GEO Mountains Task Group 3.5

GEO MOUNTAINS
Observing Mountain Environments

MOUNTAIN RESEARCH INITIATIVE

ISAC

ADAPTATION AT ALTITUDE
Taking Action in the Mountains

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Housekeeping

- ❑ Kindly mute yourselves when not speaking
- ❑ Please “raise your hand” to request the floor
- ❑ The meeting is being recorded
- ❑ Brief notes will be circulated afterwards

GEO Mountains: an introduction

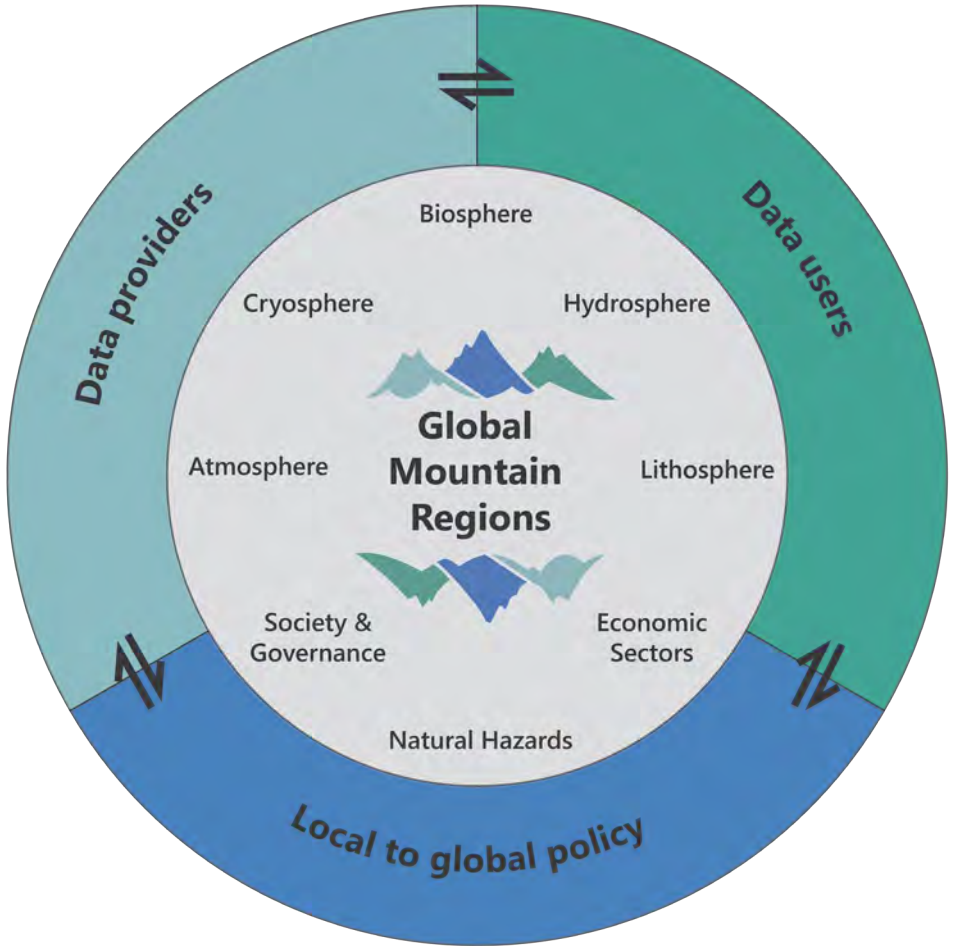
The Global Network for Observations and Information in Mountain Environments

An Initiative of the Group on Earth Observations (GEO) co-lead by the Mountain Research Initiative (MRI) & the National Research Council of Italy

Objectives:

- To identify and satisfy the data and information needs of a diverse range stakeholders operating in the mountain sphere
- To improve monitoring and understanding of mountain processes and phenomena, especially under change
- To build, connect, and communicate with the community of mountain researchers, practitioners, and policy makers
- **To develop collective reporting capacity that responds to pre-identified assessment and policy needs**

Strong Open Data and Open Science principles



Task Groups

Number	Description	Number of participants
1.1a	Develop, maintain, and share a list of relevant datasets	31
1.1b	Develop and maintain a list of interdisciplinary in situ mountain observational infrastructure and associated datasets	20
1.2	Contribute to our series of regional workshops / consultations into data portal requirements and main data needs / gaps	24
1.4	Contribute Knowledge Packages via GEO Mountains to the GEO Knowledge Hub	20
2.1	Analyse the extent to which data from mountain observatories are freely available, and which measurement protocols are followed	14
2.2	Contribute to the MRI's existing Mountain Observatories (MOs) and Elevation Dependent Climate Change (EDCC) Working Groups	24
2.3	Contribute to a GEO Mountains workshop to identify Essential Mountain Societal / Socio-Economic Variables	34
2.4	Develop a global spatial dataset related to mountain socio-economics	20
2.5	Establish links with the paleoscience community to help ensure that paleodata pertaining to mountains are discoverable, accessible, and usable	8
3.4	Develop educational, training, and capacity development materials related to the drivers, processes, and impacts of environmental, ecological, and societal change in mountains	27
3.5	Identify areas in which / how existing resources can be applied to respond to pre-identified policy needs	28

20 YEARS
MOUNTAIN RESEARCH INITIATIVE

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Main Task Group objectives

- Ensure that GEO Mountains makes / coordinates relevant contributions of data / information / expertise to major global assessment exercises and policy agenda
  - e.g. the IPCC, IPBES, UNFCCC/Paris Agreement, UN Sustainable Development Goals/2030 Agenda, and the Sendai Framework for Disaster Risk Reduction
  - As well as more regional assessment efforts and related exercises
- Likely in collaborations with other organizations

Example

Taskforce for the Review of the SDG Indicator 15.4.2 – Mountain Green Cover Index (2021 – Present)

The 2030 Agenda for Sustainable Development provides a shared blueprint for peace and prosperity for people and the planet. At its heart are the 17 Sustainable Development Goals (SDGs), among them SDG 15 Life on Land, which includes indicator 15.4.2 – the Mountain Green Cover Index (MGCI). In 2021, as the UN agency custodian for the MGCI, the Food and Agriculture Organization of the United Nations (FAO) set up a Taskforce for the review of the MGCI. The Taskforce convenes key member countries and stakeholders to provide technical advice, and includes the GEO Mountains community.

The SDG Indicator 15.4.2 - Mountain Green Cover Index (MGCI) is one of the two indicators under SDG Target 15.4, which aims to 'ensure the conservation of mountain ecosystems, including their biodiversity, to enhance their capacity to provide benefits which are essential for sustainable development'. The MGCI measures changes in the area of green cover in mountain areas. These changes are reported as the change of the proportion of the area covered by four land cover/land use classes (forest, grassland, croplands and wetlands) over time. This figure is expressed as a percentage of the total mountain area and is disaggregated by mountain and land cover and land use classes, following the UNEP-WCMC and IPCC classifications, respectively. The MGCI is based on the assumption that green cover is directly correlated with the health state of mountain ecosystems. Further information on the methodology of the existing version of the MGCI can be found in the SDG Indicator 15.4.2 metadata.

- In this case, we reached out to our network to solicit inputs / feedback to the process

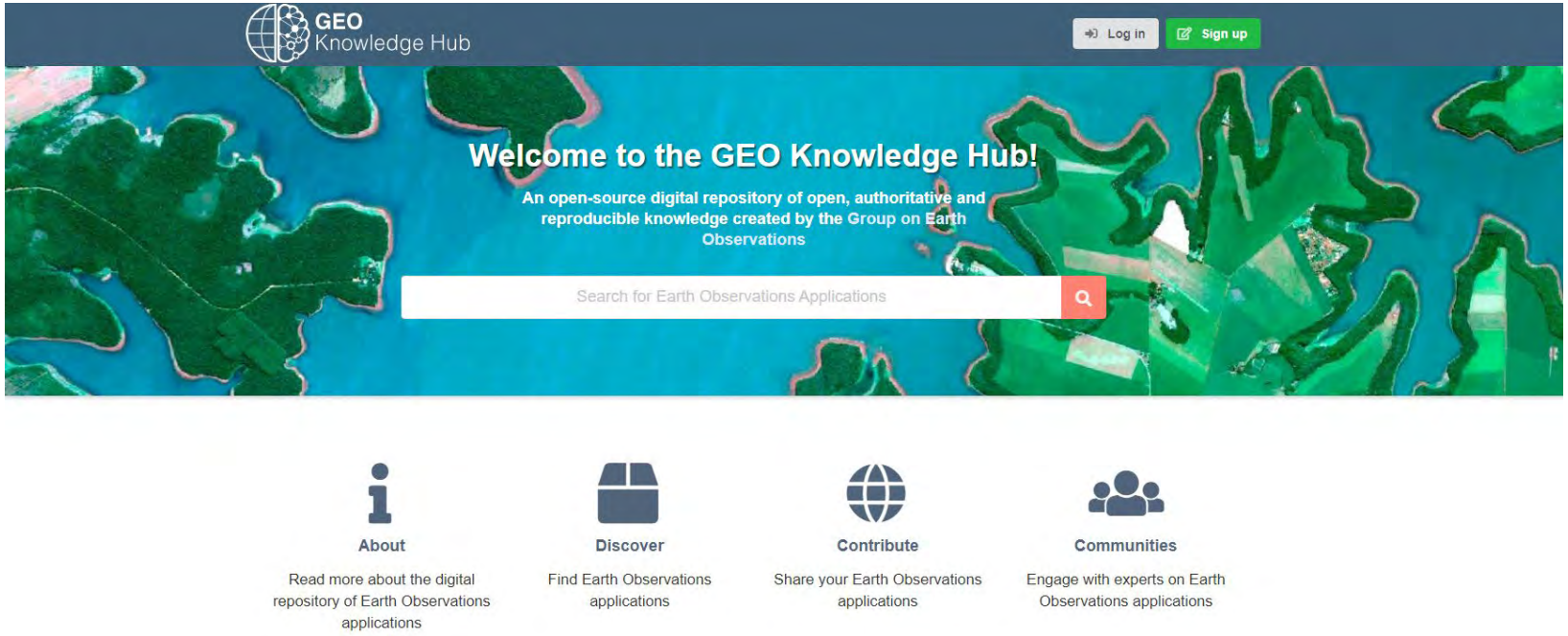
https://www.geomountains.org/projects-impact-stories/ongoing-projects

Potential link with the GEO Knowledge Hub

- An open-source digital repository of open, authoritative and reproducible knowledge created by members / participants of the Group on Earth Observations (GEO)

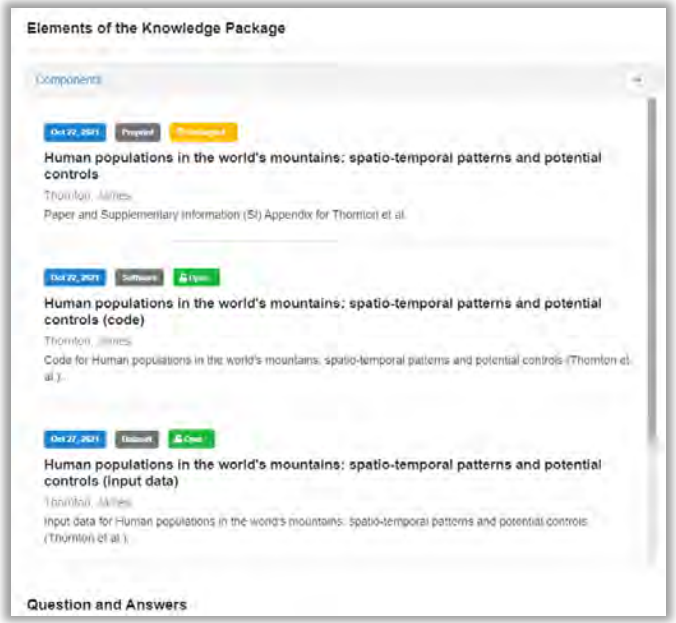
- *"From data to knowledge"*

https://geo-knowledge-hub.org



- Flexibility to tailor to needs, e.g. add functionality to "tag" SDGs addressed by individual packages

What does a Knowledge Package actually look like?



- "Provision of full resources (paper, input datasets / dataset links, code, instructions, full output datasets) enable the work to be i) **replicated** and ii) **efficiently modified / extended / repeated** (e.g. applied to a different region, updated once new data become available, etc.)

Suggested practical steps

- As with many other Task Groups, a solid overview of global, interdisciplinary mountain data availably will be helpful:
  - Please contribute to the GEO Mountains In Situ and General Inventories using the respective forms here and here.
- Careful review of current indicator or data needs / known data or knowledge gaps of these frameworks with respect to mountains:
  - Suitability of existing datasets?
  - Can better existing alternatives be proposed?
  - Or do we need to develop entirely new datasets to respond to these needs
- Operationalization / delivery of improved data and information, perhaps in the form of a GEO Knowledge Package (ideally in collaboration with the responsible agencies / organizations)

Organization, leadership and funding

- We are looking for individuals to lead or co-lead this Task Group
- Some funding might be available to support well-defined activities within the TG remit
- We will remain on hand to help with coordination etc.

- Could start with trying to identify a couple of “low hanging fruits”?

Discussion

- ❑ Comments, questions, ideas?

Many thanks for your interest and contributions!

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