

GEO Mountains: Recent Activities, Outputs & Outlook

Workshop Series: Interdisciplinary Monitoring, Data & Capacity Sharing

- In 2023 and 2024, GEO Mountains hosted a series of workshops alongside regional partners and the WMO in the Andes, the Caucasus, Central Asia, East Africa, and the Hindu Kush Himalayas
- The workshop outcomes were published in separate reports, and are synthesised in the figure below, which indicates the situation of each mountain region with respect to several key themes related to monitoring and data

	Implementation of the concept of Mountain Observatories by the research community	Status of national operational monitoring networks in mountains	Status of bidirectional free and open exchange between the operational and research communities	Extent of existing ecology / biodiversity monitoring	Extent of existing socio-economic monitoring	Degree of interest in expanding thematic scope of existing sites / observatories	Degree of community involvement in monitoring / implementation of Citizen Science initiatives	Existence of data platforms / portals	Need for / interest expressed in new training and capacity building courses related to mountain data and information
Andes	Low	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
East Africa	Low	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Caucasus	Low	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Central Asia	Low	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
HKH	Low	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium

■ Low / Could benefit from further development
■ Medium / Moderately developed
■ High / Well developed

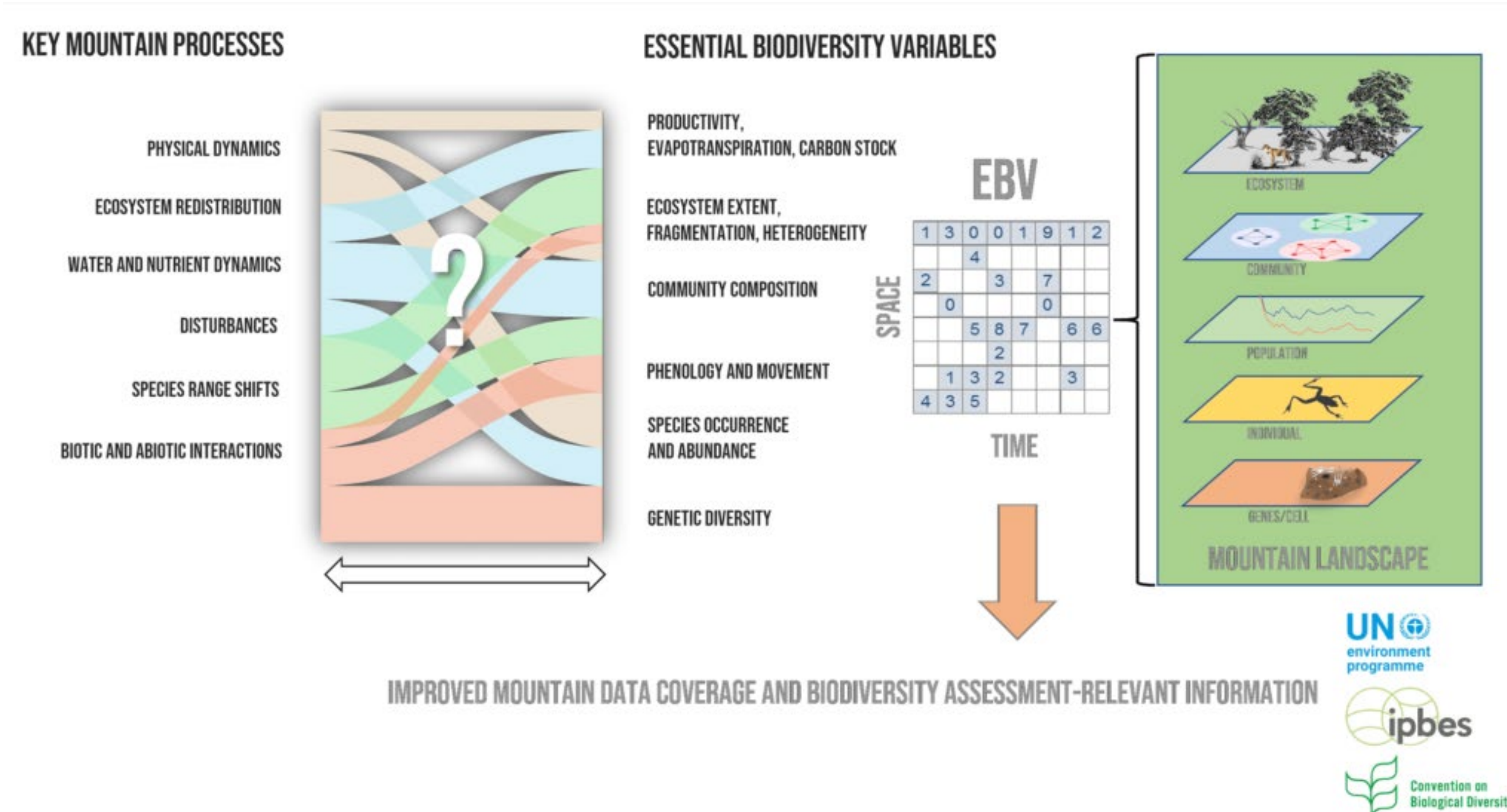
Mountains Uncovered: A Global Resource for Policy & Education

- In 2023, we released a series of accessible, standardised fact booklets for 100 selected global mountain ranges³, based exclusively on open data
- The product enables users to rapidly obtain an overview of each individual mountain range, and make comparisons between ranges



Progress on Essential Mountain Variables (EMVs)

- Building on our 2021 paper “Towards a Definition of Essential Mountain Climate Variables”¹, in 2024 a new paper exploring the utility of the concept of Essential Biodiversity Variables (EBVs) in mountains was published in *BioScience*²
- The figure below illustrates the approach taken



Outlook & Get Involved

- From 2024–2027, GEO Mountains is proud to continue to receive funding and support from the Swiss Agency for Cooperation and Development under the Adaptation@Altitude programme⁴
- Further regional engagements will be conducted to help meet the needs expressed during the recent series
- New member are always welcome; please create a profile in the MRI Expert Database⁵, indicating that you would like to be considered a member of GEO Mountains
- Members can join one or more of the GEO Mountains Task Groups, which facilitate collaboration across regions and disciplines to contribute to many key activities and objectives
- We also seek to develop deeper collaboration with other relevant GEO Work Programme Activities

1. Thornton et al. (2021). Toward a definition of Essential Mountain Climate Variables, *One Earth*. doi: 10.1016/j.oneear.2021.05.005
 2. Schmeller et al. (2024). Toward a set of Essential Biodiversity Variables for assessing change in mountains globally, *BioScience*. doi: 10.1093/biosci/biae052
 3. Alberti et al. (2023). Mountains Uncovered v1.0, <https://zenodo.org/records/8010166>
 4. Adaptation at Altitude (2024). <https://adaptationataltitude.org/>
 5. Mountain Research Initiative (2024). Experts Database, <https://mri-expert-database.cde.unibe.ch/>

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