

4 Years of Collaborative Action in the Mountains

Mountains are vital ecosystems, providing a home for people and rich biodiversity, hosting an impressive array of natural resources, and essential ecosystem services for livelihoods.



More than **1 billion** people live in the mountains

Roughly **25%** of Earth's land surface is covered by mountains



2/3 of global biodiversity hotspots are located in mountainous areas

60% of biosphere reserves are situated in mountains



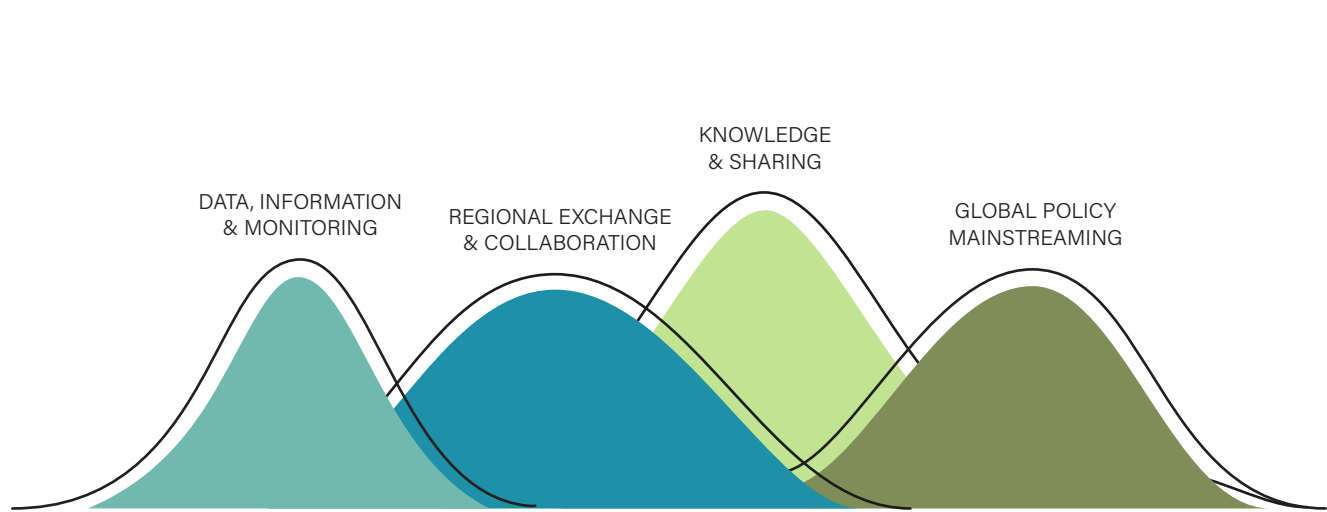
50% of the population is supplied with freshwater from the mountains

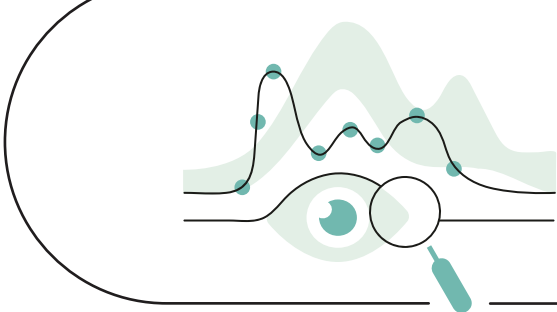
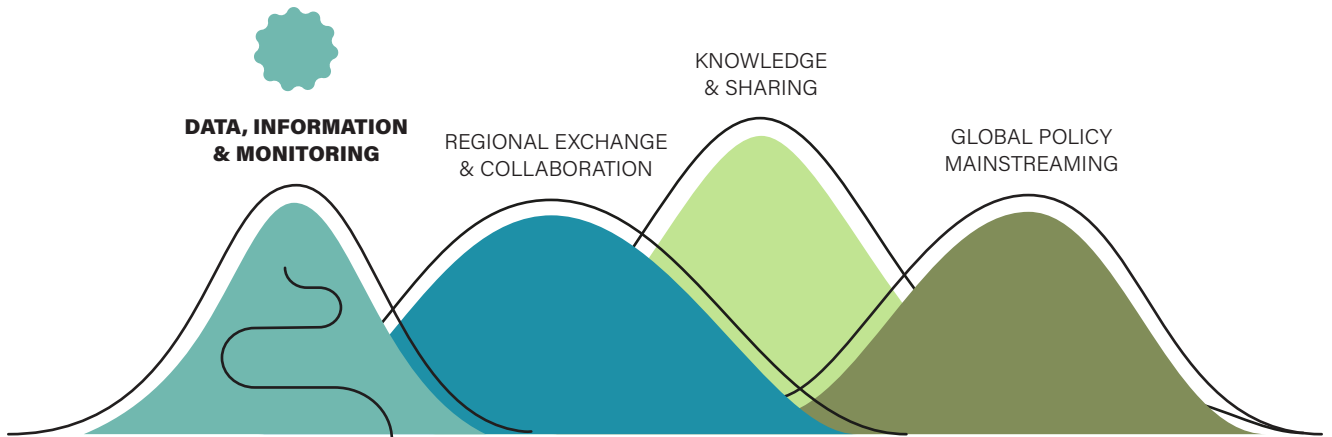
However, mountains are also some of the most vulnerable areas on the planet, with a rugged environment that is often cut off from vital infrastructure. Not only that, but mountains feature some of the clearest indications of climate change.



These impacts will affect communities already confronting poverty and land degradation, leaving mountain livelihoods particularly sensitive to climate change.

The Adaptation at Altitude programme seeks to increase the resilience and adaptive capacity of mountain communities and ecosystems to climate change by improving knowledge of appropriate adaptation strategies and transferring this knowledge to inform decision-making in national, regional and global policy processes. Throughout Phase 1 of the programme (2019-2024), seven partner organisations have come together to achieve four major outcomes that will help accomplish these goals.





DATA, INFORMATION & MONITORING

Improved mountain observation data and accurate scientific information is pivotal to understanding the impacts of climate change in mountains, and informing appropriate adaptation strategies for mountainous countries. Outcome 1 strives to close the information gap through improved access to Earth Observation data and a series of outputs that transfer knowledge through science-policy platforms to inform decision-making in national, regional, and global policy processes.

REPORT

[Policy Brief on Mountain Observation: Monitoring, Data, and Information for Science, Policy, and Society](#) gives an overview of the current state of multi-disciplinary observations



©Jakob Steiner

100 Mountain Fact Booklets have been generated

REPORT

[The Mountains Uncovered Series](#) provides an overview of the key characteristics of 100 mountain ranges

Over **51,000** stations/sites in the GEO Mountains' In Situ Inventory (v2)

REPORT

GEO Mountains Data inventories compile metadata on stations and infrastructure (**[In Situ Inventory](#)**), and other datasets (**[General Inventory](#)**) in mountains

5 Peer-Reviewed Publications published

642 Datasets, Data Portals, & Tools listed in the GEO Mountains General Inventory (v1.4)

REPORT

[The Sustainable Mountains Training Course](#) provides resources on the importance of mountains and resilience initiatives for learners of all ages

REPORT

[The Central Asia Mountain Observatories Network](#) was formed, and its inaugural meeting took place in Almaty in 2023

11 Data projects funded via the GEO Mountains' Small Grants Programme

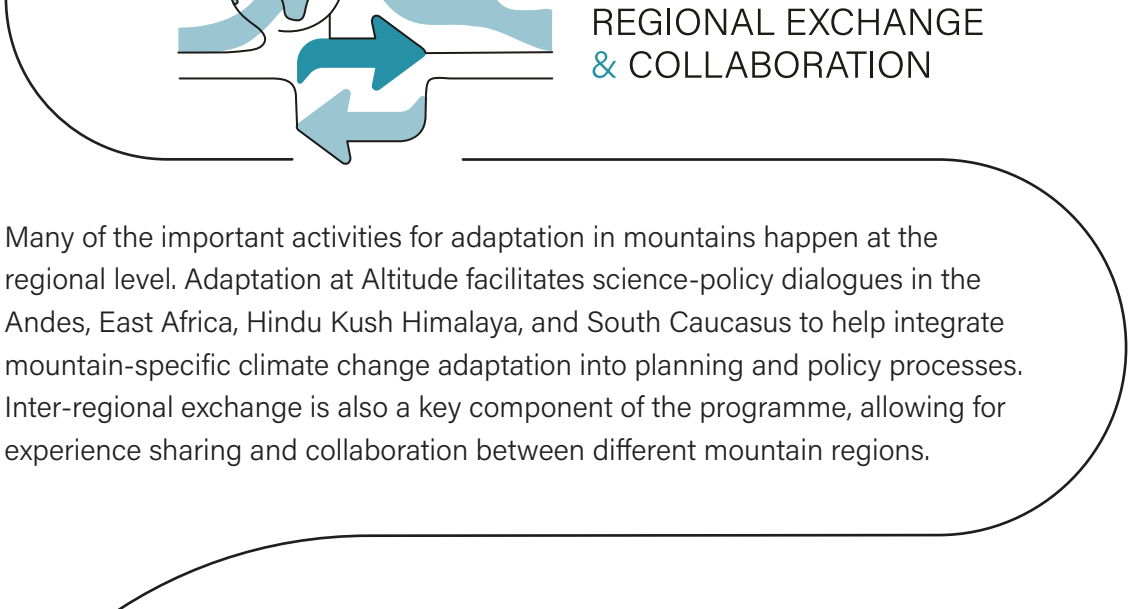
REPORT

[IPCC AR6 contributions](#) on impacts, adaptation and vulnerability were made by GEO Mountains members



NEXT OUTCOME





Many of the important activities for adaptation in mountains happen at the regional level. Adaptation at Altitude facilitates science-policy dialogues in the Andes, East Africa, Hindu Kush Himalaya, and South Caucasus to help integrate mountain-specific climate change adaptation into planning and policy processes. Inter-regional exchange is also a key component of the programme, allowing for experience sharing and collaboration between different mountain regions.

The Andes

REPORT | TOOLS

Knowledge management for adaptation activities include regional studies and knowledge tools on socio-environmental indicators of the Andes

The **6** A@A Andes webpages had more than **12,000** views and **4,500** users in Phase 1.

NETWORK

Support and consolidation of integrated monitoring in Andean summits and forests has led to socio-environmental research and the **Andean Network of Socio-Ecological Observatories**

7 countries work on the AMI

REPORT | DECLARATION | WORKING GROUPS

The **Andean Mountain Initiative's** consolidation as a regional platform is showcased through various milestones

WALIKI JUTAWAXTAXA JALLALLA INICIATIVA ANDINA DE MONTAÑAS

Qullunakun mayqhthapitawra

DIALOGUE | EVENT

Inter-regional exchange occurred through the **Dialogue on Mountain Governance of the AMI, Regional Dialogues for Integral Management of Páramos and other Mountain Ecosystems**, and the study visit to the **Alpine and Carpathian Conventions**

16 spaces of interchange and capacity building were implemented

TRAINING | COMMUNITY

Capacity building activities include the **IPROMO course** and the **Community of Practice for adaptation in the Andes**

SOUTH CAUCASUS & EAST AFRICA

©Saskia Flores

South Caucasus East Africa

PUBLICATION

18 tested mountain adaptation solutions from East Africa and **9** from the South Caucasus were shared in the **Mountains ADAPT Solutions** booklets

Mountains ADAPT Solutions Booklets for **East Africa and the South Caucasus** showcase solutions in the regions covering diverse themes and climate risks

14 nominated government officials from East African Community (EAC) Partner States and high-level representatives from the EAC Secretariat have agreed to establish an **East African Community Mountains Stakeholder Platform (EAMSP)**

COMMUNITY

The **East African Community Mountains Stakeholder Platform** brings together nominated experts and practitioners from the region to develop further the sustainable mountain development agenda and provide policy and technical support to the work of the EAC thematic working groups. Terms of Reference were endorsed, and an **Action Plan** developed with key 3 Priority Intervention Areas, respective Targets and 15 concrete Activities.

More than **1,400** people have accessed the booklets

4 national policies and laws in the East African Community and the South Caucasus include provisions for adaptation in the mountains

COMMUNITY

The **Regional Adaptation Dialogue in the South Caucasus** was established, bringing together representatives to share best practices and develop common activities for strengthening the region's resilience

90 different representatives from government, research, practice and civil society from Armenia, Azerbaijan and Georgia discussed regional climate change impacts, adaptation solutions, national policies and regional priorities during three meetings

©Sustainable Caucasus

Hindu Kush Himalaya

REPORT

The **Hindu Kush Himalaya Assessment report** assembled the collective knowledge of over 300 experts on the current state of the HKH

DECLARATION | EVENT

The **Ministerial Declaration on the HKH Call to Action** was launched at the first **HKH Ministerial Mountain Summit** to strengthen regional cooperation and promote a unified voice for the HKH

Over 980,000 downloads

NETWORK | REPORT

Formation of the **HKH High-Level Task Force** and the development of the **Recommendation Report** for the formation of a suitable **High-Level Regional Institutional Mechanism**

REPORT

Launch of the **HI-WISE Outlook**, an assessment of the Asia high mountain cryosphere

Over 2,000 downloads of the HI-WISE report

EVENT

Second Hindu Kush Himalaya science-policy forum: Climate and Cryosphere Experts took stock of knowledge and identified gaps in science and national policies

©Sustainable Caucasus

Interregional Exchange

EVENT

The **2022 Mountains Connect Interregional workshop** in Vienna, Austria welcomed participants from 6 mountain ranges to exchange on governance and regional approaches to adaptation through innovative methodologies

64 participants from **6** mountain ranges came together for the **2022 Mountains Connect workshop governance simulation**

EVENT

The **Tamlar Range Governance Simulation** was developed to advance regional mountain governance

KNOWLEDGE SPACE

The **Mountains Connect** online knowledge space includes videos about seven dimensions of mountain range governance, and existing arrangements in key regions

6 UNEP webstories refer to A@A and/or adaptation in mountains

The **International Year of Sustainable Mountain Development 2022** and **5 Years of Action for the Development of Mountain Regions 2023-27** provide a unique opportunity to accelerate climate-resilient mountain development on the global level

REPORT

"Losses and Damages from the disappearing frozen heartbeat" mountain case study in **UNEP Adaptation Gap Report 2023**

Mountain adaptation solutions: turning challenges into opportunities

"The Last Glaciers" film issues a global wake-up call for climate action on **World Water Day**

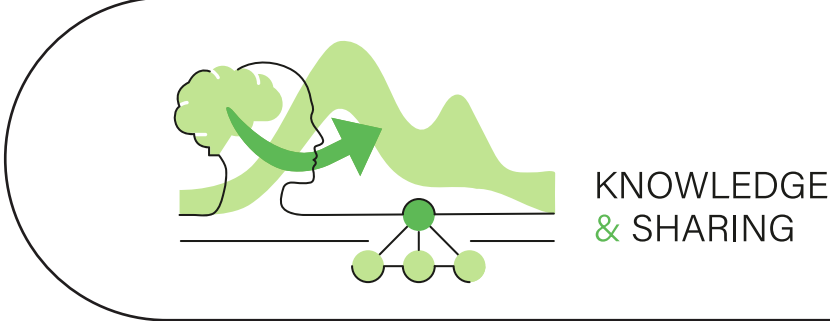
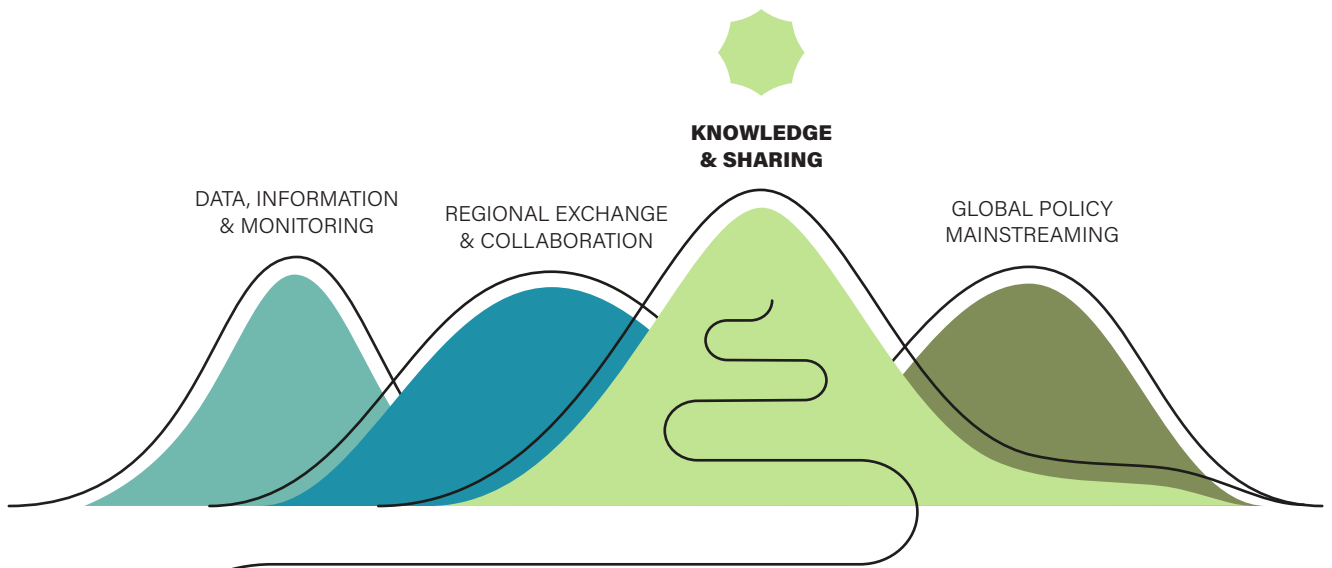
Glacier collapse in India a worrying sign of what's to come

Ice loss on Africa's highest peak prompts star climber **Will Gadd** to reconsider his sport

Sustainable Mountain Development in a **Climate Emergency speech**

©Christian Trumbull

NEXT OUTCOME

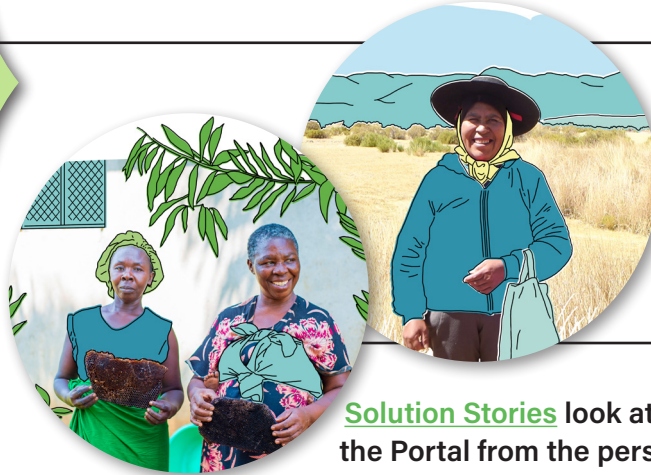


Around the world, practitioners, policy makers, and other experts are working on increasing the resilience and adaptive capacity of mountain regions. Outcome 3's aim is to bring this knowledge together and support the sharing of research and good practices to better inform national, regional, and global adaptation approaches through a community of practice and a global database of solutions for mountains.

SOLUTIONS

The **A@A Solutions Portal** showcases tried and tested climate change adaptation solutions for mountain regions across different risks and sectors

99 solutions are available on the A@A Solutions Portal



SOLUTIONS

Solution Stories look at solutions from the Portal from the perspective of local stakeholders and beneficiaries

COMMUNITY

Climate Change Adaptation in Mountains theme on weADAPT connects experts to share knowledge and experience in one space



There are **110** registered users of the weADAPT Climate Change Adaptation in Mountains theme, which features **105** pieces of topic-specific content

COMMUNITY

The **A@A Knowledge Network** is a community of practice on climate adaptation in mountains to accelerate the uptake of innovative solutions

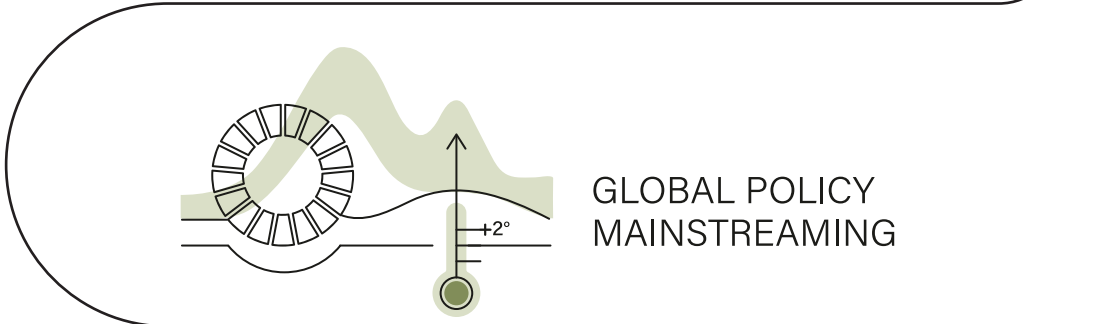
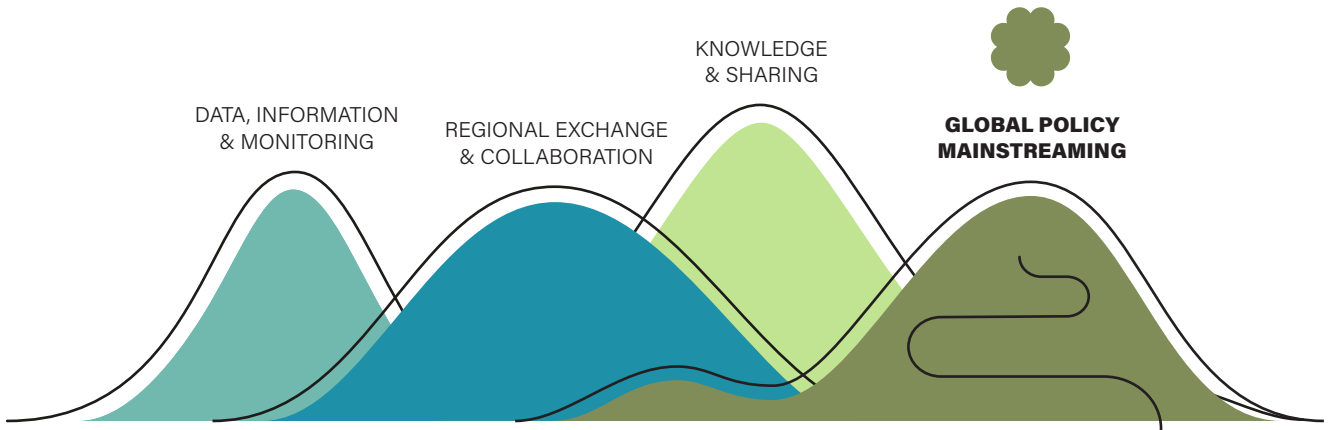
SOLUTIONS

Solution Synthesis series explores solutions from the Portal related to **finance**, **Indigenous knowledge**, **ecosystem restoration**, and transboundary solutions



NEXT OUTCOME





Outcome 4 aims to ensure that the major global policy processes related to climate change, disaster risk reduction, and the Sustainable Development Goals are taking climate change adaptation in mountains into account. Policy mainstreaming activities such as events, briefs, and guidance documents have been conducted to inform decision makers and other stakeholders about the importance of mountains in policy planning.

EVENT

UNFCCC COP side events have explored topics such as climate impacts in mountains, disaster risk reduction for natural hazards, financial options for adaptation projects, and interregional exchange

The Nairobi Work Programme of the UNFCCC established a thematic area on knowledge and innovation in mountains

The mountains non-paper was shared at the 35th Board Meeting of the GCF and supported by several countries, subsequently bringing mountains into the new GCF Strategic Plan 2024-2027

REPORT

The 'Leave No Mountain Behind: Disaster Risk Reduction for All' brief dives into how disasters in the mountains are increased by development failures and climate change impacts

REPORT | EVENTS

Engagement with Parliamentarians includes a webinar series on mountain-related issues and an issue brief with guidance on incorporating key adaptation actions in different countries



©Thierry Roge / Reuters



©James Brunner / Alamy Stock Photo

