



Strengthening Climate Change Adaptation in Himalayas (SCA-Himalayas)

CONTEXT

The Global Climate Risk Index 2021 ranks India among one of the most vulnerable countries to climate change. The Government of India has encouraged all the states to develop action plans on climate change outlining the relevant climate strategies across key sectors for climate mitigation and adaptation. Although the Himalayas represent only 16% of the country, they shelter one of the most vulnerable ecosystems, requiring special attention. Responding to the Government of India's request for Swiss expertise, SDC supports the Indian Himalayan States to strengthen climate change adaptation.

During the first phase of the project (3SCA, 2016-19) SDC supported the States of Sikkim, Uttarakhand and Madhya Pradesh to assess sectoral vulnerabilities, to develop tools and to implement adaptation actions. The project's second phase (SCA-Himalayas) focuses on Disaster Risk Management (DRM) and Water Resource Management (WRM) in mountain ecosystems fostering resilience against climate change in the according sectors. The project supports pilots in the Himalayan states of Sikkim, Uttarakhand, Manipur and Himachal Pradesh. Through a close collaboration with relevant government institutions at local, state and national level the project builds capacities for replication of pilot interventions in the 13 Himalayan States and supports policy uptake.



Natural Resource Management



Disaster Risk Management

PROJECT AT A GLANCE

Area: Adaptation and Risk Mitigation

Duration: February 2020 - December 2025 (Phase 2)

Budget: CHF 5'800'000

Implementation Partners:

- Project Implementing Unit (PIU) managed by SDC in India
- Swiss experts from academia and private sector
- Other international, regional and national partners from academia, NGOs, intergovernmental institutions

Partners:

- Ministry of Environment, Forests and Climate Change (MoEFCC)
- National Disaster Management Authority (NDMA)
- NITI Aayog
- Department of Science and Technology (DST)
- Ministry of Jal Shakti
- State Governments from Uttarakhand, Sikkim, Manipur, Himachal Pradesh

Geographic Focus:

Uttarakhand, Sikkim, Manipur, Himachal Pradesh and other Himalayan States of India

OBJECTIVES

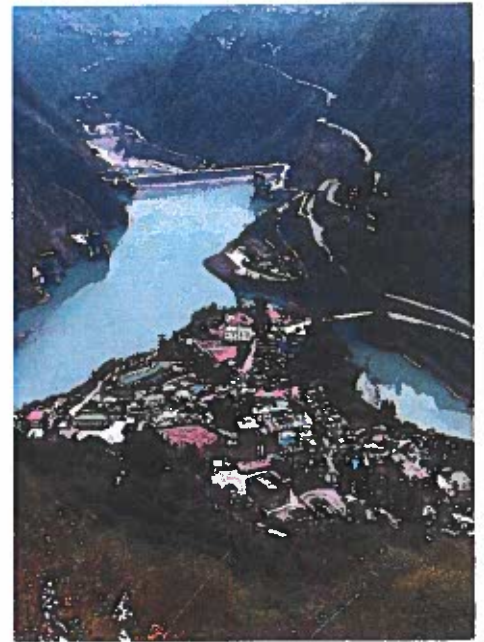
The project aims to enhance resilience of the mountain communities in the Indian Himalayan Region by integrating climate actions into national and sub-national planning and implementation.

Specific approaches and tools are developed, and shared through capacity building for replication and institutionalization. SDC brings on board Swiss, regional and Indian expertise through technical support for climate change adapted water resource management, science based springshed management and to pilot early warning systems for Glacial Lake Outburst Flooding (GLOFs), landslides and floods.



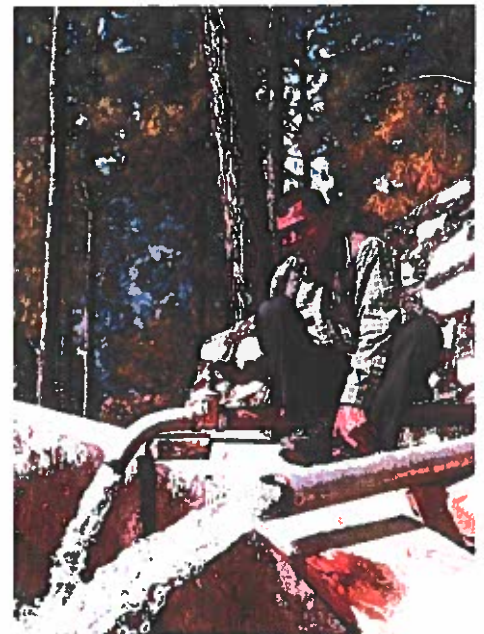
KEY ACHIEVEMENTS

- Publication of a resource book on springshed management in the Indian Himalayan Region in close collaboration with NITI Aayog, Government of India.
- Implementation of field pilots fostering springshed management based on a combination of science-based assessments, capacity building and community action.
- Development of guidelines and trainings for glacio-hydrological and water allocation modeling.
- Development of a Climate change Decision Support System (CC-DSS) for a reservoir in Madhya Pradesh and guidelines for its use and upscaling by the Government of MP.
- Analysis of remote sensing data using Synthetic Aperture Radar data (SAR-data) to identify surface deformations, namely landslides and instable areas.
- First-order assessment of GLOF risk for Sikkim and detailed hazard modelling for two critical glacial lakes in Sikkim.
- Development of a landslide susceptibility model and hazard mapping for Bhagirathi Valley in Uttarakhand.



INITIATIVES UNDER SCA-HIMALAYAS PROJECT

- Piloting an early warning system for GLOF in Sikkim.
- Development of a rainfall threshold-based landslide forecast model in Uttarakhand.
- Glacio-hydrological model, Integrated Water Resources Management (IWRM) plan and Decision Support System (DSS) for a selected sub-basin in Bhagirathi Basin in Uttarakhand.
- Documentation of best practices, guidance and field action to promote innovative science-based springshed management.
- Development of a numeric model and application for large scale hazard indication mapping of rock-ice avalanches in Uttarakhand.
- Capacity building for key institutions referring to officials, technicians and scientists etc. to design, implement and monitor climate change actions.
- Development of guidelines for upscaling of climate change actions in the (Indian) Himalayan Region and integration into policy frameworks.
- Documentation and experience sharing across the Himalayan region including in the international community.



All pictures Parikshit Rao © SDC

ABOUT SDC IN INDIA

The Swiss Agency for Development and Cooperation (SDC) has been a partner of India for more than 60 years. Since 2011, SDC's engagement focuses specifically on climate change adaptation and mitigation, and other environmental challenges. The office in India is part of SDC's strategic engagement on Climate, Disaster Risk Reduction and Environment. As part of its regional and global initiatives, SDC also has ongoing activities related to food systems, water and health in India.

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