**Adaptation at Altitude Template**



Mountain environments are highly vulnerable to climate change. As well as threatening livelihoods directly, the impacts of climate change felt in mountains have far reaching implications for the surrounding areas and communities.

With this template, we invite those who have developed climate change adaptation solutions (CCAS) for mountain environments to highlight their work to others. Following an internal review, those that meet the criteria will be added to our [Adaptation at Altitude (A@A) Solutions Portal](https://adaptationataltitude.org/solutionsportal/): an open, unique database of CCAS for mountains that can be used by practitioners, decision-makers, policy-makers and all other interested parties. In this database, all solutions are linked to the individuals, teams and organisations that have helped develop the solution. We hope this will increase visibility and provide due acknowledgement to the excellent and innovative work being done.

We define CCAS as technologies, approaches, and/or processes to adjust natural or human systems to actual or expected climate impacts, in order to reduce expected losses or harness benefits. Thus, a solution could be an early warning system or an education programme associated with it, but it could also be a combination of both. Large adaptation programmes are often made up of several different solutions. For such programmes, we suggest completing the template separately for each solution.

*Acknowledgment: The survey has been developed by the*[*Adaptation at Altitude programme*](https://adaptationataltitude.org/)*(A@A), funded by the*[*Swiss Agency for Development and Cooperation (SDC).*](https://www.eda.admin.ch/deza/en/home.html) *The programme seeks to increase the resilience and adaptive capacity of mountain communities and ecosystems to climate change. The team who developed the template includes the following partners:*[*University of Geneva*](https://c-cia.ch/)*,*[*Stockholm Environment Institute*](https://www.sei.org/)*, and* [*Zoï Environment Network*](https://zoinet.org/)*.*

**HOW TO COMPLETE THE TEMPLATE:**

1. Please provide input to each part of the solution template covering key characteristics of your CCA solution (the location, scale, benefits, planning process, and capacities necessary to implement it, etc). It should take approximately 30 minutes to complete.
2. For the definition of the key words used in the survey (e.g. impacts, adaptation, risk) we refer to:<https://apps.ipcc.ch/apps/glossary/>
3. If available, please provide supporting documents about the solution (e.g. plans, papers, reports). The main inputs will be available in English, but attachments and links can be in other languages. As far as possible, please provide details of all those involved (including local partners) with the development and implementation of the solution. These actors will be invited to be associated with the solution to acknowledge their contribution.
4. Once you have shared the completed template with us via email, it will undergo an internal review, and the A@A team will be in contact if there are any issues or queries.
5. After review, your solution will be published online and will be open access (see [here](https://creativecommons.org/licenses/by/4.0/deed.en) for details about Creative Commons attribution). Later updates and additions to responses will be possible by contacting the A@A team. Data providers will be fully acknowledged, and data will be freely available for others to use and cite.
6. You can read notes and find out more about the conditions of supplying data for the template [here](https://weadapt.org/privacy-policy/).

**Example solution entry:** For reference you can also see examples of completed solutions [here](https://adaptationataltitude.org/solutionsportal/).

**CONTACTS:**

Send your completed solution forms and any questions to rosie.witton@sei.org and kate.williamson@sei.org.

**Thank you in advance for your time and contribution!**

Click on links below to jump to the filled examples for each page of the online survey:

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## General



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| **Solution Title** |  |
| **Solution brief description** Please provide a brief description (no more than 1000 words) of the key characteristics of the solution, including problems/vulnerabilities addressed, purpose and function. |  |
| **Solution picture/video**Please provide a picture, acknowledging the source. If you have a video relating to the solution, please share the URL. |  |

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| **Location** |
| **Solution location** | Solution location(s) (if required, add multiple countries separated by a comma):Was the solution implemented in multiple locations in the same country? (Yes/No)Mountain range (if required add multiple ranges separated by a comma):Region/province (if required add multiple locations separated by a comma):Site location (if required add multiple locations separated by a comma): |

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| **Scale** |
| **Solution scale****[please select from the following options, or specify under other]** | * Local
* Sub-national/regional
* National
* Transboundary
* Global

If solution is spread over an area, please specify area covered in km2 (1ha=10000 m2; 1km2=100ha): |
| **Mountain ecosystem type(s)****[please select from the following options, or specify under other]** | * Agricultural land
* Desert
* Forest
* Grassland
* High Alpine
* Lakes and rivers
* Meadows
* Peatland
* Urban
* Other (please specify)
 |
| **Solution type(s)****[please select from the following options, or specify under other]** | * Education and awareness
* Engineering
* Finance
* Land use practice
* Monitoring; Policy
* Research
* Technological development
* Other (please specify)
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| **Sectors** |
| **Sectors****[please select from the following options, or specify under other]** | * Agriculture
* Basic infrastructure
* Ecosystems biodiversity
* Forestry
* Human health and wellbeing
* Natural hazards
* Plans and policy
* Tourism and consumption
* Transport and energy
* Water
* Other (please specify)
 |
| **Climate impact(s) addressed****[please select from the following options, or specify under other]** | * Altered growing seasons
* Drought
* Flood
* Heat stress
* Landslides
* Wildfire
* Other (please specify)
 |
| **Climate impact time-scale(s)** | * Slow onset
* Rapid onset
* Both
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| **Benefit** |
| **Main benefit associated with the solution implementation****[please select from the following options, or specify under other]** | * Climate risk reduction (e.g. reduced risk from floods)
* Social benefits (e.g. poverty reduction, inclusiveness and equity, health and well-being)
* Technical benefits (e.g. innovative use of geographic information systems)
* Economic benefits (e.g. job creation, tourism)
* Environmental benefits (e.g. biodiversity preservation, water security, food security)
* Political benefits (e.g. reduced displacement/migration)
* Other (specify)
 |
| **Co-benefits(s) associated with the solution implementation****[please select from the following options, or specify under other]** | * Climate risk reduction (e.g. reduced risk from floods)
* Social benefits (e.g. poverty reduction, inclusiveness and equity, health and well-being)
* Technical benefits (e.g. innovative use of geographic information systems);
* Economic benefits (e.g. job creation, tourism)
* Environmental benefits (e.g. biodiversity preservation, water security, food security)
* Political benefits (e.g. reduced displacement/migration)
* Other (specify)
 |
| **Main beneficiaries, availability and outcomes**Who are the main beneficiaries of the solution? Is the solution widely available (vs. accessible only to certain groups or organisations)? Were there differential outcomes for elderly, women, men, youth, poorer communities, indigenous people etc? If yes, please describe. |  |

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| **Planning** |
| **Planning and implementation** Which was the main organisation in charge of planning and implementation? Can you briefly describe the process (i.e. list of activities) that lead to implementation? What role did stakeholders and their involvement play? *Please upload any relevant supporting documents – assessments, reports, method descriptions etc.* |  |
| **Timing for solution implementation** | When implementation started (year)When implementation ended or the project leading to the solution is due to close (year)If precise years are not known, please indicate approximate date when the solution was initiated:Less than ten years ago, 10-20 years ago, more than 20 years ago  |
| **Finance** Who financed the project? How was the financing provided (e.g. loans, credit, grants, subsidies)? What is the total cost (USD) of the solution? Has a cost benefit analysis been conducted? If yes, what indicators were used? Did the private sector play a role?If only partial cost information is available, please specify what activity the costs refer to (e.g. labour, equipment, construction material etc).*Please upload any relevant supporting documents – assessments, reports, method descriptions etc.* |  |
| **Innovation**What was the key innovative aspect of the solution, particularly with respect to CCA in mountain?*Please upload any relevant supporting documents – technical reports, design specifications, method descriptions etc.* |  |

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| **Goals** |
| **Sendai Framework targets addressed****[please select from the following options]** | * TARGET 1 Substantially reduce global disaster mortality
* TARGET 2 Substantially reduce the number of affected people
* TARGET 3 Reduce direct disaster economic loss in relation to global gross domestic product
* TARGET 4 Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities
* TARGET 5 Substantially increase the number of countries with national and local disaster risk reduction strategies
* TARGET 6 Substantially enhance international cooperation to developing countries
* TARGET 7 Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people
* NONE
 |
| **Sustainable Development Goals addressed (1 – 17)****[please select from the following options]** | * GOAL 1: No Poverty
* GOAL 2: Zero Hunger
* GOAL 3: Good Health and Well-being
* GOAL 4: Quality Education
* GOAL 5: Gender Equality
* GOAL 6: Clean Water and Sanitation
* GOAL 7: Affordable and Clean Energy
* GOAL 8: Decent Work and Economic Growth
* GOAL 9: Industry, Innovation and Infrastructure
* GOAL 10: Reduced Inequality
* GOAL 11: Sustainable Cities and Communities
* GOAL 12: Responsible Consumption and Production
* GOAL 13: Climate Action
* GOAL 14: Life Below Water
* GOAL 15: Life on Land
* GOAL 16: Peace and Justice Strong Institutions
* GOAL 17: Partnerships to achieve the Goal
* NONE
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| **Performance evaluation**Has a performance/impact evaluation been conducted? By whom? When? What are the key criteria taken into account? Were indicators measured with field data? |  |
| **Long term project sustainability and maintenance**What maintenance activities are in place (if any)? How long are these in place for? Has an environmental monitoring assessment been conducted? Who will take long-term ownership/costs of the solution maintenance (e.g., government, organisation, community etc.)? |  |

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| **Capacities** |
| **Knowledge capacities**What role did available (scientific and indigenous) knowledge play in the design and implementation of the solution? Was research part of the solution? What experience and technical support has been made available to the community benefiting from the solution? |  |
| [On a 1(min) to 5 (max) Likert scale] How would you evaluate the importance of knowledge capacities in enabling this solution?  |  |
| **Technology capacities**What role did available technologies (e.g. geographic information systems) play in the design and implementation of the solution? |  |
| [On a 1(min) to 5 (max) Likert scale] How would you evaluate the importance of technology in enabling this solution? |   |
| **Political/legal capacities**What role did available policies, strategies, laws play in the design and implementation of the solution? Has there been a clear mandate to implement the solution? To what extent did motivation (e.g. of some authorities-politicians) contribute to implementation?  |  |
| [On a 1(min) to 5 (max) Likert scale] How would you evaluate the importance of political motivation in enabling this solution? |   |

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| **Institutional capacities**What role did the collaboration between project and local partners play? What coordination mechanisms (e.g. of government ministries) have been put in place? If so, which ones? How did the coordination work? |  |
| [On a 1(min) to 5 (max) Likert scale] How would you evaluate the importance of institutional capacities in enabling this solution? |  |
| **Socio-cultural capacities**What role did the social context play (e.g. NGOs, advocacy coalitions)? Was a stakeholder analysis performed? Were there any opponents to the solution? To what extent were local communities engaged in co-development and/or implementation of the solution? |  |
| [On a 1(min) to 5 (max) Likert scale] How would you evaluate the importance of socio-cultural capacities in enabling this solution?  |  |

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| **In-depth** |
| **Barriers and adverse effects**What barriers have you experienced? Were they successfully overcome? If yes, how? Does the solution have any known or expected side/adverse effects (e.g. on ecosystem, on equity in risk distribution) now and in the future? |  |
| **Transformation and future outlook**How did the solution cause or support fundamental change in CCA in the mountain region? How will the solution cope with climate related changes (e.g. extreme events, gradual climate change, climatological disasters) in view of achieving its main purpose? |  |
| **Potential for upscaling and replication**Based on your learnings, is upscaling of this solution desirable? What is required for upscaling this solution to a wider scale? Is the solution included in a CCA plan or strategy (e.g. National Adaptation Plan)? Has it been replicated, e.g. using large scale financing (e.g. World Bank)? |  |

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| **Finally** |
| Would you like to join the [Adaptation at Altitude Knowledge Network](https://weadapt.org/knowledge-base/adaptation-in-mountains/the-adaptation-at-altitude-knowledge-network/): a global community of practice designed to promote knowledge exchange on climate change adaptation in mountains? |  |
| Is there any further content you would like to add to our [mountains theme](https://weadapt.org/knowledge-base/adaptation-in-mountains/) or the A@A [resources](https://adaptationataltitude.org/resources/) or [events](https://adaptationataltitude.org/events/) page? This could be a report, case study or upcoming event! |  |

**Key references/links with further details on the solution (if available):**

**Contacts of key local institutional partners involved with the solution planning and implementation:**

**Acknowledgments (if pertinent):**

**Complete**

Thank you for contributing! We’ll be in touch shortly.