 30 June, 14:00 CEST, <https://www.eventbrite.se/e/how-can-digital-technologies-contribute-to-adaptation-in-mountains-tickets-1986419817146>
- ❑ **Save the Date!** MRI 25 Anniversary & Release of the MRI Anniversary Publication, 10-11 December 2026.



Many thanks!

Please kindly provide some
feedback on this meeting:



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