

Adaptation @ Altitude Programme Phase 1



Final Evaluation Report (Version 2.0)

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June 8, 2023

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ACRONYMS AND ABBREVIATIONS

A@A	Adaptation at Altitude Programme
ADB	Asian Development Bank
AfDB	African Development Bank
AFF	African Forest Forum
AfroMont	African Network on Mountain Research
AMCEN	African Ministerial Conference on the Environment
AMI	Andean Mountain Initiative
AR6 WGII	Working Group II to the Sixth Assessment Report
ARCOS	Albertine Rift Conservation Society
CARE	CARE International
CBD	Convention on Biological Diversity
CC	Climate change
CCA	Climate change adaptation
CCM	Climate Change Mitigation
CDE	Centre for Development and Environment
CCTWG	Climate Change Technical Working Group
CIPRA	Commission Internationale pour la Protection des Alpes
CONDESAN	El Consorcio para el Desarrollo Sostenible de la Ecorregión Andina

COP	Conference of the Parties
CoP	Community of Practice
CPCCE	Global Programme Climate Change and Environment
DRR	Disaster risk reduction
EAC	East African Community
EAMSP	East African Community Mountains Stakeholder Platform
EbA	Ecosystem-based Adaptation
EBRD	European Bank for Reconstruction and Development
EMBV	Essential Mountain Biodiversity Variables
EMCV	Essential Mountain Climate Variables
EMSV	Essential Mountain Societal Variables
ESPA	Ecosystem Services for Poverty Alleviation
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FDDM	Fondation pour le développement durable des régions de montagne
GBF	Kunming-Montreal Global Biodiversity Framework
GCF	Green Climate Fund
GCOS	Global Climate Observing System
GEF	Global Environment Facility
GEO	Group of Earth Observations

GeoCONDESAN	Geodatabase of CONDESAN
GEO BON	Group on Earth Observations - Biodiversity Observation Network
GEOSS	Global Earth Observation System of Systems
GIS	Geographic Information System
GLOCHAMORE	Global Change in Mountain Regions
GLOMO	Global mobility of employees
GNOME	Global Network for Observations and Information on Mountain Environments
GP	Global Programme
GPCC	Global Programme Climate Change
GPDRR	Global Platforms for Disaster Risk Reduction
HKH	Hindu Kush Himalaya
HKH RMC	Hindu Kush Himalaya Regional Member Countries
HLPF	High-level Political Forum on Sustainable Development
HQ	Headquarter
IvH	Instituto Alexander von Humboldt
ICIMOD	The International Centre for Integrated Mountain Development
IDB	Inter-American Development Bank
IER	Institute for Energy Research
IKI	International Climate Initiative (BMWK in cooperation with BMUV and German Federal Foreign Office - AA)
IMC	International Mountains Conference

IMD	International Mountain Day
IMS	International Mountain Society
INAIGEM	Instituto Nacional de Investigación en Glaciares y Ecosistemas de Montaña
InfoAndina	Information Portal of CONDESAN
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IPROMO	International Programme on Research and Training on Sustainable Management of Mountain Areas
IUCN	International Union for Conservation of Nature
IYM	International Year of Mountains
MEAs	Multilateral Environmental Agreements
MF	Mountain Forum
MH	Mountain Hub
MP	Mountain Partnership
MPS	Mountain Partnership Secretariat
MRD	Journal Mountain Research and Development
MRI	The Mountain Research Initiative
MSRI	Mountain Societies Research Institute
MSRI -MH	Mountain Societies Research Institute - Mountain Hub
NAPs	National Adaptation Plans
NBSAPs	National Biodiversity Strategies and Action Plans

NDCs	Nationally Determined Contributions
NGOs	Non Governmental Organisations
NRM	Natural Resource Management
NSIDC	National Snow and Ice Data Center
PAGES	Past Global Changes
ODI	Overseas Development Institute
OEA	Organización de los Estados Americanos / Organisation of American States
OECD	Organisation for Economic Co-operation and Development
OSCE	Organization for Security and Co-operation in Europe
RADISC	Regional Adaptation Dialogue in the south Caucasus
RBA	Red de Bosques Andinos
RIG	Regional Initiative Group
SD	Sustainable Development
SDC	Swiss Agency for Development and Cooperation
SDC COOF	Cooperation Office of the Swiss Agency for Development and Cooperation
SDG	Sustainable Development Goals
SEI	Stockholm Environment Institute
SMD	Sustainable Mountain Development
SMD4GC	Sustainable Mountain Development for Global Change Programme
TOR	Terms of Reference

UCA	University of Central Asia
UN	United Nations
UNCBD	United Nations Convention of Biodiversity Conservation
UNCCD	United Nations Convention to Combat Desertification
UNDRR	United Nations Office for Disaster Risk Reduction
UNEP	United Nations Environment Programme
UNEP's GEO	Global Environment Outlook
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNIGE	University of Geneva
UZH	University of Zurich
SBSTA	Subsidiary Body for Scientific and Technological Advice
SIDS	Small Island Developing States
VEGU	European Geosciences Union General Assembly
VGGT	Voluntary Guidelines on the Responsible Governance of Tenure
WB	The World Bank
WMF	World Mountain Forum
WMO	World Meteorological Organization
Zöi	Zöi Environment Network

ACKNOWLEDGEMENTS

Adaptation at Altitude Programme (A@A) Partners: CONDESAN (esp. L.D. Llambi Cartaya) , ICIMOD (esp. B. Khan, P. Wester), MRI (esp. C. Adler, J. Thorton), SEI (esp. K. Williamson, Rosie Witton), UNEP (esp. S. McCallum, A. Fellendorf, E. Daniel, M.G. Jurek), UNIGE (esp. A. Scolobig), Zoï (esp. O. Simonett, A. Mackey, J. Zwalen). **Others:** Local and regional implement partners (e.g., ARCOS, EAC Secretariat, Sustainable Caucasus); representatives of Governments of Kenya, Uganda, Georgia, Armenia, Azerbaijan; Mountain Partnership Secretariat (esp. RL. Romeo); IUCN (esp. A. Raza Rizvi). **Swiss Government:** SDC Bern and field offices (esp. R. Caprez and P.A. Cordey)

EXECUTIVE SUMMARY

Retrospective Perspective

OVERALL

The A@A programme has demonstrated numerous successes in its overall effectiveness for achieving its objectives. These include:

- Raising awareness about mountain issues in target audiences, particularly to influence global policy, by enhancing the quality, range and availability of rigorous climate change adaptation (CCA) relevant data and information;
- Strengthening science-policy platforms in the Andes, East Africa, Southern Caucasus and Hindu Kush-Himalayan mountain regions to support evidence-based policy-making and advocacy on issues of CCA and sustainable mountain development, and contributing to formalizing mountain governance at regional levels;
- The creation of the A@A solutions portal (a unique offering to date for mountains) which encompasses a rigorous selection process, links to other solution-sharing platforms, and supports regional processes to strengthen policy and practice;
- The creation of inter-regional exchanges among four mountain regions;
- Numerous important knowledge publications, summary briefs, technical sessions, side events and capacity-building workshops;
- The increased consideration of mountain climate change adaptation issues in major global policy processes.

RELEVANCE

The A@A Programme has aimed to support the needs of mountain communities through an outcome model designed to improve the availability of mountain observation data, facilitate regional science-policy dialogues, support a community of practice and knowledge exchange on adaptation, and influencing global policy processes.

COHERENCE

The causal interplay of the programme's four outcomes is coherent and consistent in light of the A@A initiative's overall goal of increasing resilience of mountain communities and ecosystems to climate change.

Each outcome feeds into the subsequent outcome, and all four are essential for

EFFECTIVENESS AND IMPACT

The programme has successfully engaged the scientific community in the policy process, and increased the accessibility of scientific findings to policymakers through the creation of knowledge products and information sharing tuned to key audiences. It has also built momentum amongst governments at regional levels to varying degrees to

SUSTAINABILITY

The programme has been successful in strengthening alliances between mountain countries at regional levels, with the Outcome model providing a structure around which a coordinated approach can be achieved, and maintained going forward.

By providing knowledge products and creating a CoP, the A@A programme has

Numerous beneficiaries of the programme include practitioners, mountain communities, scientists and academic communities, policymakers (e.g., governments in target regions), and the mountain-specific CCA agenda globally.

A@A activities have thoroughly addressed key concerns and challenges framed in the project document, and have strengthened data exchange, contributed to catalysing policy change, and drawn from mountain-specific CCA solutions to carve out a specific niche in the UNFCCC agenda.

achieving and sustaining the resilience of mountain communities and ecosystems.

The programme presents a sound impact hypothesis and compatibility with other SDC interventions as well as other interventions of the implementing partners. Finally, the A@A initiative demonstrates compatibility with global processes that it has targeted for elevating attention to CCA issues, notably the UNFCCC, SDGs, and the Sendai Framework.

work together to address mountain adaptation issues of common concern.

The establishment of the Community of Practice (CoP) has been similarly effective in providing a foundation for the implementation of effective CCA solutions.

Supporting interregional cooperation, particularly through the Vienna Mountains CONNECT activity, was also regarded as effective, and a model to build on. Through it the A@A programme was able to engage with and support policymakers across regions to influence the the global policy space.

generated a strong foundation for continuing discussions on mountain CCA policy, sharing learning, and development of new approaches and practices. The programme has successfully generated useful assets, in the form of knowledge products and of course solutions that have been curated and promoted in the Solutions Portal.

IMPLEMENTATION CHALLENGES			
<p>Need for stronger internal coordination There is a clear need for improved coordination among the partners to ensure greater synergies and alignment, reduce overlap, and create a strong basis for joint work within the project and with external actors and stakeholders.</p>	<p>Need stronger articulation of the programme's overall value-add. As of yet, there has been little discussion in the reporting of building alliances (except amongst governments), learning from each other's work, and other steps to advance common agendas which are of relevance across all four outcome areas.</p>	<p>Optimize efficiency. Further efficiency gains will need to be optimised in light of resource limitations, especially by drawing more strategically on the results of each regional process, consolidating the networks, continuing to build interregional cooperation, and strengthening linkages with other</p>	<p>Become more concrete and practical - The first phase was necessarily focused on building the foundations for knowledge-generation and creation of regional processes and platforms. However, in the second phase, the A@A programme needs to become more concrete and practical with a clear focus</p>

relevant work of the programme on generating positive impacts. partners.

Considerations for Phase 2 of the Adaptation at Altitude Programme

Optimizing impact

It is of utmost importance to seize the momentum that is building in this project to create a platform for the voices of the countries in the programme focal regions to come together, to exchange experiences and to strategize and act to elevate their common priorities in global processes which will benefit mountain areas everywhere.

There are untapped opportunities to increase the sharing of knowledge, learning and approaches; and for joint action to advance common agendas across all four outcome areas. Depending on the topic, outreach and coordination could be led by individual outcome teams, or through a dedicated project staff member for coordination and alliances. Care will be needed to not overextend since transaction costs in staff time can be high.

Sharpening substantive focus

The project needs to continue to fill research and knowledge gaps and build knowledge resources of relevance to CCA in mountains for target audiences, including expanding data parameters being tracked and knowledge products produced covering geophysical, meteorological, biodiversity, societal, and other relevant variables that can and will be used by mountain stakeholders. Concreteness and practicality of the programme can ultimately be improved by utilising Phase 2 to go beyond the foundations established in Phase 1. Phase 2 must meet the challenge of ensuring increased access, dissemination, and application of scientific data, upscaling and replication of mountain CCA, further operationalisation of the regional platforms, informed policy-making, and further elevation of mountain issues in key global processes.

Improving coordination among the partners

The evaluators recommend greater attention to programme leadership, internal communications, coordination, and collaboration among the partners and with SDC. A stronger overarching structure and mechanism would increase coherence between teams so that they reinforce each other, contribute across outcomes, enable mutual learning, and build synergy. This would also contribute to enhancing the A@A Programme's overall coherence while strengthening collaboration with other CCA activities in mountains by other actors.

The next Phase of A@A should support more contact, shared activities, and joint learning between outcome and regional teams. More exchanges and interactions would benefit all partners, and incentives could be provided to enable this such as providing support for more exchange visits, internal and external forums, and other joint events.

I. About the Adaptation @ Altitude Programme

A@A is a collaborative programme, launched and co-supported by the Swiss Agency for Development and Cooperation since late 2019, that aims to boost the resilience and adaptation of mountain communities in the face of climate change. As per the Evaluation TOR, the A@A programme seeks “to increase knowledge on climate change and appropriate adaptation solutions in mountains and feed it into science-policy platforms for informed decision-making in national, regional and global policy processes, to increase the resilience of mountain communities and ecosystems to climate change.”

As per the TOR, the A@A programme has been designed to address the following key challenges, gaps and opportunities.

Knowledge gaps	Uneven exchange of proven solutions	Need to strengthen policy	Strengthening regional platforms	Increase the profile of mountain CCA in key global, regional and national processes
Major gaps in the understanding of climate-induced changes and their effect are limiting capacity to inform decisions on strategies for climate change adaptation and pathways for sustainable mountain development.	A platform for the systematic collection and access to mountain data is essentially lacking. With regard to climate adaptation measures, a wealth of experience and proven solutions exist at the local level.	Scientific evidence and practical CCA solutions are important prerequisites to inform strategies for CCA measures in mountains.	The establishment of regional platforms for Sustainable Mountain Development, notably in the Andes, the Hindu Kush Himalaya, the Caucasus and in East Africa provides opportunities for in-depth science-policy dialogues, with the potential for evidence-based policy influencing on CCA.	Major global policy frameworks that were developed during the last years, such as the Paris Agreement under UNFCCC, the Agenda 2030 for Sustainable Development, and the Sendai Framework for Disaster Risk Reduction provides opportunities for mountain-specific implementation strategies at the national level.
Data on climate change in mountains is sparse and uneven, and in most cases not openly accessible.	But these experiences are not systematically collected, analysed, validated, and disseminated to further support their uptake and implementation.	Scientific evidence must be complemented by the concerted action of policy influencing at the national, regional and global levels.	Eventually, some of these platforms have the potential to evolve into more institutionalised structures for the regional governance of mountain areas.	The mountain agenda has not been systematically elevated in these global policy processes

As noted above, the overall objective of the programme is to increase knowledge on climate change and appropriate adaptation solutions in mountains and feed it into science-policy platforms to support informed decision-making in national, regional and global policy processes. The overall objective has been underpinned by the following four outcomes:

Outcome 1: Improved availability and use of mountain observation data and information services support regional and global knowledge products on climate change impacts in mountains.

Outcome 2: Mountain CCA is integrated into planning and policy processes of regional bodies and their national constituencies as the result of strengthened science-policy dialogue platforms.

Outcome 3: Knowledge on CCA solutions in mountains is strengthened and capitalized at the national, regional and global level.

Outcome 4: Major global policy processes are taking CCA in mountains into account.

The A@A Programme is implemented by the Consorcio para el Desarrollo Sostenible de la Ecoregión Andina (CONDESAN), the International Centre for Integrated Mountain Development (ICIMOD), the Mountain Research Initiative (MRI), the Stockholm Environment Institute (SEI), the United Nations Environment Programme (UNEP), the University of Geneva, and the Zoï Environment Network. Programme partners have also contracted a number of regional partners for work (e.g., ARCOS, Sustainable Caucasus), and work with a broad network of mountain scientists and practitioners. The first phase of the programme runs from 2020 to 2023. A potential second phase for the programme is under consideration to run from 2023 to 2027, with a preliminary total estimated budget for the whole programme of CHF 10.65 million.

II. Overview of the evaluation approach

The evaluation has three key objectives, each of which will be fully addressed in the interviews and document review. These are to:

- Review the project's objectives and implementation progress.
- Provide evidence on the project's overall impact, effectiveness and added value, and identify possible implementation challenges and responses to these challenges.
- Elaborate on the lessons learnt and experience gained and provide SDC with guidance and concrete recommendations with regards to a potential Phase 2 of the project.

The evaluation methodology has two parts. The first includes a review of documentation and other materials, including externally produced (e.g., media). The second involves bilateral and collective interviews with implementing partners, SDC officials, national governments and other key stakeholders. The objective of this approach is to ensure the triangulation of information to ensure that sources are drawn from a wide range of perspectives.

In terms of document review, these include materials referred to in section 4.1 of the evaluation TOR and any other documents deemed necessary. We have been using a combination of quantitative and qualitative methods, including surveys, analysis of primary material, and of course the results from the interviews.

III. Overarching observations about the Adaptation @ Altitude Programme

A. The overarching achievements of Phase 1

High value addition , approach, and potential for impact..	High level of capacity and solidarity among the partners	Impressive array of outputs overall	Strong project design logic	Increased visibility and access of important data, inventories and knowledge.	Overall success in strengthening regional cooperation through new or enhanced platforms and processes and in elevating the importance of mountain concerns in regional policy processes.	The Solutions Portal now contains a diverse set of solutions that have been vetted through a rigorous selection process.	Overwhelming consensus among the implementing partners about the value of the 2022 interregional Mountains Connect workshop
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High value addition - The evaluators have developed a highly positive sense of the value addition, approach, and potential for impact of the A@A programme. It is built on a strong foundation of past work, combined with the experience and dedication of the partner organizations. It also shows real promise to advance the climate change adaptation agenda for high-altitude regions in its focal geographies, with broader global ramifications across the mountain world. There is overall agreement that the project has significantly increased collaboration between partners, regions and activities relative to what existed before the project started.

High level of capacity and solidarity among the partners - We noted and admired the high degree of technical expertise, dedication and solidarity amongst the staff of the different project partners. This was coupled with a strong belief in their joint endeavor, and generally a desire to work more cooperatively to generate synergy and impact. The project members showed a high degree of adaptive learning. This was demonstrated most notably in their active responses to the limitations imposed by COVID-19 on project implementation, with substantial lessons drawn for future work.

Impressive array of outputs overall - Since the programme has run only for a bit over three years, its impact delivery is modest, with some exceptions. Despite the short time frame, however, we note an impressive array of outputs including mountain data generation and stewardship, knowledge products, regional cooperation, capacity building, learning and exchange opportunities, and the elevation of the mountain voice in the global context.

Strong project design logic - In general, we felt the four Outcomes were appropriate, and should be continued in a second phase, particularly given the potential available resources, with some adjustments as outlined elsewhere in this report. All four outcome areas will need considerably more work and time to fulfill their potential and ensure sustainability of impacts (probably beyond the next four-year project cycle). Phase 2 will need to build on the knowledge creation foundations and improve dissemination of science, scalability of solutions, operationalisation of regional platforms, increase interregional exchanges, strengthen the solutions platform, build the Community of Practice and elevate the voice of mountains in not just the UNFCCC, but CBD, 5 year actions on SMD, and via other MEAs.

Impact of Outcome 1- With regard to outcome 1, the project has been highly successful in increasing the visibility and access of important data, inventories and knowledge. The challenge moving forward will be to showcase the benefits of the inventories and data, expand the scope and range of climate, geophysical, biophysical and societal factors being tracked, develop open-source tools to ensure standardisation and interoperability and to synthesise the science and ultimately to ensure that decision makers are equipped with the evidence needed to develop more rigorous mountain-specific CCA policy (in part through links with the work in Outcomes 2, 3 and 4).

Impact of Outcome 2 - With regard to the regional processes, there has been overall success in strengthening regional cooperation through new or enhanced platforms and processes and in elevating the importance of mountain concerns in regional policy processes. This is an essential focus and indeed the building block of phase 2. The challenges moving forward will necessarily include strengthening the regional institutions/platforms and processes to enhance their overall effectiveness in uniting the regional voice on mountain-specific CCA. At the same time, it will be important to design the Outcome 2 outputs in a manner that: recognizes and builds on the specific needs and status of each region; learns from other examples of regional cooperation such as the Alpine and Carpathian Conventions and Arctic Council; deepens cooperation within and between each region; strengthens regional voices in global processes; generates stronger regional policy roadmaps to inspire and inform national action, especially in the mainstreaming of mountain concerns in NAPs.

Impact of Outcome 3- The Solutions Portal now contains a diverse set of solutions that have been vetted through a rigorous selection process. The challenges moving forward are to ensure that gaps are filled (a continuing process), that the solutions are used widely, and that uptake is monitored carefully. At the same time, efforts are needed to optimise the full potential of the Community of Practice. This means: ensuring broad representation; enabling the systematic exchange of experience and challenges; the sharing of technical insights regarding the implementation, scaling and replication of the solutions on the portal; including solutions that focus on creating enabling environments (policy and conditions on the ground); and ultimately, the strengthening of solidarity, ownership and engagement among mountain communities in their adaptation pathways.

Impact of Outcome 4 - The programme has started to have traction with the UNFCCC, especially with the Cross-Chapter on Mountains in the IPCC's Sixth Assessment Report, and reference to mountains in the Nairobi work programme. Efforts need to be scaled up both within the UNFCCC but equally in the Sendai Framework and the post-2020 Global Biodiversity Framework to ensure that the profile of mountains is increased. However, influencing the global policy landscape should not be seen as an end in itself, but rather as a means to accomplish the overall goal of mainstreaming mountains in key policy processes. In the second phase, deciding on which global policy processes to focus on will depend on where the best traction can be achieved and what are the key hooks where the programme can make a difference. Equally, it is important to continue to strengthen the mountain voice within key global funds such as the Green Climate Fund and the Global Adaptation Fund and to consider how best to engage in the Five Years of Action for the Development of Mountain Regions by supporting greater dialogue, attention and action between different stakeholders; development of mountain-specific measures, mitigation, and sustainable development strategies, and increased international cooperation.

Interregional exchange - There was overwhelming consensus among the implementing partners about the value of the 2022 interregional Mountains Connect workshop in Vienna, Austria. More interregional cooperation is needed in Phase 2 to elevate the importance of transboundary collaboration for sustainable mountain development and to promote interregional exchange of knowledge and experiences for collective action in mountain regions. The scale of the Vienna workshop should be retained alongside the use of innovative simulation training opportunities. Equally important is the new Mountains Connect website that is promoting shared learning about the various approaches for collaboration and joint decision making that can further inspire regional mountain governance around the world. Interregional cooperation currently falls under Outcome 2 and at the same time it has increasing relevance for Outcome 4, because increased interregional cooperation will be extremely useful for increasing impact in global processes.

B. The overarching implementation challenges to be addressed in Phase 2

Need for stronger internal coordination	Need for stronger articulation of the programme's overall value-add.	Engage local and regional non-governmental actors	Learn from the past	Optimize efficiency	Strengthen bottom-up approaches	Greater focus on enabling conditions	Clarify attribution of partners' contributions
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Despite the clear achievements, the evaluators observed a number of factors that are limiting the potential scope and impact of this initiative and which would need to be addressed in the design of a second phase. Specific issues are covered elsewhere in this report, but we make the following general observations about overarching implementation challenges:

Need for stronger internal coordination - In reporting and through the interviews, the programme and its partners come across at times as if they are operating in a somewhat insular fashion when in fact there are many other actors working in climate change adaptation of relevance to mountains at national, regional and global levels. Hence the need for improved coordination among the partners to ensure greater synergies, reduce overlap, and create a strong basis for joint work within the project and with external actors.

Need stronger articulation of the programme's overall value-add. As of yet, there has been little discussion in the reporting of building alliances (except amongst governments), learning from each other's work, and other steps to advance common agendas which are potentially of relevance across all four outcome areas.

Ensure that local and regional non-governmental actors continue to be included in regional processes - This is essential because of their potential influence on governments and their technical expertise. It is clear that there is a need to undertake a network mapping exercise in each region and globally on organizations working on CCA in mountains.

Learn from the past - Discussions and work to forming alliances of mountain countries at regional levels goes back many years, building on progress in regions like the Alps and Carpathians. SDC has ample experience with this as do some of the project partners, although institutional memory is at risk of fading in some cases due to staff turnover.

Optimize efficiency - Further efficiency gains will need to be optimised in light of resource limitations, especially by drawing more strategically on the results of each regional process, consolidating the networks and continuing to build interregional cooperation.

Strengthen bottom-up approaches - High level global policy engagement and focus on national governments are both appropriate for a global programme like this one. However, it is essential to recognize that such top down approaches have their limitations and are often best if complemented by bottom up approaches.

Greater focus on enabling conditions - Many of the adaptation solutions are grounded in project based, restricted funding and investment approaches which are typically time-bound with outcome at risk when project/fundings end. Hence the need for deeper understanding of the enabling conditions that will be needed to sustain the project moving forward.

Become more concrete and practical - The first phase was necessarily focused on building the foundations for the knowledge-generation work and creation of regional processes and platforms. However in the second phase, the A@A programme needs to become more concrete and practical.

Clarify attribution of partners' contributions - Going forward it is important to clarify how best to attribute partners' contributions and their impact more explicitly.

IV. Overview of findings related to evaluation review areas ²

In this Chapter IV, we present a summary of the key findings related to each of the evaluation review areas. For more detailed analysis on each of these areas, please consult the detailed analysis of findings of evaluation review areas contained in Annex II.

RELEVANCE	COHERENCE	EFFICIENCY	LIKELIHOOD OF IMPACT	SUSTAINABILITY	FINANCIAL MANAGEMENT	EFFECTIVENESS
High level of relevance for practitioners, mountain communities, scientists, policy-makers.	Causal interplay of the project's four outcomes is coherent and consistent in light of the A@A programme's overall goal of increased resilience of mountain communities and ecosystems to climate change.	Adaptive management necessitated by the COVID-19 pandemic, which began at the outset of the A@A program, had a positive impact on cost efficiency, resulting from the strategic and indeed virtual approach to attendance of international meetings, processes, and conferences emerged.	The project has successfully linked governments at regional levels with the scientific community in the policy process, and increased the accessibility of scientific findings to policymakers through the creation of knowledge products and information sharing. The establishment of a CoP has been similarly effective in enabling a unified effort towards a clear goal.	The project has generated a strong foundation for continuing ongoing discussions on mountain CCA policy, sharing learning, and development of new approaches and practices.	Compliance with financial standards is not assessed in this evaluation. Regarding financial management, the A@A Programme is subject to a separate auditing process of the partners conducted by SDC. Regarding financial management, we primarily looked at the project from the perspective of efficiency and effectiveness.	The A@A programme has demonstrated a significant level of overall effectiveness in achieving project objectives.

A. Relevance

In its aim to support the needs of mountain communities by improving the availability of mountain observation data, facilitating science-policy dialogues, supporting a community of practice and knowledge exchange on adaptation, and influencing policy processes, the A@A programme has proven relevant in a variety of ways for numerous groups. These include practitioners, mountain communities, scientists and academic communities, policymakers (e.g., governments in target regions), and the global mountain-specific CCA agenda. A@A activities thoroughly addressed key concerns and challenges in the framing of the project

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document, and have strengthened data exchange, helped to catalyse policy change, and drawn from mountain-specific CCA to carve out a specific niche in the UNFCCC agenda.

B. Coherence

The causal interplay of the project's four outcomes is coherent and consistent in light of the A@A programme's overall goal of increased resilience of mountain communities and ecosystems to climate change. Each outcome feeds into the subsequent outcome, and all four are essential for achieving and sustaining the resilience of mountain communities and ecosystems. The project presents a sound impact hypothesis and compatibility with other SDC interventions and interventions of implementing partners. Finally, the A@A programme demonstrates compatibility with global processes that it has targeted for elevating main issues, notably the UNFCCC, SDGs, and the Sendai Framework.

C. Efficiency

Adaptive management necessitated by the COVID-19 pandemic, which began at the outset of the A@A program, had a positive impact on cost efficiency, resulting from the strategic and indeed virtual approach to attendance of international meetings, processes, and conferences emerged. The digital mode allowed equal balance in discussions and a reduction in the project's overall carbon footprint, but conversations were felt to be limited in some areas with regards to establishing core aims and objectives. It was expressed that the high personnel turnover within some of the states also impacted the ability to make progress on a regional level.

D. Likelihood of impact

The project has successfully engaged the scientific community in the policy process, and increased the accessibility of scientific findings to policymakers through the creation of knowledge products and information sharing. It has also built momentum amongst governments at regional levels to varying degrees to work together to address mountain adaptation issues of common concern. The establishment of a CoP has been similarly effective in enabling a unified effort towards a clear goal. The Outcome model has been found to be effective in outlining clear aims and objectives for each area of concern (although it was felt by some that greater integration and synergies between outcomes would be beneficial to future momentum of the project). Interregional cooperation, particularly through the Vienna Mountains CONNECT activity, was also regarded as highly successful, and the A@A programme was

able to successfully engage with policymakers in the global policy space.

E. Sustainability

The project has been successful in strengthening alliances between mountain countries at regional levels, with the use of the Outcome model providing a structure around which a coordinated approach can be achieved, and maintained going forward. By providing knowledge products and creating a CoP, the A@A programme has generated a strong foundation for continuing discussions on mountain CCA policy, sharing learning, and development of new approaches and practices. The programme has successfully generated useful assets, in the form of knowledge products and of course solutions that have been curated in the Solutions Portal.

F. Financial Management

Compliance with financial systems and standards is not specifically assessed in this evaluation as, in terms of financial management, the A@A Programme is subject to a separate auditing process of the partners conducted by SDC. Regarding financial management, we primarily looked at the project from the perspective of efficiency and effectiveness. From the interviews and the progress reporting our sense is that the project's organizational structure and function have allowed for cost-effective and cost-efficient implementation. One key financial issue concerns the distribution of funds across the implementing partners and towards the four project outcomes. We are aware that this is a complex calculus that must take into account varying operational costs in different parts of the world, the relative resource needs of the different outcomes, and the existence of other funding stream to partners that cover all or some of the activities as well as core operating costs (with implications for overhead/indirect costs). Each of the partner institutions is in a different financial position economically.

G. Effectiveness

The A@A programme has demonstrated numerous successes in its overall effectiveness in achieving project objectives. These include:

- Raising awareness about mountain issues in target audiences, particularly for global policy, by enhancing the quality, range and availability of rigorous CCA data and information;

- Strengthening science-policy platforms in the four mountain regions to support evidence-based policy-making and advocacy on issues of CCA and sustainable mountain development and contributing to a formalisation of mountain governance at the regional level;
- The creation of the A@A solutions portal (a unique offering to date for mountains) which encompasses a rigorous selection process, links to other solution-sharing platforms, and linkages to regional processes;
- The creation of inter-regional exchanges;
- Numerous important knowledge publications, summary briefs, technical sessions, side events and capacity-building workshops;
- The increased reflection of CCA in mountains in major global policy processes.

The programme has also proven effectiveness for each of the four project outcomes. This is demonstrated by the following:

- Under Outcome 1, MRI has built on existing facilities, stations, sites, institutions and networks to make data comparable between regions, advance scientific analysis, and increase the output of knowledge. Under Outcome 1, the A@A programme has facilitated an improvement in the quality and access to data, the identification of the information needs of users, and the feeding of aggregated and synthesised data on climate change impacts in mountain regions into global processes. Challenges included limits to capacity of MRI staff members, reduced in-person opportunities due to COVID-19, and difficulties in tracking impact.
- Under Outcome 2, science-policy platforms have been strengthened in the four mountain regions - work which has facilitated further regional and transboundary cooperation. Another success has been seen in the creation of inter-regional exchanges. Although implementation challenges varied across regions, there were shared experiences in the challenges presented by COVID-19, funding difficulties, and regional/transboundary geopolitics.
- Under Outcome 3, the programme was very successful in the establishment of the A@A Solutions Portal. The project has also been able to track the number of portal users and the uptake of mountain CCA solutions. To date, there is no other mountain-specific CCA solutions portal that is global in geographic scope and which is also linked to regional processes. The A@A project has also facilitated the creation of a CoP, which may be further broadened moving forward. Analyses undertaken by UNIGE in 2022 has identified some key barriers to the implementation of solutions, including: lack of technological capacities; high staff turnover; lack of commitment to support long-term maintenance of solutions from key stakeholders;

difficulty in establishing the realistic impact of solutions at the community level; the need of increased insight from those who have implemented solutions at the local level.

- Under Outcome 4, implemented in collaboration with Zoï, the SEI, and University of Geneva, mountains are becoming more prominent on the global agenda. Major global policy processes are beginning to reflect mountain-specific CCA, and project partners have played an important role in this elevation. The elevation of mountains in the SDGs specifically has been the biggest implementation challenge under this outcome as, unlike other evolving global policy frameworks, the SDGs are fixed. Challenges were also observed in attribution and in influencing the Sendai Global Platform (resulting from the rigidity of the format).

V. Overarching recommendations for improving impact, substantive focus and project coordination ³

We present our overarching recommendations for the A@A programme in the following three tables.

In the first table we review specific actions which we believe will increase the real impact and the sustainability of those impacts of the Programme in Phase 2. In the second table we review specific actions and steps which we think will build a foundation to accomplish what is laid out in the first column. Finally, in the third table we review various actions that we think vital to strengthen the internal coordination of the programme, and hence enable it to accomplish what is laid out in the first two columns.

Overall, this assessment and our recommendations aim to be comprehensive and ambitious. We, the evaluators, believe strongly in the objectives of the programme, and also in the capacity of the partners to deliver. However, as we look over the whole initiative with Phase 2 in mind, it will be vitally important for it to be implemented strategically and thoughtfully, with adaptive management clearly in mind. Given resource limitations, the true capacity of the partners, and political environments, tough choices will and should be made over what to prioritize and what to drop and when.

Throughout the assessment we have taken care to present our perspectives on priorities, but also indicated concerns about only taking things on if resources permit and/or if necessary conditions are in place. This is one of the key reasons we recommend a stronger coordination function for SDC in the programme. It is in the nature of effective and talented partners within such initiatives to push for work they believe in. However, we think SDC may on occasion need to play a strong role in keeping activities aligned, keeping a strategic focus, and deciding when to drop work and when to squeeze resources to take advantage of emerging opportunities.

A. Recommendations for optimizing impact

Elevate the mountain voice systematically in regional, national and global processes

- Increase efforts to empower the regions to address transboundary mountain issues, build on the untapped potential of the nascent regional mountain platforms, and promote accomplishments.

³ The detailed recommendations for each of the evaluation review areas is contained in Annex III.

- There is a momentum building in this project to create a platform for the voices of the countries in the project regions to come together, to exchange experiences and to strategize and act to elevate their common priorities in global processes. It is important to distinguish this possible alliance of mountain countries from the NY based Group of Friends of Mountainous Countries in order not to duplicate processes. We note that NY-based Group of Friends can struggle to be effective because of political dynamics within the GA and its committees.
- We suggest an alliance that grows specifically and explicitly from this project, that elevates the unique shared knowledge and regional experiences for integrating mountains in CCA into key global processes, with the UNFCCC being the priority.
- One of the most efficient ways to generate impact is for partners to organise joint side events to share important insights from the substantive work in Outcomes 1, 2 and 3, for example at UNFCCC COPs, to demonstrate the robustness of A@A experience, findings, and its network (governments, technical/scientific partners, local actors). This would optimize use of limited travel resources and enable partners to interact with a wide range of actors with whom new relationships could be explored and built.

Step up interregional cooperation in the project

- Partners are in full agreement that more efforts in support of interregional cooperation would be useful including exchanges, events, study visits, etc.
- This could build on the foundations of the UN Friends of Mountain Countries which includes some, but not all of the states A@A is working with. This alliance could be advanced through the interregional activities of the project, notably the MOUNTAINS CONNECT workshop process, which was regarded as highly successful.

Strengthen alliances with other initiatives and external partners with common interests

- As of yet, there has been limited attention in project reporting to building alliances (except amongst governments), learning from each other's work, and other steps to advance common agendas which are of potential relevance across all four outcome areas. Addressing this will require building more understanding of the other initiatives that partners and other actors are undertaking. This is essential to understand the whole community of mountain actors working on adaptation and to articulate where the project fits and can best contribute.
- In Phase 2 we recommend undertaking a network mapping exercise in each region and globally on organizations and initiatives working on CCA in mountains so that the A@A programme can have its fingers on the pulse of what is happening in this field and be well placed to forge alliances and build effectiveness and efficiencies going forward in alignment with its objectives.
- This would provide opportunities for sharing knowledge, learning and approaches; and for joint action to advance common agendas across all four outcome areas. Depending on the topic, outreach and coordination could be led by individual outcome teams, or through a dedicated project staff member for coordination and alliances. Care will be needed to not overextend since transaction costs in staff time can be high.

Improve and ensure long-term sustainability of project

- The continued elevation of the importance of mountains on an international level will be critical to attract committed donors (bi-/multilateral) and ensure long-term sustainability of the project's outcomes.

- Partners will need to consider how best to ensure that new outputs have a longer-term purpose and that the benefits of the project will persist after Phase 2 finishes and SDC funding comes to an end.
- A key question is whether partners have sufficient internal resources, or access to obtain them, to continue the work beyond the end of Phase 2. If not, now is the time to consider which funders to approach to support collective work beyond Phase 2.
- At regional levels, we encourage the project to explore prospects with the regional governments to provide financial support for regional secretariat functions, coordination, and joint work going forward – recognizing that this is a long-term objective.
- The project should also identify diverse funding streams that can support CCA policy change and make this information available to project stakeholders, with particular attention given to those regions which are more neglected from the funding perspective (e.g., as described for the Southern Caucasus), and with sensitivity to the risks of competition for limited funding.
- One dimension of ensuring sustainability of the A@A programme impacts is through the uptake of its knowledge outputs to inform CCA policy and practice going forward; as such, dissemination and project knowledge products should increase in Phase 2.
- It will be essential to promote engagement by relevant sectors in A@A platforms through an effective communications (and outreach) strategy.
- Moving forward, it is also critical to focus on strategies to sustain the various programme platforms in the long term after the next project funding cycle ends. Of particular concern is the sustainability of the knowledge portal, where a concerted effort to ensure uptake is being achieved with resources continually updated, but which will require sustained resources to support. Long-term strategies must also be developed to support whatever coordination mechanism may be established for Phase 2 and beyond. Ideally, such costs should be covered by external donors, including regional governmental support.

Work through clear impact pathways and targeted communications to reach key sectors for the project outcomes

- The project needs to identify pathways to reach key audiences for the different project outputs and outcomes (e.g., policy community, practitioners, in and outside governments, etc.). In some cases, this will require being active in spaces that are not focused specifically on mountain issues.
- This needs to include packaging, preparation, communications, events and promotion of knowledge designed for target audiences in policy making, practitioner, advocacy, research and mountain community spheres.
- Given risks of mountain issues getting lost amongst many demands in what often seems like a zero-sum game, it will be imperative that the project highlights mountain issues in a compelling way. Scientific information and data will need to be used to make the case for the wider socio-economic importance of mountain environments and their peoples, and the consequences of not taking action for national and global environmental and sustainable development agendas.

Monitor systematically with a focus on impact

- There is a need to monitor programme impacts systematically in order to understand and document uptake by policy-makers and other beneficiaries, keep project members focussed on impact, and promote the project’s demonstrable accomplishments.
- Project partners should systematically collect evidence of the impact of their work and include this in regular project reporting. Clear parameters need to be identified to track and measure the impact of the programme’s work.

- In order to improve likelihood of impact in Phase 2, the A@A programme must continue to focus on producing high quality outputs (science quality) that meet real needs of the key stakeholder groups, notably scientists, policy-makers, and practitioners.

Learn from the past

- Discussions and work to form alliances of mountain countries at regional levels goes back many years, building on progress in regions like the Alps and Carpathians. SDC has ample experience with this as do some of the project partners, although institutional memory is at risk of fading in some cases due to staff turnover. It would be useful to ground plans for Phase II in the past history of what has worked, and more importantly what has not at regional levels that pertain to CCA in mountains. See also comments above on mapping mountain specific CCA activities to ensure clarity on the value-add of the A@A programme.

Improve effectiveness going forward

- Increased synthesis of science and translation and transmission to other processes.
- Compile best practices on those NAPs that have successfully integrated mountain issues in NAPs and which also provide important lessons in that process. It is important to highlight that supporting countries in the integration of mountain issues in their NAPs is beyond the scope of this project. Currently one of the ways that UNEP supports the development of NAPs is through the National Adaptation Plan Global Support Programme which is funded by the Global Environment Facility and run jointly with UNEP. So perhaps through UNEP implementing partners, partners could transmit important insights and process suggestions for integrating mountains more systematically in NAPs.
- Decided on which MEAs or global agreements to focus on. At this point, partners agree that it is a much better use of limited resources to focus more intensively on UNFCCC, with the possible addition of the post-2020 Global Biodiversity Framework that was adopted at the CBD COP-15 in December 2021 and the UN Five Year Action Plan on Mountains.
- Enhance overall effectiveness through deeper coordination of the programme, notably through an SDC led governance structure that would support decision-making and collaboration on joint activities (see table C).

B. Recommendations for sharpening substantive focus

Identify and fill knowledge gaps

- The project needs to continue to fill research and knowledge gaps (e.g., as identified by project partners), and build knowledge resources of relevance to CCA in mountains for target audiences, including expanding data parameters being tracked and knowledge products produced covering geophysical, meteorological, biodiversity, societal, and other relevant variables that can and will be used by mountain stakeholders. Concreteness and practicality of the programme can ultimately be improved by utilising Phase 2 to go beyond the foundations established in Phase 1.
- Gaps and needs include: (i) to address knowledge gap on the importance of mountain ecosystems for upstream and downstream livelihoods and economies; (ii) to increase awareness of the significance and consequences of climate change in mountains and accordingly for adaptation solutions; (iii) to improve transboundary, watershed and landscape level cooperation; (iv) to improve access to data and increase know how, planning and action for adaptation; and (v) for guidance for mountain adaptation to help countries meet their obligations under various of the MEAs and associated processes (e.g., NAPs, NBSAPs).
- Phase 2 must meet the challenge of ensuring increased access, dissemination, and application of scientific data, upscaling and replication of mountain CCA, further operationalisation of the regional platforms, informed policy-making, and further elevation of mountain issues in key global processes.

Increase the management of data, syntheses of science, and generation of knowledge products

- As Outcome 1 observatories and data platforms become more consolidated, focus should be on more analysis and generation of science outputs, drawing on MRI's pool of scientist members and the expertise of other project partners.
- Research should include inventories of institutions and networks involved in research, monitoring and generating solutions for mountain climate change adaptation. This should link with and complement WMO's OSCAR/Surface programme under the WMO Integrated Global Observing System (WIGOS) framework. This could contribute research-based observation and implementation infrastructure for mountain regions, helping ensure sustainability beyond Phase 2.
- Success will hinge on science quality considering credibility, salience, and legitimacy; relevance and utility to mountain actors (from indigenous villages to national government agencies). However, as important will be the packaging, preparation, communications and promotion of knowledge products designed for target audiences in policy making and practitioner spheres (see below).

Translate and transmit knowledge to generate impacts

- A key dimension for ensuring the sustainability of the impacts of the A@A programme is through the uptake of its knowledge outputs to inform adaptation policy, planning and practice. This requires constant attention to sharing of knowledge by means that are accessible to the range of users important for adaptation in mountains, notably, practitioners, private sector, academia, and of course policy makers.
- The project must continue to feed knowledge into policy processes, an important target of A@A, through contributing to assessments like those undertaken by the IPCC. This will give visibility to data and knowledge compiled through this project and helps ensure that the science is appreciated and utilised.
- The strength of the staff of many of the project partners (e.g., members of MRI's network) are in traditional science communication channels, often through the lens and value systems of academia. This is important for establishing scientific quality but can be lacking for developing knowledge products for the

range of target audiences the project needs to reach. Attention should be given to providing support and resources (e.g., the communications strategy) to ensure that knowledge products are designed to be accessible for intended audiences.

Monitor the uptake of solutions

- The overall quality of the solutions on the Portal is high, they are robust and geographically and thematically diverse. The inclusion of solutions should continue to be dynamic to respond to evolving needs and to include innovative solutions as they emerge.
- Attention is needed to inclusion of solutions that are tailored to developing and adjusting national adaptation policy and responses to MEA processes.
- Many of the adaptation solutions are grounded in project-based, restricted funded approaches which are time-bound with outcomes at risk when projects and fundings end. Attention should be given to including more solutions for creating enabling and sustainable conditions for adaptation action at mountain community levels: e.g., tenure and resource rights resolution, sustainable livelihoods, capacity building (people and rural institutions), and service infrastructures.
- A key challenge in Phase 2 with regard to the Portal will be to develop a reliable system for monitoring uptake and the footprints impacted by the application of the solutions (e.g., beneficiaries, area, regions, etc.). More analysis is needed in terms of who is using the solutions, how the solutions are being used and the added value of the solutions to other solutions portals. Solution providers could include Key Performance Indicators for each solution that they upload.

Develop the Community of Practice

- In addition to deepening analysis of how best to support the uptake of the solutions, it will be as important to determine how best to mobilize the Community of Practice (CoP).
- With the CoP in its early design phase, key tasks should include ensuring that CoP members make full use of the solutions, exchange experiences, provide technical feedback, and build further on the solutions to replicate them and expand their use to other regions where appropriate.
- It will be important to build a sense of community amongst CoP members to enhance co-support and outreach to potential beneficiaries. Attention will also need to ensure broad regional and sectoral representation (e.g., scientists, technical workers, policy makers but also practitioners/knowledge holders from Indigenous Peoples and local communities, etc.).
- Finally, it would be useful for the mountain adaptation CoP to build links to and learn from other thematically relevant Communities of Practice, notably the Friends of Ecosystem-based Adaptation (<https://friendsofeba.com>).

Continue to strengthen regional cooperation

- Phase 2 must continue to build and support regional cooperation on mountain-specific CCA action and policy. This will help countries address and resolve national and regional challenges together.
- This will require strengthening dialogue that leads to regional agreements, policy, guidance, investment and joint/coordinated implementation of measures. Successes in one region should be used to inform and inspire action in others.
- Ensure that local and regional non-governmental actors continue to be included in regional processes. This is essential because of their potential influence on governments and their technical expertise.

- In terms of enhancing coordination between project outcomes, both Outcome 2 and Outcome 4 could draw on experiences such as from the Alpine and Carpathian Conventions (as already on track) and the Arctic Council.

Draw more explicitly on results of regional processes

- Further efficiency gains will need to be optimised in light of resource limitations, especially by drawing more strategically on the results of each regional process and consolidating the networks.
- Equally important is the opportunity to collate these unique learnings from the regions into flagship global publications that could be transmitted to UNFCCC COP-28 or 29 or to integrate key learnings into other global publications such as the next Adaptation Gap Report, Global Environment Outlook 7, and the 7th IPCC Assessment Report.
- Moving forward, it will be important to be strategic about which global processes to engage. The UNFCCC, CBD, and Five-Year Action Plan on SMD are judged the most important global processes for the next four years. However, high impact opportunities may emerge which the project should be nimble to take advantage of.

Step up work on NAPs, and other mechanisms in support of other MEAs

- The key entry points for mountains within the UNFCCC process continue to be NAPs and the Nairobi Work Programme.
- Moreover, the growth of the Green Climate Fund reflects the growing emphasis of countries around the world on supporting effective adaptation.
- NAPs provide an entry point for mountain countries to obtain global support for CCA and mitigation. One challenge is the creation of mountain-specific indicators in local, national, regional and global reporting mechanisms, review processes and commitments especially under the NAPs, the NDCs, the Voluntary National Reviews of the SDG in key mountain countries (recognizing that countries already struggle with the broad scope of the 2030 Agenda and its targets and indicators).
- If mountain-specific indicators clearly help the countries A@A is working with, then providing support would be something for Phase 2 to consider. This will require careful evaluation. If not, we propose that A@A explore other ways to step up engagement in other MEAs or global agreements.
- Opportunities should also be pursued to support inclusion of mountain indicators through other MEA mechanisms such as the NBSAPS, and tracking/supporting existing indicators of relevance to mountains such as the Mountain Green Cover Index managed by FAO (SDG 15.4.2.a) which is highly relevant to adaptation in mountains.

Optimize efficiency

- The SDC has many priorities in its overall portfolio beyond its mountain work. In order for it to continue to play a leadership role on the mountain agenda (for which it has a unique track record amongst countries) it will be important to consider how best to match high expectations with SDC's limited resources.

Strengthen bottom-up approaches

- High level global policy engagement and focus on national governments are both appropriate for a global programme like this one. However, it is essential to recognize that such top down approaches have their limitations and are often best if complemented by bottom up approaches. Here an explicit link through the Mountain Partnerships to engage civil society and NGOs working at local, regional and global levels, could contribute across all four outcome areas (e.g. advocacy at regional levels, knowledge generation, solutions). Other channels should also be considered if time and resources permit (e.g., links with organizations supporting Indigenous Peoples such as Tenure Facility and Rights and Resources).

Greater focus on enabling conditions

- Many of the adaptation solutions are grounded in project based, restricted funding and investment approaches which are typically time-bound with outcome at risk when project/fundings end. Hence the need for deeper understanding of the enabling conditions that will be needed to sustain the project moving forward.
- The Mountain Adaptation booklets published by UNEP under this programme are valuable contributions for addressing the importance of deepening understanding of the necessary enabling conditions for solutions to be uptaken. No doubt this is an important start that should be built on in phase 2. The better the understanding of the enabling conditions, the greater the likelihood that solutions will be successfully replicated and outscaled. It will be important to continue to address fundamental questions for enabling adaptation such as tenure, resource rights, livelihood approaches, and rural institutions (public and private) that can then build a sustainable foundation that can drive climate change adaptation. This has ramifications across all four outcome areas. Of course, how these enabling conditions are actually addressed may be beyond the scope of this project, but these pertain to important governance issues that should be elevated nonetheless.

C. Recommendations for improving coordination

Improve overarching programme coherence

- SDC officials indicated that the structure and outcomes work well, with project partners understanding who has responsibility for what. On the other hand, some of the partners reported confusion over organisational structure, who is charged with what, and what other elements of the project are doing.
- This issue has been challenging given that the partners responsible for different outcomes/regions hold separate contracts with SDC for work on A@A, the heterogeneous conditions across the regions, and the lack of a clearly designated lead organization (although SDC has such a mandate – see below).
- There were many lessons learned in adapting to COVID-19: partners increased appreciation of the value of virtual means to broaden and equalise participation at lower costs while reducing carbon footprints, but also communicated that more in-person meetings and events should be a priority in Phase 2 to rectify a deficit in personal contact within and between A@A outcome teams.
- In response to these issues, the evaluators recommend greater attention to programme leadership, internal communications, coordination, and collaboration among the partners and with SDC. A stronger overarching structure and mechanism would increase coherence between teams so that they reinforce each other, contribute across outcomes, enable mutual learning, and build synergy (see below). This would also contribute to enhancing A@A's coherence and collaboration with other CCA activities in mountains by other actors.
- The next Phase of A@A should support more contact, shared activities, and joint learning between outcome/regional teams. More exchanges and interactions would benefit all partners, and incentives could be provided to enable this: e.g., funding for exchange visits and joint events.
- The evaluators concurred with project partners that regular seminars and forums (in person and virtual) bringing together the different strands of the project (outcomes and regions) to present results and challenges would enable project participants to contribute to each other's work, strengthen working relationships, and build a whole-project approach and ownership amongst the partners.

Implement a more formal coordinating structure

- The evaluators felt that a more formal structure would provide the benefits mentioned above, improve mechanisms for oversight and guidance, and support a whole A@A attitude and approach amongst the partners.
- This will require one organization (with designated staff: coordinator and support person(s)) to assume a more active lead coordinating and facilitating role. In our view, SDC has the best potential and clear mandate for this function. Less preferably, this could be taken on by one of the partners or another organization.
- Such a "lead" would need a clearly defined role as coordinator, enhance communications, convene and coordinate meetings, and make linkages that might be missed by partners. This will require a non-invasive, soft leadership, and productive approach with a continual awareness of geo-political, institutional and other sensitive issues. The project and its lead would benefit from a formal governance structure that clarifies decision making, especially regarding joint activities.
- Additional suggestions should be sought from partners to advise SDC on how best to scale up such a coordination role in Phase 2. This will have consequences for SDC since they would need to commit adequate staffing to provide such support.

Project management

- The formal coordinating structure recommended above would also enhance project management and administration to improve the efficiency of the project, support the partners in keeping on track, support synergies and cost savings between outcomes, and encourage broader engagement with the mountain adaptation community.

Develop an overarching logframe for Phase 2

- In general, logframes tend to be discrete, tightly focussed and specific. However, for A@A Phase 2, we recommend taking an overarching and holistic approach to developing the programme logframe. This is due to the complexity of this programme, interregional differences (e.g., varying levels of ambition), direct and indirect contributions of the partners' to project outcomes (some funded under other mandates), and additional factors such as the work of others on CCA in mountains.
- A logframe for Phase 2 should be crafted with full engagement of the partners. This would structure the work towards outcomes and impacts, build in collaboration between teams and regions, and reduce duplication of effort. While primary responsibilities must be clear, the logframe should incorporate supporting and indirect contributions (e.g., other funding streams) from other A@A partners, regions and activities. Fully developed, this will be a useful tool to enhance collaboration, minimize confusions over roles and activities (e.g., as reported to the evaluators between Outcomes 1 and 2), and build coherence across all the partners' efforts towards shared A@A programme goals.
-

Improve reporting and coordination of direct and indirect contributions and related resource mobilization by A@A partners

- For Phase 2 it will be important to clarify how best to recognize and attribute the various partners' contributions to A@A outputs, outcomes and impacts in progress reporting, some of which are not necessarily funded by SDC. This should also be supported through joint annual planning amongst the partners, and the development of the more inclusive logframe (see above) that includes reference to such "additional" work and contributions.
- It will be important to resolve coordination mechanisms early in the Phase 2 design process, since the evaluators believe that the partners can and must mobilize additional resources from other sources towards CCA in mountains given global needs. Appropriate mechanisms will help ensure that additional work by individual partners and others are consistent and coordinated with work being undertaken under the A@A programme.

VI. Recommendations for the four outcome areas ⁴

We present specific recommendations within the four Outcomes in the following two tables. These draw on the overarching recommendations in the previous chapter. Whilst there may be some repetition, we emphasise that the recommendations in this Chapter address and apply them with greater depth and concreteness for each of the four Outcomes. Our aim is to provide as much specificity to the outcome-specific implementing partners

Recommendations for Outcome 2 are presented by region, thus in a distinct table.

A. Recommendations for Outcomes 1, 3 and 4 (see separate table for Outcome 2 recommendations below)

Outcome 1	Outcome 3	Outcome 4
<p><u>Strengthen capacity</u> With only a small number of dedicated staff in MRI (2-3), it has an extremely rich pool of scientific and technical expertise around the world in its Expert Database, distributing the workload is crucial for the success, impact and sustainability of this outcome as it moves into Phase 2.</p> <p><u>Incentivise the involvement of scientific experts</u> Efforts are needed to incentivise involvement of scientific experts and increase the number of “active” members in the network. Likely incentives include opportunities to co-author peer-reviewed journal articles; build fruitful collaborations with other scientists and technical experts as a part of a high impact and dynamic network; and jointly fundraise for research projects.</p>	<p><u>Continuously improve the scope and quality of the Solutions Portal</u></p> <ul style="list-style-type: none"> ● Expand regional coverage ● Expand ecosystem types ● Address different climate impacts ● Include solutions for different productive sectors ● Include landscape and transboundary solutions ● Include solution for use at national to regional scales ● Conduct a survey of A@A partners and others to collect information on potential solutions for the portal. ● Promote the portal to potential solution providers and users, other target audiences, and the public through targeted communications, solutions stories, social media, etc. ● Continue to search for and evaluate solutions for the portal, including identification of Key Performance Indicators where possible. 	<p><u>Continue to elevate the overall profile of mountains</u></p> <ul style="list-style-type: none"> ● Elevating the profile within global policy processes is vital to build momentum for CCA across all mountainous areas, including in higher altitude regions within countries where mountain matters are not recognized as being of national importance. ● The programme should avoid seeing engagement in the policy landscape as an end in itself, but rather as a means to an end. It should work to reposition mountain issues at regional, national and global levels in ways that deliver local benefits. ● Decisions on which global policy processes to focus on should be made based on where traction can best be achieved given resource limitations. At this point, the evaluators recommend enhancing the project’s engagement in the UNFCCC, moderate levels of engagement in the CBD and the Five Years of Action on SMD, and consider downgrading the Sendai Agreement and the SDGs (VNRs may present opportunities). There is an evolving consensus among the partners to focus on the post-2020 Global Biodiversity Framework given hooks for advancing SMD. Other processes to consider include the IPCC-AR7 and GEO-7. The project should explore opportunities to strengthen attention to mountain issues within the Green Climate Fund, the Global Adaptation Fund and the GEF. The project should be nimble to take advantage of exceptional opportunities that emerge.

⁴ These recommendations will still be shortened in terms of what should be prioritised, removed or strengthened. We will reach out to partners for further insights.

<p><u>Identify, develop and apply standards for data collection and management</u></p> <p>Alignment with standards and approaches developed by leading organizations and networks in the climate change field will be vital – especially those pertaining to WMO. The adoption and sharing of Open Science, Open Data, and other such principles and standards provide useful foundations and should continue. In addition, a participatory process with stakeholders will need to be continued and strengthened for the development of tools and guidance for data collection methodologies, prioritization, and management.</p> <p><u>Increase standardisation and interoperability</u></p> <p>The mountain observation community should work towards increased standardisation and interoperability in terms of variables observed and the means of data sharing and access, ideally converging to a common machine-readable metadata standard appropriate for both point time-series and gridded data. The ideal would be a single global mountain database from which data can be queried, retrieved, and/or processed. GEO Mountains’ data community should converge around core metadata standards. Ideally, this would evolve into a federated data system which could host data in a distributed way, that can be queried from a single central entry point and provide storage for those who do not have capacity. This is a major challenge, likely over-ambitious for Phase 2, but important to work towards</p> <p><u>Track and use, where appropriate and cost-effective, the latest data collection technologies</u></p> <p>GEO Mountains through MRI staff and members should continuously track emerging data collection and monitoring technologies (e.g., remote sensing, drones, citizen science approaches, etc.) applicable to mountain systems, and test and integrate them where justified.</p> <p><u>Expand and rationalize the scope and range of variables being tracked</u></p> <p>Ongoing work on essential climate, biodiversity and societal variables should be continued and acted on in Phase II of the A@A programme. This will require</p>	<ul style="list-style-type: none"> Continue to update and improve the online platform, including links to other solution sources and useful resources. <p><u>Assess the effectiveness and overall uptake of the CCA solutions</u></p> <ul style="list-style-type: none"> Strengthen monitoring of the uptake of the different solutions. Undertake analysis of where and how solutions are being used, and their added value to other portals Develop a methodological framework to assess effectiveness, sustainability, and potential for upscaling and out-scaling of solutions. Establish working groups of local researchers and practitioners to undertake analysis (including of economic feasibility) and develop case studies of the effectiveness of solutions and distil lessons learned (linked to the CoP). Assess effectiveness and scale attained (area, people, etc.) of a subset of solutions through the Mountain Observatories and in-situ research (e.g., by MRI/GEO members) with the goal of sharing evidence-based mountain adaptation solutions to influence governments, international organizations, and donors. <p><u>Support the needs of policymakers</u></p> <ul style="list-style-type: none"> Curate solutions specific to the needs of policymakers to assist them in the integration of mountain issues in NAPs (priority), NDCs, national disaster reduction strategies, NBSAPs, etc. Resources permitting, implement pilot projects in select countries aiming to develop National Mountain Strategies. These could provide technical and policy assistance for mountain CCA challenges and co-create responses to include in national strategies. Once documented in the Solutions Portal, they would be of use more broadly in mountain countries and for potential application across A@A countries in the latter stages of Phase 2. <p><u>Empower local communities to identify, develop and take ownership of solutions</u></p> <ul style="list-style-type: none"> To enhance long-term, sustainable outcomes of A@A at local levels, the project should encourage the development and inclusion of solutions that focus on training and empowering local populations to identify 	<ul style="list-style-type: none"> The project should consider carefully which constituencies and allies to engage with to elevate the importance of mountains on the global stage. Vital outputs of the project will continue to be webinars, workshops, side-events, and additional advocacy opportunities. These should be supported by communication materials, systemic reviews, thematic synthesis reports, and gap analyses of policy documents both as project outputs and as contributions to outputs led by others (e.g., IPCC). <p><u>Continue to develop evidence on mountain specific CCA</u></p> <ul style="list-style-type: none"> Project partners should undertake joint activities to assess how mountain adaptation is being prioritized and implemented within national, regional and global processes. Prepare issue briefs that highlight gaps in how climate change adaptation is being addressed in mountain regions, and on how mountains are being integrated into NAPs and other national policy documents, plans and strategies. <p><u>Continue to strengthen regional cooperation</u></p> <ul style="list-style-type: none"> Regional cooperation falls under Outcome 2; however, the evaluators believe the project should assist the different regions to join forces to influence global processes more effectively. In Phase 2 continued efforts are needed to build and support regional cooperation on mountain-specific CCA action and policy. Consensus is often more feasible at regional than at global level, albeit with its share of challenges (e.g., security concerns, natural resource conflicts, minorities/Indigenous Peoples, cross-border considerations). These efforts will contribute to untapping the potential of the nascent regional mountain platforms. Successes at regional levels in addressing transboundary mountain issues will also contribute to raising the mountain profile on the global stage. In alignment with work being done under Outcome 2, Outcome 4 should draw on other experiences such as the Alpine and Carpathian Conventions. These can inform policy road maps for the eventual development of regional environmental agreements for CCA in mountains. In terms of transboundary issues, it will be important to track and explore innovative solutions in alignment with several of the MEAs. For instance, approaches like developing transboundary peace parks – for which A@A and/or individual partners could provide assistance - might be useful for advancing adaptation in contested spaces. <p><u>Increase traction with the MEAs</u></p> <ul style="list-style-type: none"> A key challenge within the MEAs is to capitalize on key entry points for mountain issues. The Cross-Chapter on Mountains for AR6 is an excellent example of such a “hook” associated with the UNFCCC process which draws on A@A partners’ strengths. This opened up space for further progress such as the reference to mountains in the Nairobi Work Programme.
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<p>interdisciplinary collaboration regarding data priorities and integration to improve understanding of complex mountain social-ecological systems. It may also require expansion of the disciplinary expertise (and possibly institutional partner types) in the MRI registry given that factors like tenure, resource rights, cultural, socioeconomic, and livelihood factors may need tracking and resolution for adaptation action to be effective and sustainable at local to national levels. At the same time, rigour will be required in rationalizing the range and scope of variables to track.</p> <p><u>Update data, information and monitoring</u> This would involve updating of infrastructure, inventory, regionalization of global gridded data sets, regional workshops to develop mountain observatories, and a global workshop on monitoring mountain socio-ecological systems. This should also involve assessing inclusion of traditional Indigenous knowledge in alignment with safeguards, best practices and guidelines. There is a need to configure and tailor work and outputs to make them useful for the 7th IPPC assessment, which fits the timeframe of phase 2 quite well.</p> <p><u>Develop capacity in mountain communities to generate data and translate it into knowledge for broader use.</u> There are several elements here which we recommend for consideration for Phase 2:</p> <ul style="list-style-type: none"> • Develop capacity in pilot mountain communities for data collection, knowledge generation and sharing. This will give them ownership of the data lifecycle and enhance abilities to develop decision-relevant information. • Strengthen citizen science through GEO Mountains Community Projects. MRI hopes to exploit the potential of this, recognizing the need to get protocols right, and incentivise participation. • Implement pilots with Indigenous Peoples and local communities regarding traditional knowledge (respecting sensitive engagement with knowledge holders, IP 	<p>their own solutions and take ownership of adaptation at local levels.</p> <p><u>Continue to build the Community of Practice</u></p> <ul style="list-style-type: none"> • Ensure clarity on mission, vision and purpose of the Community of Practice amongst the members. • Expand the geographic, thematic, technical, and societal diversity of members, particularly targeting regions with few CoP members and/or adaptation solutions on the portal. • Promote membership of local stakeholders and ensure solutions are adapted to their needs. Outreach should be undertaken to attract individuals with valuable practical experience (including users/holders of traditional/indigenous knowledge). • Ensure CoP members make use of the solutions, exchange experiences, share best practices, provide feedback, and support replication in other regions and application to other contexts. • Prioritize meetings, workshops, training, coordination, and communications amongst CoP members. • Support communications, promotion and capacity building on solutions by the COP through social media, webinars and training sessions to target audiences (policy makers, practitioners, private sector, local community members). • Funding permitting, launch a small grants and/or award scheme to operationalise solutions and raise interest in the platform. • Use the CoP as a platform for the interregional exchange of experiences, best practices and learning between regional bodies supporting mountain areas. This could include study visits with different stakeholders, and between economic sectors such as agriculture, tourism etc. • Coordinate with other A@A output teams to use the CoP to mobilise mountain voices to participate in key adaptation-relevant events such as UNFCCC COPs. <p><u>Ensure the sustainability of the portal</u></p> <ul style="list-style-type: none"> • Link with other platforms and initiatives as already done with WeAdapt and others (e.g., the Mountain Partnership to promote and support training through IPROMO courses). 	<ul style="list-style-type: none"> • Another means for increasing traction is for the A@A consortium to proactively and collectively engage with MEA Secretariats (UNFCCC, CBD, CCD, etc.) to demonstrate the expertise of the A@A partnership and the value-add it can bring to technical and policy issues that involve mountains. • The project should be available to work with Switzerland on efforts to advance mountain issues in the MEAs. As a party to these conventions, Switzerland can champion the importance of mountains in intergovernmental processes and also demonstrate by example, the benefits of integrating mountain issues in NAPs and NDCs. The evaluators recognize that A@A is not about Swiss implementation and appreciate the country's demonstrated commitment to SMD. We also recognize limitations in the extent to which SDC can influence the Swiss position regarding the various MEAs. • Considering limited resources for Phase 2, it will be important to stay focused on the UNFCCC and other MEAs according to prioritization (see above). If the project is successful in mainstreaming mountains in key global policy processes, it will have greater success in anchoring the SMD agenda in other tracks. Nevertheless, the project should track other "lower priority" MEAs, to the extent bandwidths permit, in case major opportunities emerge. <p><u>Elevate mountains in the UNFCCC process</u></p> <ul style="list-style-type: none"> • A continued focus on the UNFCCC process has been reinforced by all interviewees considering the pace of climate impacts undermining development in mountain regions. • A key challenge in Phase 2 will be for the A@A programme to step up efforts to support mountain countries in prioritizing CCA through strategies that increase the resilience of mountain communities (e.g., improved livelihoods), implement nature-based solutions (e.g., EbA), invest in disaster preparedness and risk reduction, increase cross-border collaboration, and build the knowledge base so that policies are made and practices implemented based on evidence. • As highlighted in this report, impact can be achieved through side events, targeted communication products, and advocacy to/with countries leading up to and at UNFCCC COPs. These can be used to present project findings and provide evidence-based messages about the importance of integrating mountains into CCA and the availability of solutions. The project should continue to co-organize joint side events (e.g., in the mountain pavilion) at UNFCCC COPs, especially those that bring representatives from all the project's mountain regions. It should also continue to join forces for side events and advocacy with other organizations and networks active at COPs such as the Mountain Partnership. • The project should collate partner input on the challenges that mountain ecosystems and human communities face in climate adaptation and contribute this analysis to the next adaptation gap report. • The project should explore collaboration with the International Cryosphere Climate Initiative (ICCI) and others which support climate negotiators such as through convening meetings under Chatham House rules which are effective for prep ahead of SBSTA and at UNFCCC COPs.
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concerns, FPIC and other standards for its use) for issues, and factors that the science community may be missing in terms of monitoring the impacts of climate change and identifying and tracking the effectiveness of adaptation solutions.

Focus on science quality and accessibility to stakeholders

The success and impact of outputs will hinge on science quality considering credibility, salience, and legitimacy; relevance and utility to mountain actors (from indigenous villages to national government agencies); and packaging, preparation, communications and promotion of knowledge products designed for target audiences in the mountain adaptation policy making and practitioner spheres.

Mobilise third-party funding and broaden the support base

MRI/GEO Mountains should continue to seek third-party funding, in addition to SDCs contributions, to broaden the support base and build long-term sustainability. Outcome 1 work should also draw on the efforts of MRI members. Many are effective fundraisers in their own rights with access to donors through their institutions which may be harder for MRI to reach. Through effective communication and coordination among the members, it should be possible to develop complimentary activities funded through other streams that would magnify the work of GEO Mountains.

Transmit knowledge into global processes

This includes continued production of publications, briefs, guidelines and reports; organization of webinars, and participation in external fora; inputs to MRI working groups; as well as scientific products developed to support IPCC AR7 knowledge needs, the State of the Mountains report, and other high impact knowledge sharing opportunities. Building on Phase 1, increased contributions to side events, and other activities of relevance for UNFCCC, CBD, Geo Symposia, IPCC AR7 scoping meetings, 2025

- Ensure portal knowledge is mirrored in other initiatives to achieve continuity and circulation of knowledge beyond the life of A@A.
- Consider linking the CoP to the UNFCCC (particularly the Nairobi work program), which has indicated its interest in, though not yet achieved, creating a portal on mountains.

Integrate mountains within the NAPs

- A key entry point for mountains within the UNFCCC process are the NAPs and the Nairobi Work Programme which provide an entry point for mountain countries to obtain support for CCA.
- A@A should support the creation of mountain-specific guidance and indicators for local, national, regional and global reporting mechanisms, review processes and commitments. This should include inclusion of mountain-relevant indicators in periodical review processes of UN agencies (e.g., WMO, UNESCO, FAO and UNEP) and participation in scientific syntheses and assessments supported by global research communities and networks such as UNEP's GEO, International Science Council, and MRI.
- The project should work with specific countries to support pilots in developing and putting guidance into action. The CoP can play a role in convening government officials with technical experts to explore lessons learned that can be reflected in national guidance materials prepared by the project.
- A@A's contributions must be underpinned by rigorous science to ensure that they garner political support within the UNFCCC process.

Elevate the SMD agenda in the Sendai Framework (prioritization contingent)

- Link with the new WMO and UNDRR Centre of Excellence for Climate and Disaster Resilience, which will act as an information hub about the escalating impacts of climate change and extreme weather and how risks can be managed and mitigated.
- Join forces with climate and disaster risk thought leaders and practitioners to advance research, policies, and capacity-building to influence and strengthen national DRR strategies.
- Engage with Sendai on region-specific issues (e.g., through Outcome 2) since it is a very decentralised framework that is very action-oriented.

Elevate mountain adaptation priorities in the post-2020 Global Biodiversity Framework

- This may include contributing to the identification, development and inclusion of indicators related to safeguarding mountain biodiversity and advancing climate change adaptation (e.g., through nature-based solutions), as well as the indicators presented in the document "Indicators for elevating mountains in the CBD post-2020 Global Biodiversity Framework."
- The project should actively explore other entry points.

Engage in the UN's 5-year plan on Sustainable Mountain Development (2022-2027)

- Building on the progress that the IYM 2022 achieved by enhancing dialogue, attention and action between different stakeholders committed to sustainable mountain development.
- Contribute A@A expertise to the development of mountain-specific measures, mitigation, and sustainable development strategies to tackle problems caused by climate change.

<p>International Year of Glaciers' Preservation, follow up to WMO's High Mountains Summit, and the Five Years of Action for the Development of the Mountain Regions, and other high-impact opportunities that emerge during Phase 2.</p>		<ul style="list-style-type: none"> ● Support increased international cooperation in raising the profile of mountain sustainability challenges and solutions. ● While the focus of the A@A programme under this outcome is more on governments and intergovernmental processes and mobilizing existing and emerging science to inform and mobilize action, consideration should be given to forging stronger alliances with civil society, including Indigenous Peoples and local communities as increasingly recognized and effective advocates. The Mountain Partnership may provide a useful entry point to accomplish this, but other means should also be explored. <p><u>Elevate mountains in the SDGs (prioritization contingent)</u></p> <ul style="list-style-type: none"> ● Support mountain countries in the A@A regions in the development of their Voluntary National Reviews (VNRs) for the SDGs as they pertain to climate change adaptation. This will require links through Outcome 2. <p><u>Supporte building of an Alliance of Mountain Countries (prioritization contingent)</u></p> <ul style="list-style-type: none"> ● This recommendation may fall beyond the scope of the A@A programme but could be advanced through collaboration with the Mountain Partnership. A coalition of like-minded governments, accompanied by technical expertise and civil society representation, could elevate the profile of mountain issues on crowded global agendas. It could also act as a formal negotiating bloc that unites mountain countries in the UNFCCC process similar to the Rainforest Coalition. ● The project should consider actions to help build and support the expansion of the Group of Friends of Mountainous Countries, established under initiative of the Kyrgyz Republic. This might best be accomplished through building up from the regional work done under Outcome 2.
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B. Recommendations for Outcome 2

Note: these recommendations have been drawn from our bilateral and collective interview with partners and from the shared planning document “A@A output collection for Phase 2”.

	ANDES	EAST AFRICA	HKH	SOUTH CAUCASUS
Inform science-policy dialogues with knowledge and solutions	<ul style="list-style-type: none"> • Support Andean countries in integrating mountain priorities in their NAPs. • Continue to undertake regional analysis of CCA challenges and strategies, and promote and communicate findings to guide decision making. • Undertake comparative analyses along with support for implementation and monitoring of CCA solutions throughout the region. • Support the creation of a network using Andean mountain observatories to undertake integrated socioeconomic and other monitoring of relevance to CCA. 	<ul style="list-style-type: none"> • Develop guidance documents to support integration of mountains in NAPs. • Improve and operationalize science-policy interfaces, tools and platforms for sharing experience and knowledge to support climate change adaptation in the EAC region. • Foster dialogue and share science, policy options, and best practices to enable adaptation stakeholders to make full use of available data, relevant research and practical experiences so that decision-making is evidence-based, supported and informed. 	<ul style="list-style-type: none"> • Bring onboard relevant stakeholders from the RMCs, and strengthen science cooperation to foster regional cooperation and collaborative action for CCA in the HKH region. • Coordinate and facilitate, at national and sub-national levels, science-policy dialogues on CCA and resilience building in RMCs. • Co-ordinate and conduct thematic assessments for generating scientific evidence support CCA policies for the HKH. • Coordinate and facilitate meetings of Thematic Working Groups. • Regularly organise the HKH Science-Policy Forum on regional issues, including transboundary climate change adaptation in the HKH. • Strengthen and promote the HKH Regional Database and Information Services (RDIS) to make available data and evidence on climate, weather and natural resources for pre-emptive CCA 	<ul style="list-style-type: none"> • Foster science-policy interfaces to enable better use of data, relevant research and practical experiences as well as better informed and evidence-based decision-making. • Further assess and disseminate mountain specific adaptation solutions to increase up- and outscaling (continuation of Activity 2.8.5). • As needed, support Southern Caucasus countries in integrating mountain priorities in their NAPs. • Foster outreach, communications and networking of RADISC and its stakeholders to strengthen CCA advocacy at regional, interregional and global levels (continuation of Activity 2.8.6).

			<p>planning, policy and programming in the HKH.</p> <ul style="list-style-type: none"> As needed, support HKH countries in integrating mountain priorities in their NAPs. 	
<p>Strengthen regional platforms and processes</p>	<ul style="list-style-type: none"> Strengthen the Andean perspective on SMD and mountain CCA through the AMI and science policy dialogue processes focussing on governments but also involving other key mountain stakeholders in the region (e.g., using trans-disciplinary approaches). Continue to strengthen knowledge management and sharing tools/platforms to fill gaps and enhance accessibility for target audiences. Focus on implementing activities defined in the AMI Road Map and Action Plan. Ensure that the regional dialogues feed into global processes. 	<ul style="list-style-type: none"> Draw on Outcome 1 knowledge outputs to strengthen cross-border mountain ecosystem management plans and strategies. Support EACMS to elevate the importance of SMD, mountain CCA specifically, in national and regional processes. Further investigate and assess mountain specific adaptation solutions for further promotion and up- and outscaling. Support mainstreaming of SMD in climate policies, laws and strategies relevant for mountain climate action in the EAC region. Develop a regional sustainable mountain development (SMD) strategy in consultation with EAC Partner States and other relevant stakeholders as a means to gain political support and approval for implementation. 	<ul style="list-style-type: none"> Coordinate and facilitate HKH high-level task force meetings. Coordinate and facilitate periodic Ministerial Mountain Summits. Coordinate and facilitate meetings of thematic working groups [consisting of experts, practitioners and development professionals from RMCs and national, regional and international organisations]. Coordinate the drafting of policy recommendations by the thematic working groups. Coordinate the drafting of ministerial declarations, guidelines and/or protocols, as required by institutional mechanisms. Deepen understanding of domestic political challenges as a means to continue to advance the mountain CCA agenda. Develop a complementary track for engaging civil society and other stakeholders as sources of knowledge, advocates and solution implementation agents to advance CCA in the region. Deepen work to support addressing SMD challenges in global processes. 	<ul style="list-style-type: none"> Facilitate operations and meetings of newly established Regional Adaptation Dialogue in the South Caucasus (RADISC) in line with the agreed concept and Terms of Reference. Support mainstreaming of sustainable mountain development (SMD) in climate policies, processes and strategies relevant for mountain climate action in the South Caucasus (continuation of Activity 2.8.2). Consolidate and start implementation of RADISC work plan in close coordination with policy representatives to improve knowledge of mountain climate change adaptation, and develop common actions to increase resilience in the South Caucasus mountains (continuation of Activity 2.8.3). Continue to build synergies with SDC South Caucasus CCA project. Ensure a conflict-sensitive approach to navigate the complex geopolitical dynamics. Raise the under-recognized profile of South Caucasus in UNFCCC. Identify financing opportunities for implementation of concrete mountain climate action, and cooperate on resource mobilization with relevant stakeholders, organizations, donors and development partners.

				<ul style="list-style-type: none"> Develop inter-sectoral programme(s)/ project(s) on climate-resilient development and/or ecosystem management in the South Caucasus mountain ecosystems and submit for funding targeting large-scale financing mechanisms (Adaptation Fund).
Strengthen the exchange of experience on CCA	<ul style="list-style-type: none"> Strengthen inter-regional exchange and collaboration between AMI and other global mountain platforms In alignment and coordination with Outcome 3, consolidate a Community of Practice on Climate Change Adaptation for the Andes with the participation of key regional stakeholders including AMI focal points, practitioners, researchers and community organisations. 	<ul style="list-style-type: none"> Continue to engage in interregional dialogues such as the Mountains CONNECT workshop in Austria, which helped to facilitate exchange between EU partner states and helped to elevate the overall importance of mountain specific CCA in East Africa. 	<ul style="list-style-type: none"> Continue to engage in interregional dialogues and exchanges such as ones like the Mountains CONNECT workshop in Austria. 	<ul style="list-style-type: none"> Continue to engage in interregional dialogues and exchanges such as ones like the Mountains CONNECT workshop in Austria.
Strengthen interregional cooperation	<ul style="list-style-type: none"> Support interregional exchange and learning through dedicated workshops (follow-up Mountains CONNECT), study visits between A@A target regions and beyond, and further promoting the Mountains-Connect.org online space. These enable sharing of experiences, innovations, approaches and differing perspectives with governments from all regions. The increased interregional contact between governments will also assist and encourage them to join forces to advance interests of common concern in global policy processes and to the CCA donor community. Exchanges and study visits in some cases will require finding solutions for language issues. Interregional exchanges will also benefit the regional implementing partner through enabling them to share learnings (success and failures) and innovations thus promoting an adaptive approach to project implementation. Develop and disseminate innovative learning tool (e.g. governance simulation; games. etc.) suitable for use at different levels across all the A@A target regions. Organize interactive interregional learning events at dedicated regional and global fora (e.g. in the context of the UNGA announced 5 Years of Action for the Development of Mountain Regions) for regional advocacy and promoting mountain range governance. These could be attended by both representatives and staff of government agencies, but also from NGOs, civil society, and research institutions. Support collaboration and coordination between regional partners for interregional exchange events (e.g., CONDESAN responsible for Andes, ICIMOD responsible for HKH). Support participation of MRI network members in exchanges, representing the science and research community, as a means to enhance contacts between the science and policy communities. 			

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ANNEX I. EVALUATION METHOD

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A. Overview of the evaluation approach

The evaluation has three key objectives, each of which will be fully addressed in the interviews and document review. These are to:

- Review the project's objectives and implementation progress.
- Provide evidence on the project's overall impact, effectiveness and added value, and identify possible implementation challenges and responses to these challenges.
- Elaborate on the lessons learnt and experience gained and provide SDC with guidance and concrete recommendations with regards to a potential Phase 2 of the project.

The evaluation methodology has two parts. The first includes a review of documentation and other materials, including externally produced (e.g., media). The second involves bilateral and collective interviews with implementing partners, SDC officials, national governments and other key stakeholders. The objective of this approach is to ensure the triangulation of information to ensure that sources are drawn from a wide range of perspectives.

B. Document review

In terms of document review, these include materials referred to in section 4.1 of the evaluation TOR and any other documents deemed necessary. We will be using a combination of quantitative and qualitative methods, including surveys, analysis of primary material, and of course the results from the interviews.

A full bibliography will be contained in the final evaluation report.

The review of documents includes at least:

- The Project Document (incl. monitoring and evaluation framework)
- Annual financial and operational plans and reports
- Relevant minutes of meetings, and workshop and event reports
- Tender documents for Outcome 3 and 4
- Other relevant publications, including scientific articles, policy briefs, media reports, etc.
- The project's website and closely related webpages including from the project's partners
- Any other documents deemed necessary (to be specified between consultants and SDC)

C. Bilateral and collective interviews

We have appended the list of interview questions and the list of interviews that have been conducted thus far.

Our interviewees have been divided into four categories, these include: (i) SDC officials, both at headquarters and at the regional offices; (ii) the project implementing partners; (iii) project beneficiaries, including national governments; (iv) other stakeholders who will be identified by the project implementing partners. We will also plan to benchmark this evaluation with the evaluation of other similar projects such as UNEP's project on climate adaptation in fragile mountain regions and the SMD4GC programme. We will also draw on lessons learned, and impacts of other adaptation initiatives focussed on mountain regions such as the IKI funded Scaling-up Mountain EbA Programme which is now in its 2nd Phase.

In addition to the individual interviews, the evaluation team will conduct one collective interview with the implementing partners. It will be conducted in the middle of the evaluation process to solicit overarching views and feedback that will establish an important context for the evaluation. The second collective interview would be conducted once the draft evaluation has been prepared. There are several benefits to the collective interview approach:

- Implementing partners will have the opportunity to interact with each other and exchange views and experience in the implementation of the project. This will contribute to building and sustaining solidarity and joint ownership of the project. Partners in many programmes and projects work overly in isolation from each other, and this will create a space for the invaluable exchange of experience that will enrich each partner's scope of work, foster support across outcomes, and help build synergies in the context of this evaluation.
- We believe that there is value in providing an opportunity for the collective sharing of evidence on the project's overall impact, effectiveness and added value, and in co-identifying implementation challenges and responses to these challenges.
- Partners will also have the opportunity to react to the initial findings from the desk study and provide their input to the higher-level questions that we have added.
- Partners will also have the opportunity to share experience in the integration of climate adaptation in global processes such as the UNFCCC COP process, CBD COP-15, Midterm review of the Sendai Framework, etc.. The collective views will help the evaluation team to distil key insights that are relevant across all regions and which could support their respective efforts to elevate mountain priorities on global agendas.
- The collective interviews will also support the process of cross-validation of key data sources and in the collective assessment of the plausibility of results achieved.

As per our technical offer, we will explore other potential comparators and opportunities for benchmarking to inform this assessment. Firstly, we will draw insights from the key conclusions from Johannah Bernstein's terminal evaluation of UNEP's inter-regional project, *'Climate change action in developing countries with fragile mountainous ecosystems from a sub-regional perspective'*. There are important similarities between the UNEP and SDC projects, with their focus on building knowledge, developing concrete solutions, strengthening regional processes and elevating mountain concerns in global policy processes. Of particular note is the fact that the UNEP project involved the exact same geographies and implementing partners as those in the Adaptation@Altitude programme, hence the relevance of the insights from that evaluation, which we will consider wherever

appropriate.

In addition, we will draw on the accomplishments, outcomes, impacts and lessons learned from the Scaling-up Mountain Ecosystem-based Adaptation which started in 2017 and has just completed its second phase with final publications not yet completed. It was implemented in Peru, Uganda, Nepal and Bhutan and particularly focused on developing and implementing EbA solutions at local levels while drawing lessons to influence national to global policy processes. Accordingly it has complementarities to the A@A and UNEP's inter-regional project. This programme was led by IUCN and The Mountain Institute/Instituto de Montaña, with primary funding from IKI-BMUV. Andrew Taber supervised the design and initiation of this programme and has direct knowledge of local stakeholders and governments, as well as of adaptation solutions (some included in the A@A solutions portal), from this work in Andean, HKH and African countries. He will also draw on his experience in global climate change policy through his active role in the Mountain Partnership as a steering committee member, and also chair, which included working with many mountain stakeholders, as well as advocacy at UNFCCC for mountain issues at COPs 20, 21, 22, and 23. This included leading several side events covering adaptation topics. These experiences make clear that A@A is embedded within a significant pool of other mountain climate change adaptation initiatives.

It is important to emphasise that the A@A evaluation will be conducted first and foremost on the basis of the evaluation criteria set out in the TOR and with regard to the concrete parameters within which the project was designed. Complementarities and additionalities will be helpful in fleshing out potential recommendations for a potential Phase 2 of the SDC A@A programme.

ANNEX II. DETAILED EVALUATION RESULTS

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A. Relevance

- Are the achieved effects consistent with the needs of the beneficiaries and the requirements at the national, regional and global level?
- Are the activities and outputs of the project consistent with the overall goal and the attainment of its objectives?
- What is the relevance of the A@A programme for the promotion of Sustainable Mountain Development on a global level, including compared to other initiatives?

Relevance in relation to needs of project beneficiaries

The Adaptation at Altitude programme has been designed to support the needs of mountain communities around the world by improving the availability and use of mountain observation data, facilitating science-policy dialogues, supporting a community of practice and knowledge exchange on adaptation solutions, and influencing policy processes.

Relevance for practitioners

As regards the relevance of the project for practitioners who are both generating and using the CCA solutions that have been included in the A@A Solutions Portal: they will benefit from the collection and sharing of proven solutions, but also support through the community of practice to make adjustments and improvements in policy and practice. Given the vital role of mountains as nature's water towers and as sources of an array of ecosystem services, other beneficiaries include many millions of people who live downstream from high altitude regions, industries, and globally important lowland agrifood production systems.

Relevance of the project for mountain communities

As regards the relevance of the project for mountain communities, the project thoroughly addressed the key concerns and challenges in the framing of the project document. These challenges were subsequently addressed in the design of the activities under each of the four outcomes, notably:⁵

- There are significant data gaps on climate change in mountains.
- Climate adaptation strategies and solutions are essential to help mountain communities manage and protect their ecosystems, but they rarely include mountain-specific challenges.
- The coupled effects of poverty, food insecurity, deficient services and investment, unresolved land and resource rights, weak market access, degrading natural resources (including biodiversity), high exposure to natural hazards, and other factors place disproportionate pressure on mountain communities and their livelihoods.
- CCA solutions exist but are not adequately and systematically collected, analysed, validated or shared.
- Regional platforms for sustainable mountain development need to be strengthened to catalyse the necessary policy action needed at different scales.
- CCA in mountain regions needs to be elevated in global policy processes.

The direct outreach with mountain communities was not a focus in Phase 1, so it was not possible to interview selected mountain communities to determine the extent to which these issues are indeed the most relevant. However, the implementing partners will have consulted with stakeholders in their respective geographies to ascertain the key priorities upon which activities were developed.

Relevance of the project for scientists and academic communities

As regards the relevance of the project for scientists and academic communities more generally, there is no question of the value of the work that has been undertaken in generating, strengthening and exchanging relevant data and information and of course in the strengthening of existing facilities, stations, sites, institutions and networks. All of this work has helped to generate important scientific inputs that have been transmitted to the IPCC process.

⁵ Source: Evaluation TOR

Relevance of the project for policymakers

As regards the relevance of the project for policymakers, there are several dimensions of the project that have been designed to support their specific needs. First, the Mountain Range Governance portal has uploaded seven videos that address different governance dimensions from collaboration, policy integration, horizontal integration, civil society participation, bridging science and policy and funding. Second, the science-policy processes have started to unite decision-makers with scientists and whilst difficult to measure impact at this stage, this has helped to generate new scientific insights that will help to catalyse policy change. Third, the regional mountain forums have connected decision-makers from different countries, and in many cases have started to build a regional community of practice. This is enabling the exchange of insights and experience about mountain-specific CCA policy. It is also inspiring governments to work collectively at the regional level but also to draw inspiration from regional approaches in national efforts. Of particular importance for policymakers was of course the Mountains Connect Interregional Workshop which hosted more than sixty government and non-state actors from the Alps, Andes, Caucasus, Carpathians, East Africa, and Hindu Kush Himalaya to connect and exchange knowledge on CCA and regional governance in mountain regions.

Relevance of the project to the global mountain-specific CCA agenda

As regards the relevance of the project to the global mountain-specific CCA agenda, project implementation partners agree that the project's focus on adaptation has enabled it to carve out a specific niche on the UNFCCC agenda. This is reflected, for example, in the success of the Cross-Chapter on Mountains and all the knowledge products that have helped to raise the importance of CCA in mountain regions.

B. Coherence

- Is the A@A programme compatible with other interventions of the SDC in the same regions/countries and thematic field (consistency, complementarity, synergies)?
- Is the A@A programme compatible with interventions of the implementing partners of the A@A programme (complementarity and synergies)?
- Is the A@A programme compatible with interventions of other actors (bilateral and multilateral donors, private sector, UN, NGOs, etc.) in the same thematic field (complementarity and synergies)?
- Is the A@A programme compatible with global, regional and national frameworks?
- What should be taken into account when planning for the project's Phase 2 in order to ensure maximal coherence at various levels?

Coherence of the project's four outcomes

The causal interplay of the project's four outcomes appears to be coherent and consistent in light of the A@A programme's overall goal of increased resilience of mountain communities and ecosystems to climate change. Each outcome feeds into the subsequent outcome and all four are essential for achieving and sustaining the resilience of mountain communities and ecosystems.

The project's impact hypothesis is sound in light of the following assumptions that underpin the initiative's logic:

- Increased knowledge on the impact of climate change and its implications for adaptation in mountains is essential for informed and impactful science-policy dialogues.
- Effective science-policy dialogues contribute to improved regional and national strategies and action plans, and the identification of effective solutions for CCA in mountains.
- The test of effective strategies is the systematic uptake of robust CCA solutions on the ground.

- In turn, the sound analysis and collection of proven adaptation solutions, combined with the creation of a Community of Practice, will contribute to the sharing, implementation, and adjustments of adaptation solutions benefitting policy makers and practitioners.
- Consequently, when the systematic exchange of these experiences is stepped up, alongside unimpeachable evidence of the benefits to the resilience of mountain communities and ecosystems to climate change, this will help to ensure that CCA in mountains is increasingly integrated in global policy frameworks.

Coherence of the project with similar SDC interventions

The compatibility of the A@A programme with other similar SDC interventions is evidenced by the following (as noted in the TOR and key project documentation, including the Credit Proposal):

- The A@A programme succeeded SDC’s Sustainable Mountain Development for Global Change (“SMD4GC”) project which served as an important basis for its conception.
- The A@A programme contributes to the Strategic Framework of SDC’s Global Programme Climate Change and Environment (CPCCE).
- The programme will contribute to the advancement of the Agenda 2030 regarding mountain areas, which so far lags behind in implementation efforts, and it will strengthen national processes in adaptation planning.
- The project also aligns with the Swiss International Cooperation Strategy 2021-24 which identifies climate change as a priority.
- The project builds on and capitalises on the SDC’s project portfolio in the Andes, the Himalayas, the Caucasus, and Central Asia.
- As such, the A@A programme, in essence, provides an overarching foundation for all mountain-related projects of SDC.

Most SDC interventions take place at the country or regional level and to this end, the A@A programme has certainly been complementary, especially in the opportunity to build on existing relationships with regional implementing partners. It will remain important that the second phase of the A@A programme continues to align and mutually reinforce SDC’s other interventions. This means not necessarily working at the local level supporting communities with technical solutions. Implementation at this level is

carried out by other projects and since there are budget constraints for Phase 2, the real value add of A@A is to continue to work at the regional level, which can serve as an entry point for both influencing global policy agendas but also influencing national CCA policy.

Compatibility of the A@A Programme with similar interventions of implementing partners

The SDC's project documentation highlights how the A@A programme contributes to similar interventions of the implementing partners:

- The programme connects to the SDC project portfolio in the Andes, the Himalayas, the Southern Caucasus, and Central Asia and aims to bundle and synthesise their results and advocate for CCA in mountains at the national, regional and global policy level.
- The programme is also designed to harness experiences in regional cooperation from Swiss experiences as a member of the Alpine Convention, specifically through its working group on climate change.
- In the Caucasus, the programme will further strengthen the Caucasus Mountain Forum, supported by SDC COOF Tbilisi.
- On the global level, the programme is also aligned with targeted support to SDC partners that are contributors to the IPCC process. The developing Community of Practice (CoP) on CCA solutions in mountains will establish links to the emerging "Nature-based solutions for water" CoP of GPW.

Compatibility of the A@A Programme with relevant global, regional and national frameworks

As noted above, the A@A programme is compatible with the global processes that it has targeted for elevating mountain issues, notably the UNFCCC, the SDGs and the Sendai Framework. The positive reception of the high profile IPCC Cross-Chapter on Mountains is an important indication of the project's relevance with the UNFCCC and the receptivity of that process to recognize the importance of mountain-specific CCA. This is equally the case with the successful addition of mountains as a key theme in the Nairobi Work Programme resulting from a proposal that was drafted by project partners.⁶ And similarly with the success that Partners had in contributing to a key UNFCCC COP27 decision that emphasises the need to "address systematic observation gaps, including in

⁶ https://unfccc.int/sites/default/files/resource/SBSTA2022_L07E.pdf

mountain regions and concerning the cryosphere”.

As regards the Sendai Framework, partners demonstrated the compatibility of the programme through its issue brief “Leave No Mountain Behind: Disaster Risk Reduction for All” which explains how “development failures and the consequences of climate change are increasing the likelihood of disasters in the mountains, and considers the priorities of the Sendai Framework for Disaster Risk Reduction in light of mountain hazards”.⁷ As well, the first in the series of DRR testimonial videos was finalised in 2022, featuring Swiss cases and parliamentarians. Preparation of storyboards for further videos has started.

The compatibility of the programme with the SDGs is not in question. However, this is one global process where the programme had the greatest challenges in elevating mountains. The other global policy frameworks evolve on a regular basis, thereby presenting more opportunities and entry points to elevate mountain-specific CCA. This is not the case with the SDGs, where the Goals and Targets themselves are fixed, thereby making it more difficult to penetrate with new and emerging issues such as the impact of climate change on mountain communities and needs for adaptation solutions.

And finally, the compatibility of the A@A programme is equally relevant for the Green Climate Fund, which increasingly is providing support to CCA projects in mountain regions. Further consultations will be undertaken with the Swiss representative at the Green Climate Fund, to scope options on mountain issues and GCF.

⁷<https://www.weadapt.org/knowledge-base/adaptation-in-mountains/leave-no-mountain-behind>

C. Efficiency

- Are the activities cost-efficient? Do the A@A partners work in a cost-efficient manner?
- Are the objectives on track to being achieved on time?
- Is the project implemented in the most efficient way compared to alternatives? If not, what were the major impediments (e.g. contexts in which some of the partners operate, strength of the partners, etc.)?
- What should be taken into account when planning for the project's Phase 2 in order to ensure maximum efficiency?

Cost-efficiency

Regarding cost efficiency, the adaptive management necessitated by the COVID-19 pandemic certainly had a positive impact. International restrictions imposed limitations on travelling and required a more strategic and indeed virtual approach to the attendance of international meetings, processes and conferences. Digital meetings proved to be productive, with participants noting that they felt that this format enabled a more equal balance for discussions, with traditional in-person meetings being dominated by strong personalities or influential states; in the digital mode everyone felt they were able to contribute. However, conversations were felt to be limited in some areas with regards to establishing core aims and objects. It was expressed that for these core concerns, in-person meetings would be important to establish key goals as well as build strong inter-state and inter-regional connections through which policy can be pursued and cooperation can enable a united push towards the underlying goals of the project.

Relationship-building

In terms of relationship-building, an issue noted by participants, particularly on the policy side, was the high personnel turnover within states that impacted the ability to make progress on a regional level. This issue could be addressed through the establishment of a mountain committee with delegates to ensure continuity within ongoing discussions.

Further, ensuring the production of NAPs will enable these conversations to be more productive going into the next Phase, with

regions and participants clear on the objectives they are collectively working towards. The model of open science also has the potential to cross into the policy space with a positive influence, wherein the principle of a shared scientific purpose enables collaboration. Utilising this as the basis of discussions could have influence at the policy level by underlining the necessity of communication and working towards a shared purpose of adapting to climate impacts on mountain environments. Including representatives from the scientific community in discussions more centrally would allow conversation to remain on a rational non-political level with a shared appreciation for the importance and urgency of these issues as underlined by scientific findings drawn from across the involved regions.

Efficiency of the project structure

In terms of the efficiency of the project structure and management, there was a feeling that this had been successful. SDC colleagues noted that the Outcomes were clear and linked well together. However, it was suggested by some project partners that within the project there is a need for more facilitation and coordination, and clearer management from SDC. Moreover, there was a sense that the agency has not so far assumed a strong mandate to fulfil this role (except for on specific issues). Going forward, widening the scope of SDC involvement within projects would allow this facilitatory function to be carried out, acting as a neutral party and enabling an open space for inter-regional/partner cooperation and communication to occur. Further, implementing partners were not as clear on the structure of the project, feeling unsure of how the other Outcomes function within the model of the wider project and where their work was situated within this. This demonstrates a need for greater clarity on roles, responsibilities, and potential complementarities. This will be important to address within the next phases of the project so that implementing partners and stakeholders feel a greater sense of agency but also collective ownership within the wider project.

Implementation

With regards to implementation, the project has been efficient in utilising and operating within existing structures for greater impact. This was particularly notable in the East Africa region, where UNEP was able to work closely with the EAC and implementing partner ARCOS. However, geopolitical tensions at times undermined certain project activities within each of the regions of the HKH and the South Caucasus. In the HKH region, it was noted that existing power dynamics between participatory states resulted in a lack of trust, which made some states reluctant to share scientific findings. Similarly, in the South Caucasus, ongoing active conflicts frustrated the aim of regional dialogue, although all three governments did participate in the in-person regional dialogue in Tblisi in

2021. This was seen as an important success and a reminder of how important it is to take conflict-sensitive approaches in this work. In addition, it was highlighted that the lack of perceived funding from other bilateral or multilateral funders in the South Caucasus made implementing partners and stakeholders less interested in cooperating as they felt that they were in competition with one another for funding, as opposed to united in working for shared objectives. Initial progress was made in terms of influencing global processes, but implementing partners felt that, going forward, a state from the global north, such as Switzerland, needs to more explicitly enshrine mountain issues as a core focus of their climate adaptation approach and priorities to accelerate the focus on these issues within international processes.

D. Likelihood of impact

- What sustainable/lasting effects and behavioural changes can be perceived?
- What capacities have been developed among the actors in the target regions with regard to Sustainable Mountain Development?
- Has the project so far influenced the awareness of / the support to Sustainable Mountain Development by decision makers? In what way?
- What should be taken into account when planning for the project's Phase 2 in order to ensure maximum impact?

Successful engagement with key constituencies

The project has successfully engaged the scientific community in the policy process. In creating knowledge products and sharing information, there is an increase in the accessibility of scientific findings to policymakers, enabling stronger cases to be made for mountain-specific adaptation policy. By involving scientists in this process more closely there is a positive benefit for both scientific practitioners and policymakers, in developing a mutual understanding of what is needed to move these discussions forward. Herein, the establishment of a CoP has been effective in enabling a unified effort towards a clear goal.

In order for scientific findings to have continued relevance to policymakers a level of utility must be maintained regarding the findings that are presented and how they are presented, such as the continued production of effective knowledge products and use of the portal. The overall impact of the project is evidenced by A@A having gained a reputation of expertise in this field, and having been approached by other groups for policy knowledge. A sustained effort should be made to ensure that A@A continues to be recognised as a leading voice in this field so as to maximise influence within policy spaces, both internationally and regionally.

Viability of outcome model

The Outcome model is effective in outlining clear aims and objectives in each area of concern. There is a feeling of clarity in terms of what is outlined within the outcomes. However, it was felt by some that greater integration and synergies between outcomes would be beneficial to the future momentum of the project as a whole. Further, implementing partners, stakeholders and local communities need to be equipped with a greater understanding of the project as a whole, the Outcome expectations, and where their work falls within this wider framework to enable a greater sense of ownership and agency. Solutions stories were highlighted as an essential next step in capturing the progress of the project, sharing these with participants and publishing on the solutions portal to maintain clear communication and spotlight the work being done under the A@A umbrella.

Interregional cooperation

Interregional cooperation, especially through the Vienna Mountains CONNECT was regarded as highly successful. Partners are in full agreement that more efforts in support of interregional cooperation would be welcome. One idea is for those meetings to “piggy back” on UNFCCC COP meetings to optimise limited travel resources. It would also enable partners to interact with a wide range of actors with whom new relationships could be explored.

Moreover, the project successfully engaged with policymakers within the global policy space, although more work must be done in this regard. Continuing progress into the next phases, impact can be increased by convening more substantive knowledge products and showcasing those at side events at UNFCCC COPs demonstrating the robustness of A@A experience and findings. This would allow for the A@A programme to become a more recognised expert thus, increasing legitimacy to advocate for policy change on the international level as well as wielding greater influence to engage states and regions within discussion spaces. Further, a way to reach policymakers with formal events is important; this could be accomplished through the production of media such as solutions stories

and the portal, to engage policymakers on an emotional level as well as a scientific one. There was a feeling that mountain issues have a tendency to become lost within wider discussions, hence the need to highlight the lived reality as well as the scientific significance of these issues.

E. Sustainability

- Do the outputs have a longer-term continuing purpose?
- Can the benefits of the project's phase be expected to persist after the current phase has terminated and after donor funding has ceased?
- What is the (in-kind) contribution of the partners to the A@A programme?
- What should be taken into account in order to ensure sustainability of the entire intervention when planning the project's Phase 2 (ownership, commitment, uptake at national level, by various stakeholders incl. state, government entities)?

Alliance building

The project has been successful in strengthening alliances between mountain countries. Use of the Outcome model has provided a structure around which a coordinated approach can be achieved, allowing a consistent and unified voice to highlight relevant substantiated issues within the international policy space and provide knowledge that is beneficial within regional discussions. By providing knowledge products and creating a CoP, the A@A project has generated a strong foundation for ongoing discussions on mountain adaptation-related policy. There is a need to continue to build resources, and these include through the project's inventories of institutions involved in mountain observation and research. The latter should connect, for example, with the work of the WMO, which has a focus on climate tracking infrastructure, and can strengthen its inclusion of research-based observations. This should link with WMO's new "OSCAR" service which is based on an inventory of adaptation infrastructure as part of the WMO Integrated Global Observing System (WIGOS). In future, this will include tandem efforts in research and implementation. To

maximise the utility of the A@A's knowledge generation, integrating the collated database with other databases, such as that created by the WMO, would be a key step in ensuring sustainability going forward.

The importance of relationship building with regards to ensuring sustainability was highlighted. While digital meetings have proved effective, particularly during the pandemic, future work must include strategic in-person meetings to establish strong working relationships and a shared sense of purpose between policymakers, as well as to ensure the establishment and continued functioning of an effective CoP. A pattern should be developed of holding such in-person meetings regularly as they also provide a mechanism to bring new people up-to-speed given staff turnover in relevant institutions - governmental and others.

High quality of products

The A@A has successfully generated useful assets, in the form of knowledge products and, in particular, the knowledge portal. These need continued monitoring and updating to maintain relevance. It was noted that a capacity shortage existed. A role could therefore be created wherein an inter-regional officer would be tasked with the maintenance and continued collection of resources. Concerns were noted about the long-term sustainability of the portal, suggesting a concerted effort needs to be made to ensure that uptake of this resource is achieved on various levels and that it is continually updated to maintain relevance as conditions and needs evolve.

Funding issues

Funding issues were raised as a concern, particularly in the South Caucasus region where a lack of funders for adaptation work were reported. Herein, the necessity of the multilevel focus of the wider project is highlighted, with a need to elevate the importance of mountains on an international level so as to attract committed donors to this issue and ensure the long-term sustainability of the project's outcomes. If Switzerland were to more forcefully advance mountain issues in global processes, this would help to activate interest among other mountain countries to join forces in order to more effectively advance their shared concerns. Further, efforts are needed to continually strengthen conflict-sensitive approaches when working in regions with tensions between states so that ongoing conflict does not impact the efficiency of adaptation efforts.

F. Financial Management

Overall

Compliance with financial systems and standards is not specifically assessed in this evaluation as, in terms of financial management, the A@A Programme is subject to a separate auditing process of the partners conducted by SDC. Regarding financial management, we primarily looked at the project from the perspective of efficiency and effectiveness. These issues are addressed in relevant sections above. However, we do have the following additional observations regarding financial management matters:

From the interviews and the progress reporting our sense is that the project's organizational structure and function have allowed for cost-effective and cost-efficient implementation. In looking at some projects we have found a "follow the money" approach useful to understand relative investment in different aspects and programmatic prioritization, as well as potential constraints on effectiveness.

However, we do not have a sense that such an approach would be optimal for assessing the A@A Programme as reflected in the issues covered below.

Transparency

In terms of assessing whether funds are allocated and used in a transparent manner, it is not within the evaluators mandate or means to make a full assessment. However, we did not come across any gaps in the financial data, nor were made aware of any issues of a compliance nature. Accordingly, we have no specific recommendations regarding audits, other financial oversight exercises, adherence to SDC financial policies and procedures, completeness of project financial information, or communications between finance and project management staff in the partner organizations.

Adequacy of financial resources

Financial resources for Phase 1 are clearly tight considering the magnitude of the work towards the four outcomes. Nevertheless, we did not hear specific reports from the partners of project work being impaired due to lack of funding. Furthermore, we noted that the partners took steps to optimize resources by aligning with other initiatives and by scheduling activities (e.g., regional policy dialogues) to take advantage of travel for other events to save costs. The sense we have from the project is that it is excellent value for money. That being said, an increased budget would enable Phase 2 to increase its level of ambition. The partners will clearly adapt to available resources, but more funding will enable SDC to push the envelope at a moment when climate change adaptation in mountains needs significant investment.

Catalytic effect

This project also helped catalyse other projects which have attracted funding from various bilateral and multilateral sources. Forging synergies with other SDC projects contributed to the overall cost effectiveness, with one example being their support for MRI (and other's) work on behalf of AR6 and the cross-chapter on mountains. We think that more funding from SDC could leverage higher levels of support from other bi- and multi-lateral donors.

Resource allocation across outcomes and partners

Another financial issue concerns the distribution of funds across the implementing partners and towards the four project outcomes. We are aware that this is a complex calculus that must take into account varying operational costs in different parts of the world, the relative resource needs of the different outcomes, and the existence of other funding stream to partners that cover all or some of the activities (see comment below) as well as core operating costs (with implications for overhead/indirect costs). Each of the partner institutions is in a different financial position economically. There is not a one size fits all solution for this. Our suggestion is that SDC uses its best judgment in terms of allocating the funds according to needs and avoid a cookie cutter approach. We also urge understanding on indirect cost rates which can be vital for the sustainability of smaller NGO partners – very much in the interest of SDC, but less so for larger institutions with some core support from governments.

Co-Financing, Matching Funds and Shadow Budget matters

While we do not have detailed information on this, the different partners are including varying amounts of matching funds/co-financing towards programme objectives in their A@A budgets. We are using the term co-financing here as funding from a

donor to a partner which is not received into an SDC funded accounts but is used by a project partner or collaborating centre to deliver part of the results for an SDC funded project.

However, we note that this may be inconsistent across A@A partner budgets and donors - indeed some donor rules may even preclude including their funding as matches. We note that some of the partners also are/have received other funds from SDC sources (e.g., to MRI to support AR6/cross-chapter related work) that according to the above would not count as co-financing, yet are to varying degree contributing to the A@A programmes objectives. Wherever possible we would urge SDC to work closely with each partner to include as many of their activities and supporting funds from other donors (and SDC) in their workplans to implement Phase 2. This will help ensure full inclusion of all project relevant activities of the partners in the more holistic logframe that we are recommending. In some cases, where other funding cannot be counted as matching funds, it may be worth separately including some detail on “shadow budget” funded activities which they would not include in any financial reporting to SDC. Regardless it is important that SDC is sensitive to not-overburdening the technical and financial reporting of the partners.

Adapting to Covid

One area where financial matters came up was regarding slow spending on travel by all/most of the project partners due to pandemic-related restrictions. The partners’ showed good adaptive management in terms of making the most of cost savings, reprogramming unspent funds, and in some cases planning for heavy travel this year to compensate.

G. Effectiveness overall

- Are the project’s objectives on track to being achieved (taking into account that the project’s Phase 1 is still ongoing)?
- What were the major factors influencing potential achievement or non achievement of the objectives?
- Is the approach and strategy proposed by the project effective?
- What is the effectiveness of the different partners of the A@A programme in contributing to their respective outputs and the overall outcomes?

- What should be taken into account when planning for the project's Phase 2 in order to ensure its effective implementation?

Effectiveness in adapting to external factors

COVID necessitated a change in approach and creative adaptive management, to which the programme partners responded effectively. Even though outcome team members could not go to the regions and engage more actively and in person with stakeholders, they used the COVID imposed “travel pause” to undertake key desk work on underdeveloped topics and issues. Aspects of already existing data sets for mountain regions got particular attention. The space gained allowed more time for planning the regional exchanges and other implementation activities, making them more effective. The programme partners learned quickly how to make best use of online virtual conferencing, webinars and other communication tools. Going forward this will enable them to expand their reach to project stakeholders at low costs, while also reducing needs for carbon-intensive travel. However, with travel restrictions now reduced the programme will benefit much from more in-person contact and “real meetings” amongst team members and with the key programme stakeholders.

Effectiveness in achieving project objectives

- At this stage of the evaluation, our initial conclusions are that Outcome 1 has helped to raise awareness about mountain issues in target audiences (especially global policy related) by enhancing the quality, range and availability of rigorous CCA data and information. According to MRI, there has been fairly good progress in terms of the core objective, namely integrating and linking much of the currently existing mountain observation sites and data (longitudinal monitoring, in-situ data, etc.) within global inventories that can be viewed, searched and queried. MRI has developed ways for the linking and long-term maintenance of these inventories to be achieved, in particular through increased automation and use of open source tools. GEO Mountains will explore these options as part of its 2023-2025 Implementation Plan (for which A@A Phase 2 support will be important) with the help of technical expertise and assistance from the GEO Secretariat and GEO community.

- The scientific knowledge and data verified and encapsulated in the IPCC Cross-chapter on mountains was an excellent example of how A@A Outcome 1 related work has informed and had a direct influence on the Climate Change UNFCCC negotiations at COP27 (blue zone presence) to promote inclusion of mountain issues in conference outputs. Further evidence of attributable impacts is the inclusion of findings from the IPCC report (e.g., derived from presentations and briefs presented by MRI) in presentations by governments at the regional exchanges for the Southern Caucasus, and of course the reference to mountains in the Nairobi Work Programme.
- Science-policy platforms have been strengthened in 4 mountain regions (Andes, Hindu Kush Himalaya, Caucasus, and East Africa), supporting evidence-based policy-making and advocacy on issues of climate adaptation and sustainable mountain development in their respective regions and contributing to a formalisation of mountain governance at the regional level. This work has been vital because regional cooperation and transboundary governance are key to managing mountain resources, many of which do not share political boundaries. Mountain countries need to come together, share data and information, form joint management committees, jointly develop policies and take decisions that benefit all countries equitably.
- There are several noteworthy features of the A@A Solutions Portal. To date there is no other mountain-specific CCA solutions portal that is global in geographic scope and which is also linked to regional processes. Furthermore, the selection process was rigorous to ensure that solutions included can be regarded as both robust and trustworthy. They reflect a diverse array of topics and regions, they are very detailed and have been quality-tested, thus enhancing their value add relative to some other open source platforms. Another important value of the portal is that it links to other solution sharing platforms, with the aim of continually strengthening collaboration to avoid competition and instead to ensure that the various portals are mutually reinforcing.⁸ More analysis is needed in terms of who is using the solutions, how the solutions are actually being used, how effective they are over time, and their added value to other solutions portals. It would also be important to continue to assess the major mountain sectors, actors and regions to determine what solution gaps they have detected. In some cases, it

⁸ Eleven solutions from PANORAMA are being included on the Portal. Solutions from Climate-ADAPT have been identified and agreement gained for sharing them on the A@A Portal. Outreach to other platforms is ongoing. As per progress reporting, connections to other solution providers are being made. For the moment these follow the simple approach demonstrated here, with the Climate Adaptation Platform for the Alps (CAPA) platform:

<https://adaptationaltitude.org/solutions-portal/prosnow-a-novel-climate-service-enabling-real-time-optimization-of-snow-management-in-mountain-ski-resorts>

may be possible to connect them to already existing solutions (including for other geographies), or to promote development of novel solutions to fill gaps.

- Another success of the project so far has been the creation of inter-regional exchanges. Going forward there should be an emphasis on building this and increasing collaboration. Specifically, the exchange of scientific findings must be encouraged and efforts must be made to mitigate the impact of geopolitical tensions on scientific collaboration. Following the principles of Open Science is crucial going forward, with a view that if this approach is enshrined within regional scientific communities this will also assist in building stronger inter-state collaboration on a political level as grounded in a principle of sharing and mutual benefit through exchange of science and political unity so as to achieve effective policy change and essential adaptation implementation.
- Several important knowledge publications, summary briefs, technical sessions, side events and capacity-building workshops have been produced for this Outcome that are particularly relevant for key global processes. These include, inter alia:
 - Searchable database of data collection infrastructure with online accessibility under GEO Mountains, with mirrored access via the GEO GEOSS platform.
 - With the data inventories it is now possible to have a good overview of, and access, to datasets corresponding to certain regions and disciplines. This will enable better planning of workshops for 2023.
 - Training and capacity development resources on the MRI webpage.
 - Policy brief on the current extent of in-situ observations in mountains as a contribution to the International Year of Sustainable Mountain Development, which was launched at GEO Week 2022.
 - In addition, project partners contributed to other knowledge products as part of work funded via other channels which nevertheless contributed to this Outcome, albeit indirectly, Examples include MRI and ICIMOD's contributions to IPCC AR6, cross chapter paper on mountains, etc.
- Major global policy processes are increasing their reflection of CCA in mountains. In addition to the high profile IPCC Cross-Chapter on Mountains, the project partners were instrumental in elevating mountain-specific CCA in the following global processes:

- The successful addition of mountains as a key theme in the Nairobi Work Programme resulted from a proposal that was drafted by project partners.⁹
- Partners also contributed to a key UNFCCC COP27 decision that emphasises the need to “address systematic observation gaps, including in mountain regions and concerning the cryosphere”.
- Upon consultation with the Swiss climate delegation attending UNFCCC SBSTA-56, and A@A partners, inputs were prepared to the guiding questions of technical assessment of the Global Stocktake. This CCA in mountain areas perspective was then provided to the Swiss delegation attending the Bonn meeting in June 2022.
- One of the most notable examples of how the project has contributed to elevating the importance of mountains on the global agenda is reflected in the IPCC Cross-Chapter Paper on Mountains, whose co-leads were two of the A@A implementing partners: Carolina Adler, MRI and Philippus Wester, ICIMOD.

H. Effectiveness of the four project outcomes

1) Outcome 1 - Improved availability and use of mountain observation data and information services support regional and global knowledge products on climate change impacts in mountains

Under Outcome 1, the primary focus of the A@A Programme is to strengthen the generation of mountain-specific data through mountain observatories. As the implementing partner for this outcome, MRI’s approach has been to build on existing facilities, stations, sites, institutions and networks to support technical development and compliance with international standards and protocols to make data comparable between regions, advance scientific analysis, and increase the output of knowledge. Much of this work is being executed in close collaboration with the World Meteorological Organisation (WMO). Results are being synthesised at regional and global levels and fed into IPCC processes, processes associated with other MEAs, and to produce various outputs to strengthen mountain adaptation knowledge to benefit policy makers, practitioners, researchers and other mountain stakeholders.

⁹ https://unfccc.int/sites/default/files/resource/SBSTA2022_L07E.pdf

MRI originally collaborated in establishing GEO Mountains to provide data for policy and action-relevant advice. However, via the A@A programme, MRI is strengthening the capacity of both GEO Mountains and the MO Working Group to support the establishment of Mountain Observation Regional Hubs in the Andes, the Caucasus, the HKH, Central Asia, and Eastern Africa for the benefit of both initiatives.¹⁰

Outcome 1 achievements

Outcome 1 has helped to raise awareness about mountain issues in target audiences (especially global policy related) by enhancing the quality, range and availability of CCA data and information. There is now growing evidence demonstrating where and how Outcome 1 has filled important knowledge gaps and supported the process of evidence-based decision-making.

Improvement in the quality and access to data - There has been good progress in terms of the core objective, namely integrating and linking currently existing mountain observation sites and data (longitudinal monitoring, in-situ projects, etc.) within inventories that can be viewed, searched and queried. They found it best for now to use a dual stream approach – global datasets for global applications, and then region data sets for regions use. MRI has developed ways for the linking and long-term maintenance of these inventories to be achieved, in particular through increased automation and the use of open-source tools. GEO Mountains will explore these options as part of its 2023-2025 Implementation Plan (for which A@A Phase II support will be important) with the help of technical expertise and assistance from the GEO Secretariat and the GEO community. MRI so far has focused more on strengthening the network of observatories and creating data inventories for uptake by the community, rather than on data analysis to generate knowledge. Nevertheless, they have produced numerous knowledge products detailed in their progress reports. In addition, in terms of access, links with Outcome 2 work (e.g., Southern Caucasus) have provided opportunities to combine scientific workshops and knowledge transfer to stakeholders.

Identification of the information needs of users - MRI conducted a series of virtual engagements in the first year that were organised in conjunction with partner organisations in the respective regions. These provided opportunities to learn from local stakeholders regarding region-specific needs and challenges. These meetings consisted of initial discussions and were followed up by a survey. Additional work was undertaken to identify essential mountain variables (climate, biodiversity, societal) which consisted of

¹⁰ Adaptation at Altitude Project Document

convening groups of scientists, technical experts, and stakeholders to identify variables and parameters to monitor to understand, predict and respond to climate change impacts in mountains in a timely and efficient manner. The scientific expert meetings generated a good understanding of the extent to which the data situation varies between the different regions.

In terms of knowledge of Indigenous Peoples, the GEO Secretariat has made advances on how to approach this going forward into Phase 2. This will require being sensitive to Intellectual Property issues; Free, Prior and Informed Consent, and other standards; gaining the trust of elders; etc. Models from IPBES and others will be used to guide the work, and regional workshops are being kicked off on how to integrate the knowledge (e.g., with UNESCO and WMO). This knowledge will be useful both to meet the needs of users, but also to feed into observatories, monitoring, synthesis and analysis, but will require further methodological work (see challenges below).

Aggregated and synthesised data and information on climate change impacts in mountain regions are being fed into global processes - Several knowledge publications, summary briefs, and technical sessions, side events and capacity-building workshops have been produced for this Outcome. Many of these are highly relevant for key global processes. One example is the publication on human populations in mountains which is of high relevance for adaptation and provides a foundation for further work at regional, national and local levels. Another, is the work towards establishing essential mountain variables for climate, biodiversity and societal issues mentioned above which is vital for providing insights and evidence for policy advocacy. In addition, the scientific knowledge and data verified and encapsulated in the IPCC Cross-chapter report on mountains (primarily supported by other SDC funding to MRI and ICIMOD) as part of AR6 was an excellent example of how A@A Outcome 1 related work has and can inform and influence UNFCCC negotiations at COPs to promote inclusion of mountain issues in conference outputs (COP27 in this case). Further evidence of attributable impacts to the project is the inclusion of findings from the IPCC report (e.g., derived from presentations and briefs presented by MRI) in presentations by governments at the regional exchanges for the Southern Caucasus, as well as references to mountains in the Nairobi Work Programme. Looking forward to Phase 2, it will be important for Outcome 1 to configure and tailor their analysis and synthesis work to make it useful for the 7th IPCC assessment, (AR7).

Outcome 1 implementation challenges

GEO Mountains is currently supported by two MRI staff members (including the Executive Director) - a modest number given the scale of work - and primarily depends on the voluntary contributions of MRI network members. These members typically hold positions in academic or research institutions, NGOs, governments and other organizations with often heavy associated responsibilities. Accordingly, while many are highly committed to GEO Mountains, it can be difficult for members to make the time commitments necessary to drive progress. In turn, this can impact the ability of this component of the A@A programme to deliver its outcome and can result in delays - as seen, for instance, in finalizing the paper on Essential Biodiversity Variables in Mountains.

COVID also created challenges for Outcome 1, as with the other three outcomes, notably reduced opportunities to meet in person, with increased reliance on virtual/online means of communication and meetings, etc. This has had consequences for building working relations, knowledge sharing, capacity building, etc. However, much learning has taken place about how to accomplish more through virtual online means which will reduce the need for some kinds of travel in the future (saving expenses and carbon).

Tracking impact is also difficult for this outcome. MRI has succeeded in “putting data on the table” and demonstrating how it can be used to generate knowledge that feeds into decision making and policy. But tracking data contributions through such impact pathways can be difficult (e.g., datasets can be discovered from the programme’s inventory, or from other sources). The surest way to assess attribution would be through citations back to original sources - which is, or should be, technically required yet is inconsistently done. This is less of a problem for knowledge products directly produced under this outcome, although impact assessment of such products needs attention.

A further implementation challenge relates to access to data, synthesis and analysis for use by sub-national and local initiatives, as well as indigenous peoples and other local communities given technical and language barrier issues (note large number of languages in some regions). A related issue is that of integrating local/indigenous knowledge data for use in western science analysis, while also respecting it as a different form of knowledge and promoting generation of new knowledge using hybrid citizen science approaches. This will require consultation and participation with communities, and will be a significant challenge during Phase 2 going forward given limited resources and experience to draw on. While these issues are pertinent to local and national level adaptation action, they also have relevance for enabling bottom-up influence on global processes. Links with those working on other A@A Outcome

teams (e.g., as part of regional dialogues and workshops - as reported for the Southern Caucasus, and via the solutions portal) provide useful channels to local levels, although in a few cases some of the MRI members working in-situ may be able to support.

2) Outcome 2 - Strengthening regional science-policy dialogue platforms

Overview of Outcome 2 achievements and implementation challenges

Science-policy platforms have been strengthened in 4 mountain regions (Andes, Hindu Kush Himalaya, Caucasus, and East Africa), supporting evidence-based policy-making and advocacy on issues of climate adaptation and sustainable mountain development in their respective regions and contributing to a formalisation of mountain governance at the regional level.

This work has been vital because regional cooperation and transboundary governance are key to managing mountain resources, many of which do not share political boundaries. Mountain countries need to come together, share data and information, form joint management committees, jointly develop policies and take decisions that benefit all countries equitably. More detailed accounting of the region-specific achievements are described below.

Another success of the project so far has been the creation of inter-regional exchanges. Going forward there should be an emphasis on building this and increasing collaboration. Specifically, the exchange of scientific findings must be encouraged and efforts must be made to mitigate the impact of geopolitical tensions on scientific collaboration. Following the principles of Open Science is crucial going forward, with a view that if this approach is enshrined within regional scientific communities this will also assist in building stronger inter-state collaboration on a political level as grounded in a principle of sharing and mutual benefit through exchange of science and political unity so as to achieve effective policy change and essential adaptation implementation.

Overview of region-specific achievements and implementation challenges

	ANDES	EAST AFRICA	HKH	SOUTH CAUCASUS
ACHIEVEMENTS				
Regional dialogues	Regional science-policy regional dialogues and Regional Governance Dialogue	Regional mountain dialogue (Tanzania)	HKH Ministerial Mountain Summit and Ministerial Call to Action and HKH Science Policy Dialogue	Virtual regional dialogue and in- person regional dialogue
Regional platforms and processes	Strengthening of AMI as regional platform for SMD Incorporation of CCA into 5 year plan of AMI	Establishment of East African Community Mountains Stakeholder Platform (EACMSP)	Launch of HKH Assessment Report HKH High-Level Task Force (to study feasibility of intergovernmental HKH Forum)	Proposal for Regional Adaptation Dialogue in South Caucasus (RADSC) First draft roadmap for the South Caucasus considers the political situation and suggests a pragmatic approach forward Synergies with RIG of the SDC Caucasus project
Filling knowledge gaps	IPROMO online course Integrated knowledge management strategy for region Multiple new knowledge products incl. 9 solutions in Mountains Adapt booklet Transmission of knowledge products into key decision making processes	Showcasing of 18 solutions (Mountains ADAPT booklet)	Review of climate and environmental policies UNFCCC COP26 side event Elevating Adaptation Action Study visit to Alpine Convention Secretariat	Integration of SMD into Georgia NAP and Armenia sub-national NAP Mountains Adapt booklet highlighting 9 adaptation solutions
IMPLEMENTATION CHALLENGES				
	COVID 19	COVID 19	COVID 19	COVID 19
	Difficulties engaging government participation in AMI		Geo-politics	Geo-politics
	Lack of funding for AMI Secretariat	Funding	Funding	Funding

Overview of the key achievements and implementation challenges within the four regions

ANDES

One of the important achievements for CONDESAN has been the consolidation and strengthening of the regional decision-making platform (AMI) as the regional platform for cooperation on sustainable mountain development and of the science-policy dialogue processes (7 countries, more than 10 spaces), using the knowledge generated in the knowledge management component- (e.g. for the formulation of its 5-year action plan). Another equally relevant regional meeting was the first Regional Governance Dialogue in Mountain Areas in 2021. The meeting was convened with the participation of ICIMOD, the Andean Mountain Initiative, the Mountain Partnership, and global mountain platforms (e.g. Alpine and Carpathian Conventions) brought together the Andes and other mountain regions to share advances and challenges in the integration of mountain-specific policies and strategies both at the national level and at the international level .

CONDESAN has also convened several regional science-policy workshops on CCA in the Andes including the science-policy workshop on February 9, 2021, that was designed to promote dialogue between decision-makers and experts on information needs, key indicators and approaches for integrated long-term monitoring of socio-ecological dynamics in the Andes. Another important science policy dialogue was convened jointly between joint OEA-CONDESAN on “Multi-dimensional impacts of deglaciation on the Sustainable Development of South America: experiences and priorities for CCA”. The event was held as an online webinar on July 6, 2021.

As part of their capacity-building efforts in the region, CONDESAN launched the IPROMO Latin America online course that was held from May 17 to June 1 2021, with 44 students from the seven Andean countries and 21 lecturers. The general objective was to improve the capacities of practitioners and decision-makers in the Andes for the sustainable management of mountain socio-ecosystems, with an emphasis on the management of water resources. The course was designed and coordinated by the PBA and A@A programs of CONDESAN.

And finally, CONDESAN has succeeded in bridging knowledge gaps and in transmitting key knowledge products to key policy processes. For example; dDissemination of knowledge synthesis products and tools including policy briefs on CCA policy; technical

support for the formulation of the 5-Year Action Plan and Road Map for Governance for the AMI; presentation and discussion of knowledge products with decision-makers: e.g. Huaraz Ordinary meeting of the AMI.

HINDU KUSH HIMALAYA

The 2020 HKH Ministerial Mountain Summit, along with the HKH Call to Action and the Ministerial Declaration represent important evidence for success because all eight countries were represented at the ministerial level and signed the Declaration. Moreover, all ministers agreed to the formation of the HKH High-Level Task Force to assess the feasibility of establishing a regional institutional mechanism.

Implementing partners have acknowledged that progress in forging regional cooperation was incremental but positive nonetheless, particularly because the region is characterised by complex transboundary politics as well as domestic political factors and resource constraints.

The incremental pace was perhaps essential in order to tread sensitively and carefully. Nevertheless, the groundwork has been laid and prospects continue to be positive for sustaining Ministerial level engagement in Phase 2 so long as ICIMOD can continue to convince governments that high-level engagement is essential to strengthen regional cooperation, to promote a unified HKH voice in global platforms, and to strengthen science-based mountain-specific CCA policy making. With its intergovernmental structure, research and knowledge generation capacity, and long-term presence, ICIMOD has a unique and critical role to continue to play in the region in Phase 2.

EAST AFRICA

The 2022 East Africa Mountains Regional Dialogue was convened by the EAC Secretariat in collaboration with the United Nations Environment Programme (UNEP) and Albertine Rift Conservation Society (ARCOS). The dialogue brought together representatives from the EAC Secretariat, the members of the Climate Change Technical Working Group (CCTWG) from the partner states and other key stakeholders from the region.

The Regional Dialogue concluded with EAC Partner States agreeing on the establishment of the East African Mountains Stakeholder Platform (EAMSP) under the auspices of the East African Community. Its role will be to provide policy and technical support to the

work of the EAC thematic working groups and as well, to foster mountain climate action through regional cooperation. Partner states also agreed to participate in the launch of the Mountains ADAPT Solutions Booklet (18 solutions) and to participate in the Interregional Mountains CONNECT Workshop in Austria. The regional dialogue has facilitated exchange between the EAC Partner States and helped to elevate the overall importance of mountain-specific CCA in the East African region, both at regional and national levels (e.g., the inclusion of mountains as climate-sensitive ecosystems in NAPs).

One of the contributing success factors in relation to the regional dialogues organized, was the close collaboration with the EAC Secretariat as a key intergovernmental body in the region which brought institutional capacity, convening power, policy capacity to integrate mountains in its climate workstreams, and its strong relationships with key policy stakeholders (i.e. ministry representatives responsible for environment, climate change as well as international affairs).

SOUTH CAUCASUS

During the first phase of the project, two regional dialogues were convened in the South Caucasus. The first regional dialogue meeting under Phase 1 took place on 14 December 2021 in a virtual setting due to the pandemic and restrictions to international travel and in-person exchange. Based on that first dialogue, further bilateral consultations were undertaken with targeted policy stakeholders from competent authorities (UNFCCC focal points) to discuss policy integration and the establishment of a South Caucasus regional dialogue platform.

UNEP and Sustainable Caucuses were able to host the second regional dialogue “Taking Action Together for Resilient Mountain Communities in the South Caucasus” in person in Tbilisi, Georgia on 6-7 December 2022. The primary objective of the meeting was to strengthen the regional adaptation dialogue process towards increased formalisation. Based on a subsequent concept note prepared by UNEP and Sustainable Caucuses, the proposed Regional Adaptation Dialogue in the South Caucasus (RADISC) has now been designed to convene government experts, practitioners and other relevant representatives from the region to exchange views, share best practices and develop common activities for strengthening the resilience and adaptive capacity in the mountain regions of the South Caucasus, while fostering sustainable development. It is further anticipated that the RADISC will convene key stakeholders for CCA policy, research and practice, increase knowledge for adaptation across the region, and enable participation of the South Caucasus region in relevant international fora and events. The consolidated roadmap for the regional CCA dialogue should be

finalized by June 2023 and presented at the next regional meeting that is planned back-to-back with the Third Caucasus Mountain Forum in Kutaisi, Georgia. Besides succeeding in developing the road map for the regional dialogue, the Tbilisi meeting was a remarkable success in bringing all three governments together, despite the ongoing conflict between Armenia and Azerbaijan.

In addition to the two regional dialogues, there were other notable accomplishments for the South Caucasus' work in phase 1, including support to Georgia to integrate mountain issues in its NAP and to Armenia in relation to its sub-national NAP. Equally important was the Identification of synergies with the Regional Initiative Group (RIG) of the SDC-funded project “Strengthening Adaptive Capacity in the Caucasus” for fostering regional policy dialogue and cooperation for mountain adaptation. Additionally the publication of the “Mountains ADAPT: Solutions from the South Caucasus” booklet, highlights nine adaptation solutions from the region with the aim to inspire further uptake, transfer and upscaling. Another key achievement has been the capacity development of policy representatives, e.g. by inviting them to participate in the interregional Mountains Connect workshop that co-created knowledge through a governance simulation.

Going forward there is a continuing need to ensure a conflict-sensitive approach in order to successfully navigate the complex geopolitical dynamics. The increasing escalation of border disputes and fights needs to be constantly monitored and taken into consideration as well as contingency measures elaborated. This has been successful so far within the project with meetings being held between the states who are currently engaged in active conflicts. However, the next phase needs to build on this to confirm and validate the importance of regional collaboration efforts, united around the shared goal of climate resilience and adaptation within mountain ecosystems.

3) Outcome 3 - Knowledge of climate change adaptation solutions in mountains is strengthened and capitalised on at the regional and global level

Overview of Outcome 3 achievements

The five outputs for Outcome 3 include: establishment of the Solutions Portal; creation of a rigorous process for testing the solutions; synthesis of knowledge products; and establishment of the Community of Practice (CoP).

A@A Solutions Portal- launched in June 2021 and has been designed as a platform to share and exchange knowledge. They have been selected through a multi-stage quality control mechanism that ensures their quality, credibility and usefulness to the CoP. They are being made available through a structured and easy to access global knowledge base hosted by weADAPT and designed in response to the needs of the CoP.¹¹ The Solutions Portal now contains 80 quality-tested solutions across sectors, solution types, and regions. The solutions cover a total of 38 countries, with 11 solutions implemented in more than one country or at a transboundary scale. Additional solutions will continue to be added. The overall quality of the Solutions on the Portal are very good, and robust and geographically and thematically diverse. However, this work must not stop there. The key challenge in Phase 2 with regard to the Portal will be to develop a reliable system for monitoring uptake.

Synthesis of knowledge products - Zoï and SEI are working together with A@A partners to coordinate and optimise social media outreach through weADAPT's and A@A's channels. The mountain-theme space in weADAPT is well-established, with a growing number of mountain-relevant materials (articles and case studies), close to 100 registered users, and ca. 230 page views per month. With a strong base of solutions now available in the Portal, themes for synthesised knowledge products have been identified and work in developing these has begun. The first two 'Solutions Stories' have been published, with positive feedback from stakeholders.

¹¹ (<https://adaptationataltitude.org/solutions-portal>)

Rigorous selection process - The collected CCA solutions were first evaluated and went through an objective quality control process to establish the feasibility and potential of the solutions to address: major constraints or problems of critical importance; capacity for change; scalability; and economic sustainability. Regional experts were also consulted to ensure that criteria are appropriately evaluated within the specific regional contexts.¹²

Uptake of the solutions - At this point, the project is able to track the number of users and determine if a given solution has associated documentation and monitor how many times it is downloaded. This information provides insights in terms of how many people are actually using the solution. As per SEI's progress reporting, between 1st January 2022 and 30th June 2022, the online space received 1,412 unique page views, an increase of 500 views in the previous 6 months. The online space is also topping Google search engine results for "climate change adaptation mountains". One ambition for Phase 2 is to evaluate uptake by policymakers and practitioners although this has not been undertaken in Phase 1. SEI has also conducted an evaluation of the solutions portal to determine gaps in coverage.

The added value of the A@A Solutions Portal - To date, there is no other mountain-specific CCA solutions portal that is global in geographic scope and which is also linked to regional processes. Besides the rigour of the solutions selection process, the solutions are regarded as robust and trustworthy. They reflect a diverse array of topics and regions, they are very detailed and have been quality-tested, thus enhancing their value add relative to open-source platforms. Another important value of the portal is that it links to other solutions portals, with the aim of continually strengthening collaboration with other portals to avoid competition and instead ensure that the various portals are mutually reinforcing.¹³ Equally important is the Portal's potential for enabling exchange, collaboration and networking. This is already becoming evident with the growing interaction between solution providers and users. The empowerment, capacity building and training are now intended to start in two months globally mountain communities. Hopefully, it will increase awareness and use of the solutions on the Portal and also support the creation of the CoP.

¹² https://www.weadapt.org/sites/weadapt.org/files/survey_evaluation_plan_unige.pdf

¹³ Eleven solutions from PANORAMA are being included on the Portal. Solutions from Climate-ADAPT have been identified and agreement gained for sharing them on the A@A Portal. Outreach to other platforms is ongoing. As per progress reporting, connections to other solution providers are being made. For the moment these follow the simple approach demonstrated here, with the Climate Adaptation Platform for the Alps (CAPA) platform:

<https://adaptationaltitude.org/solutions-portal/prosnow-a-novel-climate-service-enabling-real-time-optimization-of-snow-management-in-mountain-ski-resorts>

Translation of solutions into knowledge products - There is general agreement about the importance of also translating solutions into knowledge products, especially solutions stories that involve interviews with beneficiaries and the collection of visual materials. Two solutions stories have been developed, launched and disseminated and others are currently being drafted. As well, efforts are being undertaken to identify the themes for synthesised knowledge products, based on the analysis of the solutions in the A@A Portal. Issue briefs are also being prepared, including one concerning migration in mountain regions as well as a joint SEI-ODI brief about solutions for transboundary risks in mountain regions.

Community of Practice (CoP) - The mountain-theme space in weADAPT is now well-established, with a growing number of mountain-relevant materials (articles and case studies), close to 100 registered users, and ca. 230 page views per month.¹⁴ The project will continue to promote the community's work via the weADAPT newsletters. It will also continue to work with relevant actors to share knowledge and promote the work of all A@A partners. Other opportunities to engage with the mountain community could include broadening the CoP to include policymakers and exploring solutions specifically related to policy advances. SEI's ambition for Phase 2 is to ensure that the CoP is fully up and running. The first step is to ensure that the community uses the curated solutions, provides feedback and engages in dialogue about how the online space and portal best serve the mountain community.

Overview of Outcome 3 implementation challenges

It is premature to assess the overall effectiveness of the solutions at this stage. However, analyses undertaken by UNIGE in 2022 have identified key factors and barriers to the implementation of solutions:¹⁵

- Reported lack of technological capacities, particularly at sub-national levels. As a result, the implementation of some solutions has often been outsourced to external experts, who may lack the necessary connection to the ground level.
- While solution providers have invested heavily in technical capacity building, high staff turnover in low to mid-level positions, means that skills have not been institutionalised.

¹⁴ <https://www.weadapt.org/knowledge-base/adaptation-in-mountains>

¹⁵ Progress report June 2022

- Key stakeholders, especially at the political level, have often lacked the commitment needed to support the long-term maintenance of adaptation solutions, after the initial intervention ended. This is despite the fact that local populations and community groups have often supported further action.
- Difficulty in establishing the realistic impact of solutions on the ground at the community level.
- Increased efforts are needed to gather insights from those who have been implementing the solutions at the local level.
- Not enough traditional knowledge captured in solution portal in part because of limited responses on how Indigenous knowledge has been integrated into the solutions
- We understand that all these points highlighted above will be taken into account in the knowledge brief that is currently being written.

4) Outcome 4- Major global policy processes are taking climate change adaptation in mountains into account

The key focus of Outcome 4 is to strengthen the emphasis on CCA specific to mountain regions within multilateral processes and reinforce policy discussions centering on high altitude alpine impact mitigation and adaptation. Outcome 4 is implemented in collaboration with three partners: Zoï, the Stockholm Environmental Institute (SEI) and the University of Geneva.

The key tasks under Outcome 4 include the following:

<p>Developing and implementing a strategy (including the identification of key processes, key moments and key stakeholders) for increasing awareness of mountain regions in the Paris Agreement, the Sendai Framework for Disaster Risk Reduction, the SDGs.</p>	<p>Defining and elaborating key knowledge products (reports, policy briefs, case studies, guidance notes, guidelines, etc.) for policy influencing to advance the mountain CCA agenda in key global processes</p>	<p>Transmitting key knowledge products into existing convening, reviewing, monitoring and implementation processes.</p>	<p>Elaborating a communication strategy for the whole "CCA in mountains" programme, including communication goals, target audiences, communication products</p>
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Overview of Outcome 4 achievements

Mountains are becoming more prominent on the global agenda - One of the most notable examples of how the project has contributed to elevating the importance of mountains on the global agenda is reflected in the IPCC Cross-Chapter Paper on Mountains, whose co-leads were two of the A@A implementing partners: Carolina Adler, MRI and Philippus Webster, ICIMOD.¹⁶ It is featured in the Intergovernmental Panel on Climate Change (IPCC) AR6 WGII Climate report 'Climate Change 2022: Impacts, Adaptation and Vulnerability'. The last time that mountains were referred to in a dedicated chapter in an IPCC report was in the Second Assessment Report in 1995. Mountains were also covered recently in 2019 in IPCC's Special Report on the Ocean and Cryosphere in a Changing Climate with a Chapter on "[High Mountain Areas](#)". Evidence of the impact of this paper includes the increasing use by governments for their own presentations and remarks, for instance around UNFCCC COP27.

It is clear that the prominence of mountains on the global agenda has grown during the life of the project with many factors and institutions contributing to this. This is reflected by the 2022 International Year of Sustainable Mountain Development – which marked the 20th year anniversary of the first IYM in 2002¹⁷ and the five-year action plan for the development of mountain regions,¹⁸ which aims to unite efforts for sustainable development and prosperity of mountain regions at the bilateral, regional, interregional and global levels and to give new impetus to the international community's efforts to address the challenges and problems of mountain countries.¹⁹

Attribution is always a challenge, but Zoï's contribution (under Outcome 4) to the work of the Mountain Partnership (in which MRI has participated as a steering committee member) in the execution of IYM activities, along with Zoï's chapter in the GLOMOS Elsevier book 'Safeguarding Mountains: a Global Challenge' (to which MRI staff also contributed) as well as its inputs to the UN Secretary-General 2022 report on Sustainable Mountain Development are all helping to raise awareness of the role of mountain ecosystems and mountain communities.

¹⁶ It is important to note that this deliverable was prepared under the ambit of Outcome 1.

¹⁷ This International Year marks the 20th anniversary since the proclamation by the United Nations General Assembly of the International Year of Mountains 2002 as well as the 20th anniversary of the Mountain Partnership.

¹⁸ https://www.fao.org/fileadmin/templates/mountain_partnership/doc/Global_Meeting/Aspen_Declaration_2022.pdf

¹⁹ <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N22/756/81/PDF/N2275681.pdf?OpenElement>

Equally relevant is the webinar that was co-organised with the InterParliamentary Union (IPU) on “Climate change adaptation in mountain areas: What role is there for parliamentarians?” on International Mountain Day 2020. The webinar focused on the importance of promoting the sustainable development of mountain regions and the conservation of mountain ecosystems. The aim was to showcase challenges and opportunities that could help parliaments to play a more active role in the alignment and institutionalization of climate, DRR and SDG targets. This webinar not only helped to raise issues but to establish a firm mutual trust with the IPU, which will help to pave the way for further collaboration. Parliamentarians are a key constituency and their engagement is critical to elevating mountains on national policy agendas.

Major global policy processes are starting to reflect mountain-specific CCA - In addition to the high-profile IPCC Cross-Chapter on Mountains, the project partners played an important role in elevating mountain-specific CCA in the following global processes:

- The successful addition of mountains as a key theme in the Nairobi Work Programme resulted from a proposal that was drafted by project partners.²⁰
- Partners also contributed to a key UNFCCC COP27 decision that emphasises the need to “address systematic observation gaps, including in mountain regions and concerning the cryosphere”.
- Upon consultation with the Swiss climate delegation attending UNFCCC SBSTA-56, and A@A partners, inputs were prepared to the guiding questions of the technical assessment for the Paris Global Stocktake. This CCA in mountain areas perspective was then provided to the Swiss delegation attending the Bonn meeting in June 2022.
- Further consultations took place with the Swiss representative at the Green Climate Fund, to scope options on mountain issues and GCF.
- As regards the Sendai Framework, partners prepared an issue brief “Leave No Mountain Behind: Disaster Risk Reduction for All” which explains how “development failures and the consequences of climate change are increasing the likelihood of disasters in the mountains, and considers the priorities of the Sendai Framework for Disaster Risk Reduction in light of

²⁰ https://unfccc.int/sites/default/files/resource/SBSTA2022_107E.pdf

mountain hazards”.²¹ As well, the first in the series of DRR testimonial videos was finalised in 2022, featuring Swiss cases and parliamentarians. The preparation of storyboards for further videos has started.

- The development of guidance material on mountain-specific CCA solutions in the revision process of NAPs and NDCs started with initial mapping of existing NDCs and national adaptation strategies including NAPs. This work will continue in 2023.

Overview of Outcome 4 implementation challenges

- Elevating mountains in the SDGs has been the biggest challenge. The other global policy frameworks evolve on a regular basis, thereby presenting more opportunities to elevate mountain-specific CCA. This is not the case with the SDGs, where indeed the Goals and Targets themselves are fixed, thereby making it more difficult to penetrate with new ideas such as the impact of CCA in mountain communities.
- Attribution is always a challenge, especially when it relates to measuring the impact of influence on global processes where so many other actors are engaged. Tracking uptake of guidance materials will be an important task in phase 2.
- In terms of influencing the Sendai Global Platform in 2022, the challenge was that the format itself is very rigid and whilst the issue brief did have traction, overall influence could have been greater, in large part because mountain issues are still under the radar within the Sendai Framework. That said, more efforts will be needed in the second phase to elevate mountain-specific CCA challenges within the DRR space. Partners were not able to secure a side event slot at the Sendai Global Platform, but this does not reflect their lack of effort in securing the slot. Side events are always heavily booked in advance and therefore efforts will be needed to start earlier in advance of the next Global Platform.

²¹ <https://www.weadapt.org/knowledge-base/adaptation-in-mountains/leave-no-mountain-behind>

ANNEX III. DETAILED EVALUATION RECOMMENDATIONS

Inside ANNEX III. Detailed evaluation recommendations

A. Overarching recommendations for Phase 2

1. Synthesis of overarching recommendations
2. Recommendations for improving relevance
3. Recommendations for ensuring coherence
4. Recommendations for improving effectiveness
5. Recommendations for improving efficiency
6. Recommendations for improving sustainability
7. Recommendations for improving likelihood of impact

B. Recommendations for the four outcomes in Phase 2

1. Recommendations for Outcome 1
2. Recommendations for Outcome 2
3. Recommendations for Outcome 3
4. Recommendations for Outcome 4

In this ANNEX we review our findings and recommendations for a Second Phase of the A@A Programme. We provide overarching recommendations, followed by recommendations that are structured according to the OECD DAC evaluation criteria. This is followed by specific recommendations for each of the four outcome areas.

A. Overarching Recommendations for Phase 2

1) Synthesis of overarching recommendations

<p>Need stronger internal coordination - In reporting and through the interviews, the programme and its partners come across at times as if they are operating in a somewhat insular, isolated, even exclusive fashion when in fact there are many other actors working in climate change adaptation of relevance to mountains at national, regional and global levels.</p>	<p>Need stronger articulation of the programme's overall value-add. As of yet, there has been little discussion in the reporting of building alliances (except amongst governments), learning from each other's work, and other steps to advance common agendas which are potentially of relevance across all four outcome areas.</p>	<p>Ensure that local and regional non-governmental actors are taken into account - This is essential because of their potential influence on governments and their technical expertise.</p>	<p>Greater focus on enabling conditions - Many of the adaptation solutions are grounded in project based, restricted funding and investment approaches which are typically time-bound with outcome at risk when project/fundings end.</p>	<p>Strengthen bottom-up approaches - High level global policy engagement and focus on national governments are both appropriate for a global programme like this one.</p>
<p>Hence the need for improved coordination among the partners to ensure greater synergies, reduce overlap, create a strong basis for joint projects. In general the evaluators recommend greater attention to communication and collaboration between Outcomes, implementing partners and the SDC. These ideas are fleshed out further in the cluster of recommendations on coordination.</p>	<p>This will require a solid overview of the other initiatives that partners and other actors are undertaking, possibly through a thematically and geographically defined network mapping . This is essential to understand the whole community of mountain actors and to articulate where the project fits and can best contribute.</p>	<p>It is clear that there is a need to undertake a network mapping exercise in each region and globally on organizations working on CCA in mountains.</p>	<p>Greater value could be found through addressing fundamental questions for enabling adaptation such as tenure, resource rights, livelihood approaches, and rural institutions (public and private) that can then build a sustainable foundation that can drive climate change adaptation. This has ramifications across all four outcome areas.</p>	<p>lit is essential to recognize that such top down approaches have their limitations and are often best if complimented by bottom up approaches.</p> <p>Here an explicit link through the Mountain Partnerships to engage civil society and NGOs at regional and global levels, which could contribute across all four outcome areas (e.g. advocacy at regional levels, knowledge generation, solutions).</p>

2) Recommendations for improving relevance

Systematic monitoring with a focus on impact

There is a need to monitor programme impacts systematically in order to understand and document uptake by policy-makers and other beneficiaries to insure relevance. Project partners should systematically collect evidence of the impact of their work, and include this in their regular project reporting. Clear parameters need to be identified to track and measure the impact of the programme's work. This will also help ensure a focus on impact pathways by the partners as they produce outputs and use them to drive results and change. Given that the project has already generated a wide range of knowledge products, we recommend development of a questionnaire to be sent to all participants in regular regional/programme partner meetings, and for future use to gauge the overall usefulness of products and processes. Training in impact pathways, orientation and assessment should be made available to project partners where needed.

Address key gaps

Project partners identified various gaps and needs that should be addressed in Phase 2 in order to sustain the project's relevance. These include: filling knowledge gap on the importance of mountain ecosystems for upstream and downstream livelihoods and economies; needs to increase awareness of the significance and consequences of climate change, and for mountain adaptation solutions at national to community levels; challenges and needs for improving transboundary, watershed and landscape level cooperation and action; need for access to basic data to increase know how, planning and action to adapt to a changing climate; and needs and guidance regarding mountain adaptation to help countries meet their obligations under various of the MEAs and associated processes (e.g., NAPs, NBSAPs).

Contribute useful knowledge products and data

The project needs to continue to fill research and knowledge gaps, and build knowledge resources of relevance to CCA in mountains for target audiences. This includes expanding and rationalizing data parameters being tracked, analyses undertaken, and knowledge products produced covering geophysical, meteorological, biodiversity, societal, and other relevant variables that can and will be used by mountain stakeholders. These should include inventories of institutions and networks involved in research, monitoring and generating solutions for mountain climate change adaptation. This should link with and complement WMO's OSCAR/Surface (in part SDC supported) under the WMO Integrated Global Observing System (WIGOS) framework. This programme can especially contribute research-based observation and implementation infrastructure for mountain regions. Building links with WMO will help ensure sustainability beyond Phase 2 of this programme.

Improve concreteness and practicality of the programme

Generally speaking for all outcomes, the A@A programme needs to become more concrete, practical, inclusive, and action oriented. The first phase was particularly focused on building the foundations for knowledge creation and sharing, and to support and develop regional intergovernmental processes. But Phase 2 will need to go beyond this. The challenge for Phase 2 in terms of increasing relevance is to ensure: increased access, dissemination and application of scientific data and analysis by the project, governments and others; upscaling and replication of mountain adaptation solutions of relevance at household, to national, to regional levels; further operationalisation of the regional platforms; improved policy-making at the national and regional levels; greater integration, cooperation and coordination with other actors in and for mountain regions; and elevation of the mountain voice and explicit inclusion of mountain issues in key global processes.

3) Recommendations for ensuring coherence

Need for stronger leadership structure to ensure coherence across the programme

In terms of the overall programme design, the evaluators felt that the specificities of the four outcomes and the complementary alignment between them was coherent in alignment with the objectives. SDC officials have generally reported that the structure and outcomes work well, with project partners understanding who has control over what. Yet some implementing partners have reported confusion over organisational structure, responsibilities, and what others are doing.

In general, the evaluators found that this is a programme where soft leadership (from SDC) has worked well to date. However, we suggest that a stronger overarching structure and mechanism would help ensure coherence in the work between the outcome teams so that they mutually reinforce each other, contribute across outcomes, enable mutual learning, build positive synergy across the project, and ultimately deliver stronger outcomes. This is challenging given that independent implementing partners are responsible for different outcomes (with separate contracts), heterogeneous conditions across the different regions, and the lack of an overall lead organization (SDC plays this role, but with limitations in its current mandate). The evaluators felt that a more formal coordinating structure would provide the benefits mentioned above, and enhance communications, provide mechanisms for oversight, and support a whole A@A programme attitude and approach amongst project partners.

SDC has the potential to play a core facilitator role and is supported with the mandate to do so. In the second phase it would be important for SDC to have a clearer role as the general overseer of the project. This could be conducted through a non-invasive, soft leadership, and productive approach, with a continual awareness of potential geo-political tensions. However, in terms of project management there are areas where having direct guidance from the SDC would benefit the efficiency of the wider project, allow synergies between outcomes to be more pronounced and collaboration within regions to be negotiated, and encourage broader engagement with the mountain adaptation community. An alternative, but less preferable arrangement, would be to have this role taken on under a specific contract by one of the partners or another organization.

Support more contact, shared activities and joint learning between the discrete outcome teams

Regular in-person meetings (now possible as COVID-19 recedes) and virtual meetings between outcome teams will contribute to enhancing coherence across the programme – but are insufficient. These should be complemented by more joint activities across outcomes given that there are many interlinkages (e.g., between Outcomes 2 and 4). Also, conducting seminars or in-person/virtual forums in which different strands of the project present their work would be a beneficial step in terms of sharing accountability, as well as build greater coherence across the wider project. These would help implementing partners gain a sense of wider project ownership going forward. They would also help form inter-regional bonds and working relationships across the project at personal levels, and provide a means for engagement with other mountain adaptation actors.

Create interlinked logframe for Phase 2 to support coherence within and between the Outcomes

An overarching logframe for Phase 2 would provide a useful foundation to build in joint work and deliverables between the different outcome teams and regions thereby enhancing overall programme coherence. While logframes are usually a tool to build discrete and specific work towards projects results, if responsibilities are shared they could also build in more collaboration between outcome teams and regions (e.g. to respond to some confusions between roles and activities reported for Outcome 1 with some of the regional partners for Outcome 2). A well developed and inclusive logframe could also provide a means to track progress towards A@A's objectives by complimentary activities being undertaken by individual project partners with non A@A resources. This would help build broader coherence across all the partners' efforts towards shared goals with A@A.

Use more interregional interaction to support more coherence between work at regional levels

Implementing partners suggested that more interaction was needed between the regions to understand the different approaches being undertaken by other regions but also to ensure coherence in approach, notwithstanding the fact that each region is unique in terms of climate impacts, institutional ripeness, political engagement of key governments, state of science etc. More incentives are needed for partners to engage. On a practical note, there should be one centralised log frame for Phase 2 (see above) which will help to cultivate a greater sense of overall coherence.

4) Recommendations for improving effectiveness

Synthesis of science and translation and transmission to other processes

There is a clear need for improved synthesis of mountain science and for sharing knowledge generated in a way that is accessible to the broad range of users important for adaptation in mountains - from the village, to practitioners, to academia, to policy makers. Feeding this knowledge into policy processes - a particular target of A@A - through contributing to assessments like those undertaken by the IPCC gives much needed visibility to data and knowledge compiled through this project, and helps ensure that the science is appreciated and utilised within policy processes. The strengths of MRI and its members are more through traditional science communication channels, often through the lens and value systems of academia. However, they had made significant advances in tailoring communication outputs to the needs of global policy processes. Nevertheless enhancing their science to policy communication skills is a topic which would benefit from additional investment in a Phase 2 of A@A.

Monitoring uptake of solutions

The overall quality of the solutions on the Portal is high, they are robust and geographically and thematically diverse. Some attention is needed to inclusion of solutions that (i) are tailored to developing and adjusting national adaptation policy and responses to MEA processes, as well as (ii) for creating enabling conditions for adaptation action at mountain community levels (e.g., tenure and resource rights resolution, sustainable livelihoods, rural institution building, services, etc.). However this work must not stop there. The key challenge in Phase 2 with regard to the Portal will be to develop a reliable system for monitoring uptake and the footprints impacted by the application of the solutions (e.g., beneficiaries, area, regions, etc.). Notwithstanding the need to fill Portal gaps, more analysis is needed in terms of who is using the solutions, how the solutions are actually being used and the added value of the solutions to other solutions portals. Solution providers could include Key Performance Indicators for each solution that they upload.

Developing the Community of Practice

In addition to deepening analysis of how best to support the uptake of the solutions, it will be equally important to determine how best to mobilize the Community of Practice (CoP). With the CoP in its early design phase, key tasks should be to ensure that the CoP makes full use of the solutions, exchange experiences, provides technical feedback, and builds further on the solutions to replicate them and expand their use to other regions where appropriate. It will be important to build a sense of community amongst CoP members to enhance co-support and outreach to potential beneficiaries. Attention will also need to be placed on ensuring broad regional and sectoral representation (e.g., scientists, technical workers, policy makers but also practitioners from Indigenous Peoples and local communities, etc.). Finally, it would also be useful for the mountain adaptation Community of Practice to build links to and learn from other thematically relevant Communities of Practice, notably the Friends of Ecosystem-based Adaptation (<https://friendsofeba.com>).

Continuing to strengthen regional cooperation

A key dimension in Phase 2 should continue to be building and supporting regional cooperation on mountain-specific CCA action and policy. Forging consensus is likely more feasible at the regional than the global level at this point, albeit with its share of challenges (e.g., security concerns, minorities/Indigenous Peoples straddling borders, migration, sharing of water and other natural resources). Success in raising mountain profiles on the global stage will benefit from increasing efforts to empower the regions to address transboundary mountain issues, and to build on the untapped potential of the nascent regional mountain platforms.

In alignment with work being done under Outcome 2, Outcome 4 could also draw on other experiences such as that of the Arctic Council (with its representation involving Senior Officials from member nations). More regional cooperation and integration can help countries address and resolve joint challenges together. This will require dialogue that leads to regional agreements, policy, guidance, investment and joint/coordinated implementation of measures - with successes in one region being used to inform and inspire action in others. In terms of transboundary issues, it will be important to track and explore innovative solutions in alignment with several of the MEAs – for instance, in some cases approaches like promoting transboundary peace parks might be useful tools for advancing adaptation priorities across contested spaces to which A@A could contribute.

Towards an Alliance of Mountain Countries

There is a momentum building in this project to create a platform for the voices of the countries in the project regions to come together, to exchange important experiences and to strategize about how best to elevate their common priorities in global processes. The development of a global alliance of mountain countries has been an aspiration of the mountain sustainable development circles for well over two decades – but has yet to build momentum. Today, there are strong examples of such alliances advancing specific agendas such as for Small Island Developing States (the SIDS) or for countries with significant coastal and marine areas.

A number of smaller mountain countries have frequently expressed interest in such engagements (e.g., Nepal, Kyrgyzstan, Bhutan, Uganda, etc.), and many others amongst the 63 countries which are government members of the Mountain Partnership. It was felt by implementing partners that in regard to mountain issues, states in the global south were doing the ‘heavy lift’ and that progress within the international policy realm would be accelerated if states in the global north were to be more explicit on their commitment to adaptation in mountains. Project partners will need to assess the overall role and impact of the existing NY based Group of Friends of Mountainous Countries in order not to duplicate processes. That said, the NY-based Group of Friends rarely are effective because of political dynamics within the GA and its committees. The reason why AOSIS and SIDS have worked so well is that they have insulated themselves from those politics and spend more time in their regions strategizing on how best to advance their priorities in global policy processes. What we are talking about here, is an alliance that grows specifically and explicitly from this project and elevates the unique shared knowledge and regional experience about integrating mountains in CCA into key global processes, most specifically, the UNFCCC. Internationally, Switzerland is well placed to lead such a move and advocate for the consolidation of a global alliance on mountain issues. If Switzerland were to encourage other states in the global north to follow suit, there is a greater potential for mountain issues to be given focus within high-level political and policy forums which could greatly advance the effectiveness of the A@A Programme.

Step up work on NAPs, and other mechanisms in support of other MEAs

The key entry points for mountains within the UNFCCC process continue to be NAPs and the Nairobi Work Programme. Moreover, the growth of the Green Climate Fund reflects the growing emphasis of countries around the world on supporting effective adaptation. NAPs provide an entry point for the mountain countries to obtain global support for CCA and mitigation. The focus should now be on the creation of mountain-specific indicators in local, national, regional and global reporting mechanisms, review processes and commitments especially under the NAPs, the NDCs, the Voluntary National Reviews of the SDG in key mountain countries (recognizing that countries already struggle with the broad scope of the 2030 Agenda and its targets and indicators). If mountain-specific indicators would actually help countries, then it would be something for phase 2 to consider. If not, then we propose to explore other ways to step up engagement in other MEAs or global agreements.

Opportunities should also be pursued to support inclusion of mountain indicators through other MEA mechanisms such as the NBSAPS, and tracking/supporting existing indicators of relevance to mountains such as the Mountain Green Cover Index managed by FAO (SDG 15.4.2.a) which is highly relevant to adaptation in mountains.

The evaluators also suggest promoting the inclusion of mountain-relevant indicators in periodical review processes of agencies in the United Nations system (such as WMO, UNESCO, FAO and UN Environment) and in the scientific syntheses and assessments that are supported by relevant global research communities and networks such as UNEP's GEO, International Science Council and the Mountain Research Initiative.

Strengthen alliances with other initiatives and external partners with common interests to increase effectiveness

The A@A should strengthen its impact and effectiveness by linking with and/or joining forces with other initiatives or sectors of relevance to climate change adaptation in mountains at national, regional and global levels. This would provide opportunities for sharing knowledge, learning and approaches; and for joint action to advance common agendas across all four outcome areas. Depending on the topic, outreach and coordination could be led by individual outcome teams for the programme, or through a dedicated project staff member for coordination and alliances. In addition, in Phase 2 we recommend undertaking a network mapping exercise in each region and globally on organizations and initiatives working on CCA in mountains so that the A@A programme can have its fingers on the pulse of what is happening in this field and be well placed to forge alliances and build effectiveness and efficiencies going forward.

Deepen coordination of the programme to improve effectiveness

We suggest that this be done through the development of a common logframe for Phase 2 which builds in recognition of overlapping and contributory work between outcomes and partners, as well as other work that the project partners are undertaking which is aligned with the objectives of A@A but implemented all or in part with other funding.

5) Recommendations for improving efficiency

Learn from COVID to increase efficiency

Travel restrictions due to the COVID pandemic, which started at the very outset of the A@A Programme, necessitated rapid adaptation to working through virtual/on-line means to hold meetings, workshops and conferences. Project staff rapidly adjusted to virtual communications and conferencing. They gained appreciation that, despite limitations, virtual means can permit broad and more equal participation at much lower costs, while also reducing the carbon footprint of the project.

Based on this experience, going forward the project will be able to continue to reduce travel and in-person meeting expenses while still engaging with project staff from the partner institutions and mountain adaptation stakeholders generally. Furthermore, they will continue to use such virtual tools to reach out and engage more people, partners and institutions than might have been the case if they had not gone through this forced learning.

At the same time there was a general recognition across the programme of the value of in person meetings, workshops and conferences for relationship building and to advancing the goals of the project. In fact, there seems to be a deficit of in-person contact both within and between some of the A@A outcome teams which needs addressing to build a whole A@A approach. Accordingly, conducting in person meetings in the next phase must be a priority within the project and with external partners.

Using more integrated logframes in Phase 2 to enhance efficiency

As mentioned for some of the other OECD DAC structured recommendations, the evaluation team recommends developing consolidated logframes for Phase 2 that captures core work by outcome lead organizations, as well as contributions from other project partners, which will increase recognition and tracking of progress towards programme outcomes more holistically and efficiently – also including aligned non-A@A work supported by other funding streams (taking care to avoid burdensome reporting).

Build stronger collaborations and linkages with other initiatives working to advance Mountain Adaptation

Strengthening linkages, communications and coordination with other organizations, networks and initiatives working to advance mountain adaptation (see recommendation under improving effectiveness above) will provide opportunities for mutual support, to increase reach, and generate cost savings resulting in efficiencies in the implementation of the A@A Programme. Examples include joining forces on side events at major international conferences and COPs, as well as

sharing costs for major events, publications, and generating other outputs. Building collaborations can have significant transaction costs, but rewards can be great, and staff time should be build in for this in partner budgets in Phase 2 of the A@A programme.

6) Recommendations for improving sustainability

Quality, utility, dissemination and use of A@A knowledge outputs and platforms

One dimension of ensuring the sustainability of the impacts of the A@A programme is through the uptake of its knowledge outputs to inform adaptation action and policy going forward. The production and dissemination of project knowledge products would increase in volume in a 2nd Phase of the programme: e.g. as Outcome 1 observatories and data platform become more consolidated it should be able to focus more on analysis and generation of science outputs, especially drawing on its large pool of scientist members. Success will hinge on science quality considering credibility, salience, and legitimacy; relevance and utility to mountain actors (from indigenous villages to national government agencies); and packaging, preparation, communications and promotion of knowledge products designed for target audiences in the mountain adaptation policy making and practitioner spheres.

In terms of the platforms (data/observatories, regional science-policy dialogues, adaptation solutions) it will be essential to promote engagement by relevant sectors through an effective communications strategy. Priority sectors are members of the policy, natural resource managers, and mountain science communities. To demonstrate the utility of the platform, introductory seminars should be held at strategic events and other outreach would assist in this goal. Once the platforms begin to gain users, ideally their usage will snowball, but initial effort must be focused on strategic engagement in order to reach this goal. Collaborating with other platforms and forums doing similar work would be useful at this stage to reach more users.

Identifying the right partners to sustain data and knowledge sharing platforms long-term

The steps covered above are important to establish the utility of the programme outputs and promote their initial uptake and application. However, it is essential to focus from this point forward on long-term strategies to sustain the various programme platforms long term after the next project funding cycle ends (Phase 2). This includes for the observatories and data inventories of Geo Mountain, the solutions platform, and the community of practice. In each case, candidate long-term homes with reliable funding and potential for commitment should be considered and cultivated. For Geo Mountain this would likely be through WMO associated structure already being explored; and for the Solutions Portal and the Community of Practice there are a number of options including the Mountain Partnership which provides a strong window to the mountain community and via its Secretariat housed within FAO has demonstrated staying power.

Strategies to support regional intergovernmental platforms

As and when the regional science-policy dialogue platforms get off the ground - highly contingent on heterogeneous conditions (and complex political environments) in the different regions - long-term strategies need to be developed to support associated secretariats or other kinds of coordination bodies. Ideally this would be through regular contributions from member countries to cover core operating costs, but are likely to depend on restricted donor funding all or in part for some time to come. To obtain such donor funding, the A@A programme in Phase 2 will need to strongly make the case for the utility of such platforms, indeed indispensableness, to improve prospects for resource mobilization and member country commitments.

7) Recommendations for improving likelihood of impact

Produce high quality outputs that meet real needs

The project needs to fill research and knowledge gaps, build resources, and provide high quality support to generate impacts across all four outcome areas. Success will hinge on maintaining outputs of the highest quality considering credibility, salience, legitimacy, relevance and utility to mountain actors (from indigenous villages to national government agencies). It also should engage with more knowledge builders and providers to address current and future knowledge generation and monitoring needs as they emerge. This should include using inventories of institutions focussing on research, monitoring and implementation (e.g. WMO/ OSCAR system would benefit from greater inclusion of infrastructure supporting research-based observation).

Work through clear impact pathways and targeted communications to reach key sectors for the project outcomes

The project needs to identify pathways to reach key audiences for the different project outcomes (e.g. policy community, practitioners, in and outside governments, etc.). This needs to include packaging, preparation, communications, events and promotion of knowledge designed for target audiences in policy making, practitioner, advocacy, research and mountain community spheres. Given risks of mountain issues getting lost amongst many demands in what often seems like a zero-sum game, it will be imperative that the project highlights mountain issues in a compelling way. This should include utilising scientific information and data to make the case for the wider socio-economic importance of mountain environments and their peoples, and the consequences of not taking action in mountains for national and global environmental and sustainable development agendas. This will also require being active in spaces that are not focused specifically on mountain issues.

Broaden engagement with other organizations and initiatives working on adaptation in mountains

In terms of ensuring and increasing the impact of the project it will be important to widen and diversify outreach and cooperation with relevant government agencies (national and subnational), other international organization and NGO/civil society led initiatives, and networks (e.g., Friends of EbA) working in the mountain adaptation space. This is covered in recommendations on increasing programme effectiveness above. In this regard it will be important to continue to expand the community of practice (to include more practitioners, scientists and policy makers) to increase its ability to capture and promote solutions that generate impacts. Conducting seminars at strategic events and enhanced outreach work would assist in this goal. The view is that once the platform begins to gain users and momentum it will snowball in terms of its impact. Collaborating with other platforms doing similar work would be useful, so as to diversity solutions offered and reach more potential users.

Identify incentives for adaptation policy change and action

Increasing awareness of mountain issues through targeted dissemination of the project's knowledge products should be used to elevate the need for adaptation in mountains within international and regional processes, which in turn could help diversity and increase funding for adaptation action at national levels and on the ground. To the extent possible the project should identify diverse funding streams that can support adaptation policy change and action and make this information available to project stakeholders. It should also prepare knowledge products specifically focussed on influencing the donor community such as the Green Climate Fund and others to prioritize support for adaptation in mountains. Care should be taken to ensure that attention is drawn to all mountain regions, but in particular those which are more neglected from the funding perspective (e.g. as described for the Southern Caucasus), and to be sensitive to the risks of competition for limited funding resulting in losses for some regions (which lack access to diverse funding streams) – contradicting one of the core tenets of this project.

Get the Project Structure right for impact

There is a feeling that the structure and outcomes work well, with project partners understanding who has control over what. But this feeling is felt by SDC officials and not by implementing partners who report confusion over organisational structure, who is in charge of what and what other aspects of the project are doing. In general the evaluators recommend greater attention to communication and collaboration between Outcomes, implementing partners and the SDC. Conducting seminars or an in person forum in which different strands of the project present their work and progress would be a beneficial step in terms of ensuring mutual accountability as well as greater clarity of the work of the wider project which would lead to greater impact. It is important that implementing partners feel a sense of ownership over the wider project to ensure commitment going forward. Forming strong inter-regional bonds and working relationships in this respect is important.

It was felt that the SDC had the potential to deepen its core facilitator role. Going forward there needs to be a clearer role for the SDC as the general overseer of the project. This must be conducted in a non-invasive and productive method, with a continual awareness of potential geo-political tensions, but in terms of

project management there are areas where having guidance from the SDC would benefit the efficiency of the wider project and allow synergies between outcomes to be more pronounced and collaboration within regions to be negotiated. Further, engaging a member of staff whose focus is on encouraging and facilitating collaboration between regions, partners and stakeholders would be a good way to insight this collaboration, and maintain communication building on in person meetings.

B. Recommendations for the four Outcomes in Phase 2

1) Recommendations for Outcome 1 in Phase 2

Strengthen capacity

With only a small number of dedicated staff in MRI (2-3), but an extremely rich pool of scientific and technical expertise around the world in MRI's Expert Database, distributing the workload is crucial for the success, impact and sustainability of this outcome as it moves into Phase II.

Sharing the work amongst key stakeholders similarly applies to the other A@A outcomes. To make this work well for strengthening and building consistent mountain observation data and information services, significant investment will be needed in capacity building, as well as ensuring that assistance is available from MRI directly, peers, or drawing on external expertise where needed. It will also require maintaining an effective culture of empowerment, sharing, clarity of responsibilities, and accountability amongst all mountain data collaborators associated with GEO Mountains.

Incentivise the involvement of scientific experts

More efforts are needed to explore how best to incentivise the involvement of scientific experts and increase the number of "active" members of the network. A number of incentives can improve engagement, including opportunities to: co-author peer-reviewed journal articles; build fruitful collaborations with other scientists and technical experts as a part of a high impact and dynamic network; jointly fundraising for research projects, etc..

Identity, develop and apply standards for data collection and management

Alignment with standards and approaches developed by leading organizations and networks in the climate change field will be vital – especially those pertaining to WMO. The adoption and sharing of Open Science, Open Data, and other such principles and standards provide useful foundations. In addition, a participatory process with stakeholders will need to be continued and strengthened for the development of tools and guidance for data collection methodologies, prioritization, and management.

Focus on open-source tools, apps and data

This will be vital to keep costs low, ensure long-term sustainability, and to give back to the larger climate change adaptation communities. This will also enable and support the transfer of data, tools and services into the hands of local and decentralized stakeholders to help them design and co-design their own data collection and monitoring protocols. In Phase 2, this devolution may contribute to developing more “crowd-sourced” (including citizen science) approaches for enriching the mountain climate data ecosystem. At the same time, it will be important for MRI to continually “keep its fingers on the pulse” of mountain data initiatives (and other relevant environmental data initiatives) to enhance sharing, robust analysis and quality control (e.g. to compare in situ climatological data with those obtained via remote sensing, as MRI will be doing for Africa in October 2023).

Track and use, where appropriate and cost-effective, the latest data collection technologies

GEO Mountains through MRI staff and members should continuously track emerging data collection and monitoring technologies (e.g., remote sensing, drones, citizen science approaches, etc.) applicable to mountain systems, and test and integrate them where justified.

The importance of increased standardisation and interoperability

The mountain observation community should work towards increased standardisation and interoperability in terms of variables observed and the means of data sharing and access, ideally converging to a common machine-readable metadata standard that is appropriate for both point time-series and gridded data. The ideal would be a single global mountain database from which data can be arbitrarily queried, retrieved, and/or processed - although this will not be feasible for some time to come.²² GEO Mountains’ data community should converge around core metadata standards - in a participatory manner. Ideally, this would evolve into a federated data system which could host data in a distributed way, that can be queried from a single central entry point, and provide storage for those who cannot do this themselves. This is a major challenge, likely over-ambitious for Phase II, but important to build momentum towards.

²²[ICIMOD, "Mountains and Climate Action: Priorities for COP 26" ICIMOD, 2022. https://lib.icimod.org/record/36066/files/HimalDoc_2022GEO_Mountains_Policy_Brief_IYSMD22.pdf.](https://lib.icimod.org/record/36066/files/HimalDoc_2022GEO_Mountains_Policy_Brief_IYSMD22.pdf)

Expand while rationalizing the scope and range of Climate, Geophysical, Biophysical and Societal factors being tracked

This is vital both to understand and track the impacts of climate change on high altitude systems, but also to adapt response options and their feasibility and effectiveness. Ongoing work on essential climate, biodiversity and societal variables will need to be continued with conclusions drawn and acted on in Phase II of the A@A programme. This will require greater interdisciplinary collaboration between the biophysical sciences, the social sciences, and the humanities regarding data priorities and data integration methodologies to improve collective understanding and abilities to predict future changes and their impacts and adaptation response options in complex mountain social-ecological systems.²³

There is a growing body of evidence that a wide range of societal factors, some politically sensitive in some countries and regions, need resolution for adaptation action to be effective and sustainable at local to national levels. For instance, land tenure, natural resource governance, human rights; cultural, socioeconomic, and livelihood factors; availability of services (informal and formal, i.e. government); and more. Addressing the data and knowledge needs for such factors will likely require expansion of the disciplinary expertise (and possibly institutional partner types) in the MRI experts registry, and incorporation of holders of other kinds of knowledge such as from Indigenous/traditional knowledge systems. At the same time, rigour will be required in terms of identifying the range and scope of variables to track since there is a risk of overwhelming the capacity of MRI and partners at this stage and into Phase 2.

Demonstrate applications of diverse mountain datasets

MRI reported that “the integration of multiple datasets with the latest process-based models and machine learning algorithms, along with purposeful science-policy-practice dialogues and iterative exchanges to define relevant applications, have the potential to revolutionise the translation of mountain observations into knowledge and subsequent action.”²⁴ The evaluators support this assertion, and recommend that in Phase II, Outcome 1 demonstrate the applications of diverse mountain data sets to inform adaptation action using impact assessment methodologies to understand how and under what conditions this approach can be used most effectively.

Mobilise third-party funding and broaden the support base

MRI/GEO Mountains should continue to seek third-party funding (MRI is currently in the process of submitting proposals), in addition to SDCs contributions, to broaden the support base and long-term sustainability for this work. At the same time, Outcome 1 work should also draw on the fundraising expertise, energy and

²³https://lib.icimod.org/record/36066/files/HimalDoc_2022GEO_Mountains_Policy_Brief_IYSMD22.pdf

²⁴https://lib.icimod.org/record/36066/files/HimalDoc_2022GEO_Mountains_Policy_Brief_IYSMD22.pdf

experience of its members – many of whom are effective science fundraisers in their own rights with access to donors which may be harder for MRI to reach. Through maintaining a high degree of communication among its member’s registry, and joint planning, it should be possible to develop and maintain a highly effective “shadow budget” that could greatly magnify the work of GEO Mountains and the strength of the network as a whole. In fact to incentivize such partner fundraising, a small matching grant facility could be considered for Phase II.

Develop capacity in mountain communities to generate data and translate it into knowledge for broader use.

There are several elements here which we recommend for potential (further) inclusion in Phase 2:

- Develop capacity in pilot mountain communities for data collection, knowledge generation and sharing. This will give them ownership of the data lifecycle and enhance their ability to translate data into decision-relevant information.
- Strengthen citizen science through GEO Mountains Community Projects. MRI hopes to exploit the potential of this more going forward, recognizing the need to get protocols right, and incentivising participation, which we think is very appropriate (given many models of successful application around the world).
- Implement pilots with Indigenous Peoples and local communities to mine traditional knowledge (respecting IP concerns) for issues, and factors that the science community may be missing in terms of monitoring the impacts of climate change and identifying and tracking the effectiveness of adaptation solutions. Furthermore, develop capacity in communities so that they can do more with the data themselves, and translate data into decision-relevant information and knowledge. Decentralise the work, and allow scientists to work in a more bottom-up way.

2) Recommendations for Outcome 2 in Phase 2

Note: these recommendations have been drawn from our bilateral and collective interview with partners and from the shared planning document “A@A output collection for Phase 2”.

	ANDES	EAST AFRICA	HKH	SOUTH CAUCASUS
<p>Informing science-policy dialogues with knowledge and solutions</p>	<p>Support Andean countries in integrating mountain priorities in their NAPs.</p> <p>Continue to undertake and develop regional analysis of CCA challenges and strategies, and promote and communicate findings to guide decision making.</p> <p>Undertake comparative analyses along with CCA solutions throughout the region. Continue to support for implementation and monitoring of CCA solutions throughout the region.</p> <p>Support the creation of a network using through existing and new on Andean mountain observatories to undertake and promote integrated socioeconomic and other monitoring of relevance to CCA.</p>	<p>Develop/Need guidance documents to support integration of mountains in NAPs.</p> <p>Improve and operationalize science-policy interfaces, effective tools and platforms for sharing experience and knowledge, best practice and lessons learned to support for climate change adaptation action in the EAC region.</p> <p>Foster dialogue and share science, – policy options, and best practices to enable adaptation stakeholders to – practice interfaces to make full use of available data, relevant research and practical experiences so that decision-making is evidence-based, well supported and informed.</p>	<p>Bring onboard most relevant stakeholders from the RMCs, and strengthen science cooperation to foster regional cooperation and collaborative action for CCA in the HKH region.</p> <p>Coordinate and facilitate, at national and sub-national levels, science-policy dialogues on CCA and resilience building in RMCs].</p> <p>Co-coordinate and /conduct thematic assessments for generating scientific evidence to support CCA policies for the HKH.</p> <p>Coordinate and facilitate meetings of Thematic Working Groups.</p> <p>Regularly organise the HKH Science-Policy Forum on regional issues, including transboundary climate change adaptation in the HKH.</p> <p>Strengthen and promote the HKH Regional Database and Information Services (RDIS) to make available offer data and evidence on climate, weather and natural resources for pre-emptive CCA planning, policy and programming in the HKH.</p>	<p>Foster science-policy interfaces to enable towards making better use of available data, relevant research and practical experiences as well as better informed and evidence-based decision-making.</p> <p>Activity 2.8.5 Further assess and disseminate mountain specific adaptation solutions to increase towards up- and outscaling (continuation of Activity 2.8.5). As needed, support Southern Caucasus countries in integrating mountain priorities in their NAPs.</p> <p>Activity 2.8.6 Foster outreach, and communications and networking of RADISC and its stakeholders to strengthen CCA for advocacy at regional, interregional and global levels (continuation of Activity 2.8.6).</p>

			As needed, support HKH countries in integrating mountain priorities in their NAPs.	
Strengthen regional platforms and processes	<p>Strengthen the Andean Continental perspective on SMD and mountain CCA while also and integrated trans-disciplinary approaches through the AMI and science policy dialogue processes focussing on governments but also involving other key mountain stakeholders in the region (e.g., using trans-disciplinary approaches).</p> <p>Continue to strengthen knowledge management and sharing tools/platforms to fill gaps and enhance accessibility for target audiences.</p> <p>Focus on implementing activities defined in the AMI Road Map and Action Plan.</p> <p>Ensure that the regional dialogues feed into global processes.</p>	<p>Draw on Outcome 1 knowledge outputs to strengthen cross-border mountain ecosystem management plans and strategies.</p> <p>Support EACMS must be supported to elevate the importance of SMD, mountain CCA specifically, in national and regional processes.</p> <p>Further investigate and assess mountain specific adaptation solutions towards further promotion and up- and outscaling.</p> <p>Support mainstreaming of SMD in climate policies, laws and strategies relevant for mountain climate action in the EAC region.</p> <p>Develop a regional sustainable mountain development (SMD) strategy in consultation with EAC Partner States and other identified relevant stakeholders as a means to gain towards political support and approval for implementation.</p>	<p>Coordinate and facilitate HKH high-level task force meetings.</p> <p>Coordinate and facilitate periodic the Ministerial Mountain Summits periodically.</p> <p>Coordinate and facilitate meetings of thematic working groups [consisting of experts, practitioners and development professionals from RMCs and national, regional and international organisations].</p> <p>Coordinate the drafting of policy recommendations by the thematic working groups.</p> <p>Coordinate the drafting of ministerial declarations, guidelines and/or protocols, as required by institutional mechanism.</p> <p>Deepen understanding of domestic political challenges as a means to continue to advance the mountain CCA agenda.</p> <p>Develop a cComplementary track for engaging civil society and other stakeholders as sources of knowledge, advocates and solution implementation agents to advance CCA in the region.</p> <p>Deepen work to support addressing in advancing SMD challenges in global processes.</p>	<p>Facilitate operations and meetings of newly established Regional Adaptation Dialogue in the South Caucasus (RADISC) in line with the along agreed concept and / Terms of Reference.</p> <p>Activity 2.8.2 Support mainstreaming of sustainable mountain development (SMD) in climate policies, processes and strategies relevant for mountain climate action in the South Caucasus (continuation of Activity 2.8.2).</p> <p>Activity 2.8.3 Consolidate and start implementation of RADISC work plan in close coordination with policy representatives to improve knowledge of mountain climate change adaptation, and develop common actions to increase resilience in the South Caucasus mountainsMobilize support for RADISC (continuation of Activity 2.8.3).</p> <p>Continue to build synergies with SDC South Caucasus CCA project.</p> <p>Ensure a conflict-sensitive approach to navigate the complex geopolitical dynamics. This is essential.</p> <p>Going forward there is a continuing need to ensure a conflict-sensitive approach in order to successfully navigate the complex geopolitical dynamics. The increasing escalation of border disputes and fights needs to be constantly monitored and taken into consideration, and as well as contingency measures need to be elaborated. This has been successful so far within the project with meetings being held between the states who are currently engaged in active conflicts. However, the next phase needs to build on this to confirm and validate the importance of regional collaboration</p>

				<p>efforts, united around the shared goal of climate resilience and adaptation within mountain ecosystems.</p> <p>Promote participation from the community level in CCA processes to strengthen local ownership.</p> <p>Raise under-recognized profile of South Caucuses in UNFCCC.</p> <p>Identify financing opportunities for implementation of concrete mountain climate action, and cooperate on resource mobilization with relevant stakeholders, organizations, donors and development partners</p> <p>Develop inter-sectoral programme(s)/ project(s) on climate-resilient development and/or ecosystem management in the South Caucasus mountain ecosystems and submit for funding targeting large-scale financing mechanism (Adaptation Fund).</p>
<p>Strengthen the exchange of experience on CCA</p>	<p>Strengthen inter-regional exchange and collaboration between AMI and other global mountain platforms.</p> <p>In alignment and coordination with Outcome 3, consolidate a Community of Practice on Climate Change Adaptation for the Andes with the participation of key regional stakeholders including AMI focal points, practitioners, researchers and community organisations.</p>	<p>Continue to engage in interregional dialogues such as the Mountains CONNECT workshop in Austria, which helped to facilitate exchange between EU partner states and helped to elevate the overall importance of mountain specific CCA in East Africa.</p>	<p>Continue to engage in interregional dialogues and exchanges such as ones like the Mountains CONNECT workshop in Austria.</p>	<p>Continue to engage in interregional dialogues and exchanges such as ones like the Mountains CONNECT workshop in Austria.</p>
<p>Interregional cooperation</p>	<p>Support interregional exchange and learning through dedicated workshops (follow-up Mountains CONNECT), study visits between A@A target regions and beyond, and further promoting the Mountains-Connect.org online space These enable sharing of experiences, innovations, approaches and differing perspectives with governments from all regions. The increased interregional contact between governments will also assist and encourage them to join forces to advance interests of common concern in global policy processes and to the CCA donor community. Exchanges and study visits in some cases will require finding solutions for language issues.</p> <p>Interregional exchanges will also benefit the regional implementing partner through enabling them to share learnings (success and failures) and innovations thus promoting an adaptive approach to project implementation.</p> <p>Strengthen the joint work between key global mountain actors' and implementing partners.</p>			

	<p>Activity 2.10.1 Support interregional exchange and learning through dedicated workshops (follow-up Mountains CONNECT), study visits between A@A target regions and beyond, and further promoting the Mountains-Connect.org online space</p> <p>Activity 2.10.2 Develop and disseminate apply innovative learning tool (e.g. governance simulation; games. etc.) suitable for use application at different governance levels across all in the A@A target regions</p> <p>Activity 2.10.3 Organize interactive interregional learning events at dedicated regional and global fora (e.g. in the context of the UNGA announced 5 Years of Action for the Development of Mountain Regions) for regional advocacy and promoting mountain range governance. These could be attended by both representatives and staff of government agencies, but also from NGOs, civil society, and research institutions.</p> <p>Support Close collaboration and coordination between with regional partners for interregional exchange events (e.g., CONDESAN responsible for Andes, and ICIMOD responsible for HKH)</p> <p>Communication, outreach and tool development support by Outcome 3</p> <p>Support participation of MRI network members in exchanges, representing the science and research community, as a means to enhance contacts between the science and policy communities. through MRI</p>
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3) Recommendations for Outcome 3 in Phase 2

Continuously improve the quality of the Solutions Portal

- Expand regional coverage
- Expand ecosystem types
- Address different climate impacts
- Focus on productive sectors
- Include transboundary solutions
- Increase analysis of how solutions are being used and distill lessons learned to support future users.
- Engage with A@A partners and others through a survey to collect information on solutions
- Create content to further engage with the public, including: promotional materials, solutions stories, social media

Assess the effectiveness and overall uptake

- Further monitor the effectiveness, current usage and scale (Including potential for upscaling) of the solutions through the Mountain Observatories and in-site research work
- Strengthen the monitoring of the uptake and integration of the solutions
- Implement further analysis of where and how solutions are being used, and their added value to other portals.
- Solution providers could include KPIs for each solution that they upload, identifying::
- Extent to which the solution has addressed these constraints;
- How the solution catalyses fundamental change in a governance system or behaviour;
- Scalability of change in terms of whether it can be feasibly scaled up and duplicated in other mountain regions;
- Sustainability in terms of whether it demonstrates financial, economic, and environmental sustainability.
- Mobilize “working groups” across regions and facilitate community-based focus group meetings

Support the needs of policymakers

- Significant potential to be explored in curating solutions that are specific to the needs of policymakers and which could assist them in the integration of mountain issues in their NAPs, NDCs, national disaster reduction strategies, NBSAPs etc. and also in developing national mountain strategies.
- Develop pilot projects with selected countries expressing an interest in developing a national mountain strategy. The partners could use the remaining time in Phase 1 to identify those countries and then in Phase 2, the focus could be on providing technical and policy assistance to countries in identifying the key mountain-specific CCA challenges to be addressed and co-creating the potential policy responses that could be consolidated in a national strategy. Such strategies documented in the Solutions Portal would be of use more broadly across mountain countries. National strategies should also link with regional strategies developed under Outcome 2. If

national mountain strategy solutions are found sufficiently robust and replicable, they might be taken on for application broadly for some/all the countries in the A@A regions in the latter stages of Phase II.

Empower local communities to identify, develop and take ownership of the solutions

- To enhance long-term, sustainable outcomes of A@A at local levels, the project should encourage the development and inclusion of solutions that focus on training and empowering local populations to identify their own solutions and take ownership of adaptation.

Continue to build the Community of Practice

- Ensure that the CoP makes full use of the solutions, exchanges uptake experience, provides technical feedback and builds further on the solutions to either replicate them in other regions or thematics.
- Serve as a platform where implementation challenges and best practices can be discussed, tested, exchanged and scaled and replicated
- Prioritize regular meetings, workshops and trainings, coordination, and communications among GMC
- Create a social media account to share communications from the CoP
- Convene webinars and training sessions around clusters of solutions to bring together solutions providers and users to exchange experiences. This interaction will sow the seeds of the CoP and create an exciting dynamic that will sustain the momentum of the CoP in the next phase.
- Launch small grants scheme to operationalise selected solutions and incentivize small actions to raise interest in the platform.
- Play an important role in mobilising mountain voices in advance of key adaptation-focused events, not to mention the UNFCCC COPs.
- Expand the geographic diversity of the solution providers and users and ensure targeting of those mountain regions where there is a shortage of adaptation solutions.
- Increase the involvement of local stakeholders and to ensure that solutions are adapted to their specific needs. Solutions Stories will help to attract those individuals who may have less technical background than mountain experts.
- More workshops with partners along the lines of the Vienna Mountain Connect workshop to expand the capacity of the CoP to increase impact with policymakers.
- More focus on the interregional exchange of experiences, best practices and learning between regional bodies supporting mountain areas. This could include more study visits on different levels and with different stakeholders, including local communities. Support more intra-regional exchange, e.g. between certain economic sectors such as agriculture, tourism etc.

Ensure the sustainability of the portal

- Consider linking it to larger platforms and initiatives
- Ensure portal knowledge is mirrored in other initiatives to achieve further continuity and circulation of knowledge beyond the life of A@A
- Consider linking the CoP (particularly the Nairobi work program) to the UNFCCC, which has indicated its interest in, though not yet achieved, creating a portal on mountains

4) Recommendations for Outcome 4 in Phase 2

Continuing to elevate the overall profile of mountains

- Elevating profile within global policy processes is vital to building momentum to address CCA needs across all mountainous areas around the world - including in higher altitude regions within countries where mountain matters are not recognized in terms of their national importance.
- The programme should avoid the characterisation of engagement in the global policy landscape as an end in itself, but rather as a means to an end. This will need to drive the repositioning of mountain issues at the regional and national levels, in ways that will deliver tangible local benefits.
- Deciding on which global policy processes to focus on in the second phase will depend on where the best traction can be achieved.
- It is also important to consider which constituencies should be further engaged in this process to help elevate the importance of mountains on the global stage.
- Conceptualization and organization of webinars, workshops, and side-events .

Supporting the building of an Alliance of Mountain Countries

- Consider how best to build on and support the expansion of the Group of Friends of Mountainous Countries, which was established under initiative of the Kyrgyz Republic. This could even take the form of a formal negotiating bloc that unites mountain countries in the UNFCCC process similar to the Rainforest Coalition, which united rainforest nations to join forces in raising awareness about the impacts of climate change on forests and the role of forests in climate mitigation. Building and strengthening a coalition of like-minded governments, accompanied by technical expertise and civil society representation, could do much to elevate the profile of mountains on crowded global agendas. While this recommendation may well fall beyond the scope of the A@A programme, it could provide a basis for potential collaboration with the Mountain Partnership.

Continuing to strengthen regional cooperation as it pertains to Outcome 4

- In phase 2 more efforts are needed to continue building and supporting regional cooperation on mountain-specific CCA action and policy. Consensus is usually more feasible at the regional than the global level at this point, albeit with its share of challenges (e.g., security concerns, minorities/Indigenous Peoples, cross-border considerations etc. Success in raising mountain profiles on the global stage will benefit from increased efforts to empower the regions to address transboundary mountain issues and to build on the untapped potential of the nascent regional mountain platforms.
- In alignment with work being done under Outcome 2, Outcome 4 could also draw on other experiences such as the Alpine and Carpathian Conventions, especially in terms of developing regional policy road maps that could eventually be transformed into regional environmental agreements on mountain-specific CCA.
- In terms of transboundary issues, it will be important to track and explore innovative solutions in alignment with several of the MEAs - for instance, in some cases approaches like promoting transboundary peace parks might be useful tools for advancing adaptation priorities across contested spaces to which A@A could contribute.

Increasing traction with the MEAs

- The key challenge in terms of increasing traction within the MEAs is to find specific hooks for mountain issues and then find ways to capitalize on these entry points. The Cross-Chapter on Mountains for AR6 is an important example of a so-called hook within the UNFCCC process which draws on the A@A partners' strengths. This helped to open up policy space for further progress such as the reference to mountains in the Nairobi Work Programme.
- Another opportunity for increasing overall traction within the MEAs is for the A@A consortium to more proactively and collectively engage with the MEA

Secretariats, especially to demonstrate the diverse expertise of the A@A partnership and the specific value-add that it can bring to technical issues related to mountains in the UNFCCC, CBD or CCD, among others. And because Switzerland is a party to these key conventions, it can always help to champion the importance of mountains in these intergovernmental processes and also to demonstrate by example, the benefits of integrating mountain issues in their NAPs and NDCs.

- Finally, considering limited resources for Phase 2, it is important to stay focused on the UNFCCC, Sendai Framework and CBD. If the project is successful in mainstreaming the importance of mountain ecosystems in these three big policy processes, it will have greater potential success in anchoring the SMD agenda in other tracks. Nevertheless, the programme should continue to track the other MEAs, to the extent partner bandwidths permit, in case major opportunities emerge. There is an evolving consensus among project partners to forego work in relation to the SDGs and focus instead on the post-2020 Global Biodiversity Framework, where there are very clear hooks for advancing SMD.

Elevating mountains in the UNFCCC process

- The continued focus on the UNFCCC process has been reinforced by all interviewees, especially considering the rapid pace that worsening climate impacts are undermining development achievements in mountain regions.
- A key challenge in Phase 2 will be for the A@A programme to step up efforts to support mountain countries in prioritizing efforts to adapt to the impacts of climate change and of course, improve adaptation strategies that increase the income and resilience of mountain communities, investments into disaster preparedness and risk reduction, build cross-border collaboration, and support the knowledge base so that policies are made based on sound evidence.
- Participation in workshops, side-events, meetings.
- On supporting climate negotiators, other colleagues/entities also do this quite effectively already such as the ICCL, who convene meetings under Chatham rules which are very effective for prep ahead of SBSTA and COPs - albeit largely focused on glaciers/cryosphere ... could they be a partner for Phase 2?

Integrating mountains within the NAPs

- The key entry points for mountains within the UNFCCC process continue to be NAPs and the Nairobi Work Programme.
- NAPs provide an entry point for mountain countries to obtain global support for CCA and mitigation. Therefore, the focus should now be on the creation of mountain-specific indicators in local, national, regional and global reporting mechanisms, review processes and commitments especially under the NAPs, the NDCs, as well as the Voluntary National Reviews of the SDGs.
- Promote the inclusion of mountain-relevant indicators in periodical review processes of agencies in the United Nations system (such as WMO, UNESCO, FAO and UN Environment) and in the scientific syntheses and assessments that are supported by relevant global research communities and networks such as UNEP's GEO, the Adaptation Gap Report.
- More emphasis on working with specific countries to support them in putting the guide to action in a number of pilots. In this regard, the CoP can play a critical role in convening government officials with technical experts to explore lessons learned that can be further reflected in the national guidance materials prepared by the project.
- Ensure that the A@A guidance documents are underpinned by the most rigorous science to ensure that they garner political support within the UNFCCC process so that they can be replicated in other countries.
- Increase the generation of knowledge products such as policy/issue briefs, testimonial videos, and other products that can assist decision-makers in addressing mountain-specific CCA challenges

Elevating SMD agenda in the Sendai Framework

- Utilize the recently established joint WMO and UNDRR Centre of Excellence for Climate and Disaster Resilience, which will act as an information hub about the escalating impacts of climate change and extreme weather and how we can manage and mitigate these risks.
- Join forces with the climate and disaster risk thought leaders and practitioners to advance joint research, policies, and capacity-building, in a manner that will influence and strengthen existing NAPs, NDCs and national DRR strategies.²⁵ It is equally important to engage with Sendai on region-specific issues, especially since Sendai is a very decentralised framework that is very action-oriented.

Elevating the SMD agenda in the Green Climate Fund

- Continue to strengthen the mountain voice within key global funds such as the Green Climate Fund and the Global Adaptation Fund. So far, GCF has approved at least 31 projects in mountainous areas in 26 countries, with a total GCF investment of USD 1.8 billion.²⁶ And most recently the GCF decided to approve funding for three new projects in Bolivia, Cambodia and the Philippines, valued at \$145.3 million, which are focused on fostering CCA and resilience for smallholder farmers, local communities, and other value chain actors in three nations facing increasing weather and climate-related threats to their agricultural practices and livelihoods.²⁷
- In addition to ensuring that the GCF's budget for mountain-related projects is significantly increased, the A@A programme has an important role to play to support the GCF in stepping up its support to projects that are not just conserving, restoring and sustainably managing mountain ecosystems but which are building resilience to multiple climate risks. This means thinking more vertically about how sustainable mountain approaches needed to vary according to altitude.²⁸

Elevating SMD agenda in the post-2020 Global Biodiversity Framework

- Contribute to the identification, development and inclusion of indicators specifically related to an importance for safeguarding mountain biodiversity and mountain communities and advancing climate change adaptation (e.g. through nature-based solutions), including the Mountain Green Cover Index and the indicators presented in the document "Indicators for elevating mountains in the CBD post-2020 Global Biodiversity Framework."²⁹

Engaging in the UN's 5-year plan on Sustainable Mountain Development (2022-2027)

- Building on the progress that the IYM 2022 achieved by enhancing greater dialogue, attention and action between different stakeholders committed to sustainable mountain development.
- Contribute A@A expertise to the development of mountain-specific measures, mitigation, and sustainable development strategies to tackle mountain-specific problems caused by climate change.
- Support increased international cooperation in bringing mountain sustainability to the surface.

²⁵ <https://public.wmo.int/en/media/news/new-centre-of-excellence-climate-and-disaster-resilience>

²⁶ <https://www.greenclimate.fund/insights/what-do-gin-and-tonic-coffee-and-mountain-climate-risks-have-common>

²⁷ <https://www.fao.org/newsroom/detail/green-climate-fund-approves-new-projects-worth-151.3-million-for-climate-action-in-bolivia-cambodia-and-the-philippines/en>

²⁸ <https://www.fao.org/newsroom/detail/green-climate-fund-approves-new-projects-worth-151.3-million-for-climate-action-in-bolivia-cambodia-and-the-philippines/en>

²⁹ https://www.fao.org/fileadmin/user_upload/mountain_partnership/docs/Mountain%20Partnership%20Biodiversity%20Policy%20Note.pdf

- While the focus of the A@A programme under this outcome is more on governments and intergovernmental processes, and mobilizing existing and emerging science to inform and mobilize action, consideration should be given to forging stronger alliances with civil society, including Indigenous Peoples and local communities as increasingly recognized and effective advocates. The Mountain Partnership may provide a useful entry point to accomplish this, but other means should also be explored.

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ANNEX V. EVALUATION QUESTIONS

Explanation

These questions have been designed specifically for the project implementing partners. The first set of questions (*A. General questions for all project implementing partners*) relates to the overall effectiveness of the project. These will be raised with each of you.

The second set of questions (*B. Specific questions for the four project outcomes*) is divided into four parts with clusters of questions for each of the four project outcomes. You are invited to respond to each of the clusters however, please feel free to respond only to those questions that pertain to the project outcome for which you were responsible.

A. General questions for all project implementing partners

1. Is the project aligned with the needs of the project beneficiaries?
2. What is the relevance of the project for the promotion of sustainable mountain development?
3. Is the project compatible with the interventions of the implementing partners, other actors as well as global and regional policy frameworks?
4. How effectively has the project achieved its goals, outputs and outcomes?
5. How has the project influenced behavioural changes among policy makers and other actors?
6. What are the overarching challenges and lessons learned that are relevant for phase 2?

B. Specific questions for the four project outcomes

1) Questions for Outcome 1 (Mountain observation data and information services)

1. How has the overall quality, consistency, comparability, range and scope of mountain observation data and information services improved due to the work of A@A programme?
2. How have the improved data and information services fed into regional and global knowledge products to support the IPCC and other global and regional processes due to the work of the A@A programme?
3. What has been the impact of these improved data and information services so far for mountain climate change adaptation policy, practice, capacity building, and investment?
4. How adequate is the current network of facilities, stations, sites and institutional partners to support field observations, remote sensing and high-resolution climate modelling to meet global mountain needs?
5. How have data collection and monitoring, and information services priorities been established, and by whom?
6. What are your recommendations for continuing this work in Phase 2 of the A@A programme, including any needs for the inclusion of additional variables (eg biodiversity, societal)?

2) Questions for Outcome 2 (Science-policy platforms)

1. Have the science-policy platforms enabled the increased integration of mountain climate change adaptation into planning and policy processes of regional bodies, frameworks, platforms and initiatives?
2. Have regional dialogue platforms been established, strengthened and or formalized? And, how have established processes such as the Andean Mountain Initiative, East African Community and others contributed?
3. Is there any evidence that the strengthening of these platforms and facilitation of science-policy dialogues are increasing cooperation at regional levels, and to what end?

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| 4. Has inter-regional exchange between the mountain platforms been strengthened, and what has been accomplished as a result? |
| 5. What are your recommendations for continuing this work into Phase 2 of the A@A programme? |

3) Questions for Outcome 3 (CCA solutions)

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| 1. How effective is the A@A Solutions portal thus far? What are the preliminary conclusions thus far about uptake, scale and usage? |
| 2. What value additions does the global network provide over other networks for CCA solutions in terms of collecting and disseminating robust, trustworthy, and up to date knowledge on CCA solutions for high altitude regions? |
| 3. What have been the challenges for establishing the global network, including any gaps? |
| 4. What is the status of the CoP of solution providers and users, and how inclusive has this been in terms of mountain stakeholders? |
| 5. What are your recommendations for continuing this work into Phase 2 of the A@A programme? |

4) Questions for Outcome 4 (Influencing global policy frameworks)

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| 1. How has the project helped to elevate the focus on CCA in mountain regions in the UNFCCC, Sendai Framework, SDGs, and through other MEAs and global processes? |
| 2. What has been the uptake of the guidance documents and other key knowledge products produced by the A@A programme regarding mountain-specific CCA solutions in the revision process of the NAPs, NDCs, national DRR strategies and national SDG implementation strategies |
| 3. How have mountain issues been reflected in decisions of the UNFCCC COP-26 and 27? Is there any emerging evidence thus far of the integration of mountain issues in the preparation of the Paris Global Stocktake? |
| 4. How effective have the policy and guidance documents been in elevating mountain issues in national Disaster Risk Reduction (DRR) strategies? Is there evidence that national DRR strategies are increasingly taking these considerations into account? To what extent has the project also influenced the uptake of mountain issues at the UNDRR Global Platform and its regional platforms in 2022? |

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| 5. How has the programme contributed to the SDG review cycles that are conducted under the High-Level Political Forum? Having the knowledge of products and case studies helped to strengthen national monitoring frameworks in mountain regions and to ensure that mountain issues are addressed in regional and thematic SDG assessments. |
| 6. What has been the overall impact of the communications strategy that was prepared under the ambit of Outcome 4. |
| 7. What are your recommendations for continuing this work into Phase 2 of the A@A programme, including considering the evolving landscape of global policy frameworks and processes? |

ANNEX VI. INTERVIEWEES - internal only



ANNEX VII. COMPLETED EVALUATION RATING TABLE

Assessment grid (version July 2021)

Note: this assessment grid is used for evaluations and internal assessments of SDC or SECO financed projects and programs (hereinafter jointly referred to as an 'intervention'). It is based on the OECD Development Assistance Committee evaluation criteria.³⁰ If specific results are not yet measurable at the time of the assessment, it requires analysing the likelihood of achieving impact and sustainability. All applicable sub-criteria should be scored and a short explanation should be provided. Additional sub-criteria may be added.

Select the corresponding number (0-4) representing your rating of the sub-criteria in the column “score”: 0 = not assessed; 1 = highly satisfactory; 2 = satisfactory; 3 = unsatisfactory; 4 = highly unsatisfactory

- **Highly satisfactory (HS)** – there were no shortcomings in relation to the intervention’s relevance, coherence and efficiency; the objectives at outcome level were fully achieved or exceeded and are likely to have a significant impact, which will be sustained in the future.
- **Satisfactory (S)** – There were moderate shortcomings in relation to the intervention’s relevance, coherence and efficiency. Most intended objectives at outcome level were achieved (or for mid-term: are likely to be achieved). The likelihood of achieving intended impact or sustainability of the intervention’s benefits is reasonable.
- **Unsatisfactory (U)** – There were important shortcomings in relation to the intervention’s relevance, coherence and efficiency, in the achievement of its objectives (N.B. if outputs are achieved, but do not result in the expected outcomes, consider rating relevance and/or effectiveness as unsatisfactory). The likelihood of achieving intended impact or sustainability of the intervention’s benefits is questionable.
- **Highly unsatisfactory (HU)** - There were very severe shortcomings in relation to the operation’s relevance, coherence and efficiency. Intended objectives have not been achieved, achievement of intended impact or sustainability of benefits are highly unlikely.
- **Not assessed (na)** – The criteria statement cannot be assessed. Please explain and provide details in the justifications section.

Title of the evaluated intervention: Adaptation at Altitude Programme Phase 1

Evaluation type: Terminal

Evaluator(s): Johannah Bernstein and Andrew Taber

Date of the evaluation: May 12, 2023

Overall rating: Satisfactory

³⁰ For more guidance see: Better Criteria for Better Evaluations. Revised Evaluation Criteria. Definitions and Principles for Use, OECD/DAC Network on Development Evaluation, 2019.

Key aspects based on DAC criteria	Score	Justification (Provide a short explanation for your score or why a criterion was not assessed)
<p>Relevance</p> <p>Note: the assessment here captures the relevance of objectives <u>and</u> design <i>at the time of design</i> and <i>at time of evaluation</i></p>		
<p>1. The extent to which the objectives of the intervention respond to the needs and priorities of the target group.</p>	<p>1 - highly satisfactory</p>	<p>As regards the relevance of the project for practitioners who are both generating and using the CCA solutions that have been included in the A@A Solutions Portal: they will benefit from the collection and sharing of proven solutions, but also support through the community of practice to make adjustments and improvements in policy and practice.</p> <p>As regards the relevance of the project for scientists and academic communities more generally, there is no question of the value of the work that has been undertaken in generating, strengthening and exchanging relevant data and information and of course in the strengthening of existing facilities, stations, sites, institutions and networks. All of this work has helped to generate important scientific inputs that have been transmitted to the IPCC process.</p>

		The relevance of the project for policymakers is reflected in the engagement of national governments in the regional processes, including the science-policy dialogues and regional mountain CCA processes.
2. The extent to which the objectives of the intervention respond to the needs and priorities of indirectly affected stakeholders (not included in target group, e.g. government, civil society, etc.) in the country of the intervention.	2 - satisfactory	This is an excellent project but is narrow in focus in part due to resource limitations, but also due to some extent to the orientation of some of the partners in some of the regions. It is well serving governments, and mountain research community, but needs to be sure its products also meet needs of important less direct stakeholders (and communicated accordingly), and also engages with them to advance common objectives (other organization working in mountain CCA, civil society organizations, NGOs.
3. The extent to which core design elements of the intervention (such as the theory of change, structure of the project components, choice of services and intervention partners) adequately reflect the needs and priorities of the target group.	1 - highly satisfactory	The project has reflected needs and priorities of key target groups by by improving the availability of mountain observation data, facilitating science-policy dialogues, supporting a community of practice and knowledge exchange on adaptation, and influencing policy processes A@A activities thoroughly addressed key concerns and challenges in the framing of the project document, and have strengthened data exchange, helped to catalyse policy change, and drawn from mountain-specific CCA to carve out a specific niche in the UNFCCC agenda.
Coherence		

<p>4. Internal coherence: the extent to which the intervention is compatible with other interventions of Swiss development cooperation in the same country and thematic field (consistency, complementarity and synergies).</p>	<p>1 Highly satisfactory</p>	<p>The compatibility of the A@A programme with other similar SDC interventions is evidenced by the following (as noted in the TOR and key project documentation, including the Credit Proposal):</p> <ul style="list-style-type: none"> ● The A@A programme succeeded SDC's Sustainable Mountain Development for Global Change ("SMD4GC") project which served as an important basis for its conception. ● The A@A programme contributes to the Strategic Framework of SDC's Global Programme Climate Change and Environment (CPCCE). ● The programme will contribute to the advancement of the Agenda 2030 regarding mountain areas, which so far lags behind in implementation efforts, and it will strengthen national processes in adaptation planning. ● The project also aligns with the Swiss International Cooperation Strategy 2021-24 which identifies climate change as a priority. ● The project builds on and capitalises on the SDC's project portfolio in the Andes, the Himalayas, the Caucasus, and Central Asia. ● As such, the A@A programme, in essence, provides an overarching foundation for all mountain-related projects of SDC.
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<p>5. External coherence: the extent to which the intervention is compatible with interventions of other actors in the country and thematic field (complementarity and synergies).</p>	<p>3 - unsatisfactory</p>	<p>Almost gave satisfactory rating, which maybe more appropriate. However, this is an areas where the project could do better through both more explicitly recognizing, taking into account, building common cause with others working in the CCA space in mountains, potentially including innovative partners like organizations of IPLCs.</p>
<p>The extent to which the A@A Programme is compatible with similar interventions of implementing partners</p>	<p>1 Highly satisfactory</p>	<p>The SDC's project documentation highlights how the A@A programme contributes to similar interventions of the implementing partners:</p> <ul style="list-style-type: none"> ● The programme connects to the SDC project portfolio in the Andes, the Himalayas, the Southern Caucasus, and Central Asia and aims to bundle and synthesise their results and advocate for CCA in mountains at the national, regional and global policy level. ● The programme is also designed to harness experiences in regional cooperation from Swiss experiences as a member of the Alpine Convention, specifically through its working group on climate change. ● In the Caucasus, the programme will further strengthen the Caucasus Mountain Forum, supported by SDC COOF Tbilisi. ● On the global level, the programme is also aligned with targeted support to SDC partners that are contributors to the IPCC process. The developing Community of Practice (CoP) on CCA solutions in

		mountains will establish links to the emerging "Nature-based solutions for water" CoP of GPW.
The extent to which the intervention is compatible with relevant global, regional and national frameworks	2. Satisfactory	The A@A programme is compatible with the global processes that it has targeted for elevating mountain issues, notably the UNFCCC, the SDGs and the Sendai Framework. The positive reception of the high profile IPCC Cross-Chapter on Mountains (despite the fact that this was not a deliverable under this project) is an important indication of the project's relevance with the UNFCCC and the receptivity of that process to recognize the importance of mountain-specific CCA. This is equally the case with the successful addition of mountains as a key theme in the Nairobi Work Programme resulting from a proposal that was drafted by project partners. ³¹ And similarly with the success that Partners had in contributing to a key UNFCCC COP27 decision that emphasises the need to "address systematic observation gaps, including in mountain regions and concerning the cryosphere".
Effectiveness		
6. The extent to which approaches/strategies during implementation are adequate to achieve the intended results.	1 - highly satisfactory	The project is very well designed, but its ability to fully achieve its intended results are subject to other factors a bit out of its control independent of its influencing capacity (e.g., political matters)
7. The extent to which the intervention achieved or is expected to achieve its intended objectives (outputs and outcomes).	2 - satisfactory	See comments above – its ability to achieve objectives is in some cases out of its control.

³¹ https://unfccc.int/sites/default/files/resource/SBSTA2022_L07E.pdf

8. The extent to which the intervention achieved or is expected to achieve its intended results related to transversal themes.	2 - satisfactory	This will be a long process, which will require a second phase to fully accomplish its intended results.
Efficiency		
9. The extent to which the intervention delivers the results (outputs, outcomes) cost-effectively.	1 - highly satisfactory	Accomplishing a lot cost effectively with highly limited resources.
10. The extent to which the intervention delivers the results (outputs, outcome) in a timely manner (within the intended timeframe or reasonably adjusted timeframe).	2 - satisfactory	Despite challenges of COVID, the project has adapted well and is accomplishing much in line with its timeframe
11. The extent to which management, monitoring and steering mechanisms support efficient implementation.	3 - unsatisfactory	Again torn between unsatisfactory and satisfactory. The evaluators think that the initiative would benefit from tighter coordination between partners, and soft but more active guidance from SDC.
Impact		
12. The extent to which the intervention generated or is expected to generate 'higher-level effects' as defined in the design document of the intervention. Note: when assessing this criterion, the primary focus is the intended 'higher-level effects'. In the event that <i>significant</i> unintended negative or positive effects can be discerned, they must be specified in the justification column, especially if they influence the score.	1 - highly satisfactory	The evaluators believe that the initiative is working hard to generate higher level effects despite many challenges.
Sustainability		
13. The extent to which partners are capable and motivated (technical capacity, ownership) to continue activities contributing to achieving the outcomes.	1 - highly satisfactory	The evaluators believe strongly in the high commitment and capacity of the partners and in the quality of this program overall – despite some

		of the shortcomings mentioned elsewhere in the ratings.
14. The extent to which partners have the financial resources to continue activities contributing to achieving the outcomes.	2 - satisfactory	Resources are tight – and we think an increase in funding from SDC (a doubling) would be absorbable and would have an impact on the ability of the initiative to realize its promise. To be fully effective we think it would be important for partners to mobilizer other resources to advance its objectives, and also strengthen alliances with others working to address issues of common concern to make resources go father – would make resources go farther.
15. The extent to which contextual factors (e.g. legislation, politics, economic situation, social demands) is conducive to continuing activities leading to outcomes.	2 - satisfactory	Challenging, but the initiative is advancing well

We rated this intervention by all fifteen sub-criteria and added an additional two project-specific sub-criteria. In eight of these sub-criteria, at least one under each of the primary criteria areas, we rated the project as performing at a highly satisfactory level. This is to be commended. In seven of the sub-criteria, we found the initiative performing at a satisfactory level, and two we rated as unsatisfactory. Overall, we rate the project as Satisfactory. Looking forward, particularly in terms of planning for Phase 2, in the evaluators' view it will be vitally important to address the moderate and important shortcoming identified to maximize the prospects of this initiative having a significant and sustained long-term impact.