



## **GEO-GNOME Workshop “Identifying Essential Biodiversity Variables (EBVs) and Essential Societal Variables (ESVs) in Mountain Environments”**

**ETH Zürich, Tannenstrasse 3, Room CLA J1, Zürich, Switzerland | 20-21 February 2020**

### **BACKGROUND**

The co-leads of the Global Network on Observations and Information in Mountain Environments (GEO-GNOME), the Mountain Research Initiative (MRI) and the Institute of Atmospheric Sciences and Climate, National Research Council (ISAC-CNR), are convening the **GEO-GNOME Workshop “Identifying Essential Biodiversity Variables (EBVs) and Essential Societal Variables (ESVs) in Mountain Environments”**, to be held on 20-21 February 2020, in Zürich, Switzerland. The workshop is part of the key activities identified and prioritized at the GEO-GNOME Status and Scoping Workshop held in Bern in May 2018<sup>1</sup> (see also Adler et al, 2018<sup>2</sup>), and listed as part of GEO-GNOME’s Implementation Plan for 2020-2022<sup>3</sup>.

This GEO-GNOME workshop aims at identifying and selecting EBVs and ESVs required for the understanding and monitoring of key global change processes within mountain social-ecological systems. It also aims at identifying and selecting existing (or new) criteria (e.g. spatial and temporal scales) and protocols for data collection and standards for these prioritized variables. The workshop is structured around invited inputs from experts, followed by a series of activities in which participants have the opportunity to discuss, elaborate and provide additional feedback and share their expertise and perspectives in the selection of key processes of change and relevant EVs.

This workshop is led and coordinated by the GEO-GNOME leads (MRI and ISAC-CNR), with support from the Swiss Agency for Development and Cooperation (SDC) and the MRI. GEO-GNOME contributing organizations, including the Global Mountain Biodiversity Assessment (GMBA) and the US Geological Survey (USGS), contributed to the preparation of this workshop.

### **Key workshop objectives**

- 1) Identify and select processes that account for and improve understanding of key ecological and social-ecological changes in mountain systems;
- 2) Following from Objective 1, identify EBVs and ESVs needed to monitor and report on drivers and processes of change in biodiversity and society in mountains (selection from existing essential variables and identification of new ones);
- 3) Identify existing data sources, data gaps, and data needs (including field observations, remote sensing and modelling approaches) for the selected EBVs and ESVs, and define criteria and protocols for data collection.

### **Expected outcomes and outputs**

- 1) Identify EBVs and ESVs for monitoring of key processes of change in mountains;
- 2) Produce a workshop report including methods and key results
- 3) Peer-reviewed publications (literature review and workshop outcomes).

<sup>1</sup> See <http://www.mountainresearchinitiative.org/index.php/news-page-all/350-geo-gnome-status-and-scoping-workshop-bridging-datagaps-in-mountain-environments>

<sup>2</sup> See Adler et al (2018) - <https://doi.org/10.1659/MRD-JOURNAL-D-8-00065.1>

<sup>3</sup> See [https://www.earthobservations.org/documents/gwp20\\_22/GEO-GNOME.pdf](https://www.earthobservations.org/documents/gwp20_22/GEO-GNOME.pdf)

## PARTICIPATION

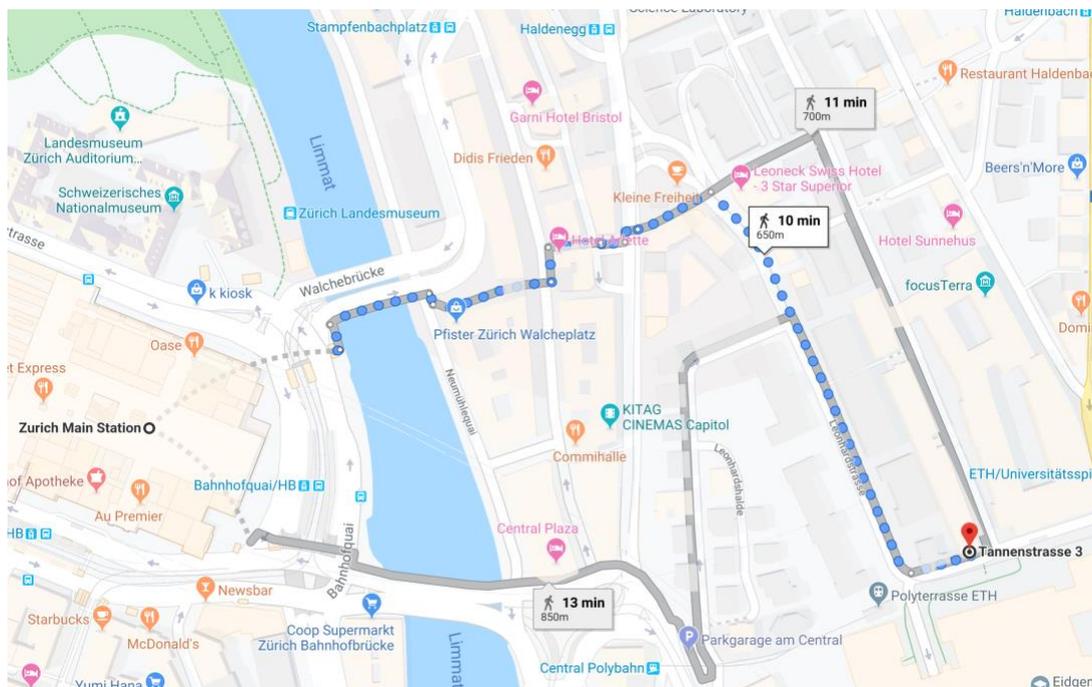
### Registration

The workshop is free to attend, including breaks and workshop dinner on Thursday evening, however we encourage participants to mobilise their own resources for travel, accommodation and related expenses. There are only a limited number of spots available for participants, therefore registration to attend is required. Given the limited number of spots, early registration is strongly encouraged. Please complete the registration form via this link:

<https://form.jotformeu.com/93085407401351> to confirm attendance, by **15 December 2019**.

### Location and travel

Zürich is easily accessible by air, road, or rail. If your flight lands in Zürich, Geneva, or Basel, there is great rail service to Zürich Central Station with the Swiss rail company SBB ([www.sbb.ch/en/](http://www.sbb.ch/en/)). Workshop venue at the ETH is located in the center of Zürich. [CLA building at Tannenstrasse 3](#) is walking distance from Zürich Main Station (see map below) and easily accessible also by public transport (tram, bus, or Polybahn).



### Accommodation

We recommend you secure accommodation as soon as possible. Options can be viewed at the Zürich tourism website (<https://www.zuerich.com/en/visit/accommodation-in-zurich>). Hotel bookings need to be arranged by the participants directly.

### Contact

For any additional questions, please contact MRI at [mri@mountainresearchinitiative.org](mailto:mri@mountainresearchinitiative.org).

**PLANNED WORKSHOP FORMAT AND PROGRAMME (DRAFT)**

<b>THURSDAY 20 FEBRUARY</b>	<b>FRIDAY 21 FEBRUARY</b>
<p><b>08:45 Arrival coffee and registration</b></p> <p><b>09:15 Welcome and introduction</b> GEO-GNOME co-leads</p> <p><b>09:30 Invited talks</b></p> <ol style="list-style-type: none"> <li>1) Mountain ecology and biodiversity</li> <li>2) Introduction to Essential Biodiversity Variables</li> </ol>	<p><b>9:00 Recap Day 1 and plan for Day 2</b></p> <p><b>09:15 Orientation to Exercises 2 and 3 in break-out groups</b></p> <p><b>09:30 Break-out groups</b> Exercise 2: Discussing and selecting essential variables for each process and evaluating their importance</p>
<b>10:30 COFFEE BREAK</b>	<b>10:45 COFFEE BREAK</b>
<p><b>11:00 Invited talks</b></p> <ol style="list-style-type: none"> <li>3) Mountain social-ecological systems</li> <li>4) Introduction to Essential Societal Variables</li> </ol> <p><b>12:00 Discussion</b></p>	<p><b>11:15 Break-out groups</b> Exercise 2 continues</p> <p><b>12:00 Plenary</b> Groups present their selection of essential variables Discussion</p>
<b>12:30 LUNCH</b>	<b>12:30 LUNCH</b>
<p><b>13:30 Orientation to exercise 1 in break-out groups</b></p> <p><b>13:45 Break-out groups</b> Exercise 1: Discussing and identifying key processes in mountain systems in break-out groups</p>	<p><b>13:30 Break-out groups</b> Exercise 3: Considering data collection possibilities and criteria – mapping existing data sources</p>
<b>15:30 COFFEE BREAK</b>	<b>15:30 COFFEE BREAK</b>
<p><b>16:00 Break-out groups</b> Exercise 1 continues</p> <p><b>16:30 Plenary</b> Groups present their selection of processes Discussion</p> <p><b>17:30 Close Day 1</b></p>	<p><b>16:00 Plenary</b> Groups present their outcomes - lists of associated protocols for each essential variable Discussion on results Discussion on the need for K4 and its development Final words and next steps</p>
<b>19:00 WORKSHOP DINNER</b>	<b>17:00 END OF WORKSHOP</b>