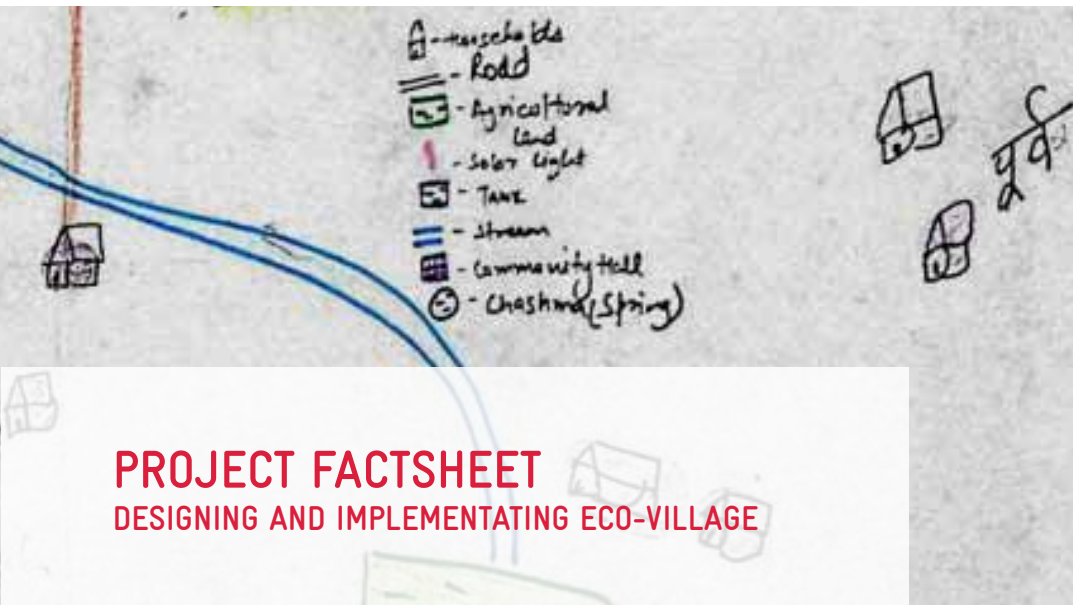


THERE WAS A TIME WHEN CLIMATE CHANGE WAS A SERIOUS THREAT IN THE FUTURE. THAT FUTURE HAS ARRIVED. NOW IT IS TIME FOR ADAPTATION.



PROJECT FACTSHEET

DESIGNING AND IMPLEMENTATING ECO-VILLAGE

SHIMLA & MANDI, HIMACHAL PRADESH
DEPARTMENT OF ENVIRONMENT, SCIENCE AND TECHNOLOGY (DEST)



Department of Environment, Science & Technology
 Government of Himachal Pradesh

THE PROJECT AT A GLANCE

State	Himachal Pradesh
Location	Shimla and Mandi District in Himachal Pradesh
Duration	December 2018 – October 2019
Implementation support	CTRAN Consulting
Geographic features	Rough hilly terrain
Climatic stresses	Heavy rainfall, heat waves, floods, droughts
Non-climatic stresses	<ul style="list-style-type: none"> • High dependence on money lenders for credit, poor crop production, and absence of drought resistant crop varieties • Low awareness of government schemes and poor institutional frameworks for water and land management • No waste management system
Predominant livelihood sources	Agriculture and horticulture
Target group/s	<ul style="list-style-type: none"> • 120 households of village Baghalli in Dhamun Panchayat of Mashobra Block (District Shimla) • 292 households village Janjheli of Seraj Block (District Mandi)



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CLIMATE TRENDS IN HIMACHAL PRADESH

An analysis of 63 years (1951-2013) of data from the Indian Meteorology Department shows that the annual maximum and minimum temperatures have been increasing in Himachal Pradesh. The increase in temperature will result in more evaporation and require more irrigation for crops. The analysis also predicts a definite decrease in annual rainfall for the state. More importantly, there is a strong trend towards a decrease in the number of rainy days, resulting in the annual rainfall for the state falling on fewer days. This implies more intense rainfall, increasing the possibility of flash floods, soil erosion, and landslides. This forbodes increased vulnerability to natural disasters for the state.

WHY ECO-VILLAGE

In Himachal Pradesh, nearly 90% of the population and their livelihood is dependent on natural resources for agriculture since the region is predominantly mountainous. Himalayan ecosystems are highly vulnerable due to multiple reasons; stress caused by forest land conversion, forest degradation, habitat fragmentation, overgrazing, fuel wood collection, forest fires, infrastructure development, mining, and other related challenges. With global environmental shifts these local resources are constantly threatened and the situation is likely to get exacerbated under mid-century climatic projections. To tackle this the Department of Environment, Science and Technology, Govt. of Himachal Pradesh, has created a scheme to implement the concept of an environmentally sustainable Eco-Village. The project aims to create a self-sustainable village through the adoption of low impact practices that create water security, food security and livelihood security for the village. These kinds of eco-friendly villages were developed with the community with the aim to reduce their ecological footprints by as much as 50%. The goal was to create climate resilient village communities focussed on the adapting development plans with environmentally responsible practices. These practices include management of water, waste, and natural resources, and energy conservation.

Under Eco-village scheme, the project supported development plans for two identified villages -- Village Baghalli in Shimla district and village Jhanjehli in Mandi district. Technical support was provided for implementation at Jhanjehli village. The process involved a baseline study of existing environmental and climate change impacts in the proposed villages. The impacts were analysed through a combination of community level participatory tools and top-down expert/model-based review. Strategies to address those impacts were developed through stakeholder consultation. Related government development programmes/schemes were reviewed for convergence of funds.

ADAPTATION HYPOTHESIS

Ensuring sustainable development of a village in an organized and integrated manner depends upon responsible use of the key natural resources. Further strengthened by adoption of low-impact practices, this can result in water security, food security and livelihood security for the resident community.

ADAPTATION INTERVENTIONS

- **Water sources conservation and protection**
Preparation of a water security plan in identified spring-sheds, climate resilient spring shed plans, rejuvenation through the landscape approach.
- **Agriculture/Horticulture**
Promotion of Organic Farming, Farm produce management practices, Crop diversification
- **Water Management**
Rooftop Rainwater harvesting, Waste Water treatment, Water conservation practices for irrigation and Revival of traditional water resources
- **Clean Energy**
Adoption of Biogas, Use of Solar Heaters and lights and Solar fencing
- **Solid Waste Management**
Source Segregation, Composting, Reuse and Recycling of goods and materials and Vermicomposting of Biodegradable waste
- **Forest Management and Eco Services**
Plantation in forest area, Community afforestation programmes, Reduction in forest fires at eco-tourism site
- **Capacity Building Interventions**
Trainings, formation of committees, exposure visits (specialised training programmes on Micro Irrigation, Soil Health Management and other Water Conservation)

BENEFITS AND ADDED VALUE FOR ADAPTATION

■ Water sources conservation and protection

Improved availability of spring water through recharge of ground water level and further sustainable management.

■ Agriculture/Horticulture

Improve yield, productivity, and market value of crops, by decreasing dependence of local community on chemical pesticides and fertilizers. Achieved through training of local SHG groups for organic farming among other value addition activities.

■ Water Management

Decreased dependence on rain-fed agriculture, through training on Micro irrigation and building of farm ponds and farm fed irrigation tanks.

■ Clean Energy

Renewable source of generation of power leading to decreased dependence on power from grid, as well as usage of gas/fuel wood for heat through installation of solar water heaters, and installation of solar street lights.

■ Solid Waste Management

Generation of value from otherwise untreated waste, and improved health and sanitation of local communities. Achieved through waste water treatment plant and installation of public pick-up bins.

■ Forest Management and Eco Services

Generation of alternative source of livelihood for the local community through tourism by building of new camping site and beautification of the village; installation of an entry gate, and fruit and flower tree plantations. Decrease of vulnerability through loss of resources through forest fires and landslides through preventive actions.

■ Capacity Building Interventions

Improved Knowledge, Skill and Ability of locals. Improved productive capacity of village community, and use of modern technology and/or other value addition activities. Reduced reliance on conventional environmentally detrimental and unsustainable practices. Specialised training programmes were conducted on Micro Irrigation, Soil Health Management and Water Conservation

SUCCESS FACTORS

- Local level **vulnerability assessment** help to identify existing climate and environment related issues, socio-economic profile of villagers, infrastructure, current government schemes and programmes, and other relevant activities.
- Regular meetings for **capacity building** trainings and handholding support to the village level management committee
- Focus given to convergence of different schemes and resources to adopt proposed plans/ activities.
- Regular meetings on climate change, environment issues to facilitate **information exchange**.
- Regular coordination between block level as well as state level departments, especially state level steering committees formed to guide this scheme.
- Knowledge management and highlighting of success stories at state and national level.
- Increased **Awareness** of villagers on climate change adaptation leading to judicious use of water, drought proofing measures, soil health management and other climate smart solutions.

Ms. Sita Devi, Baghali, Shimla

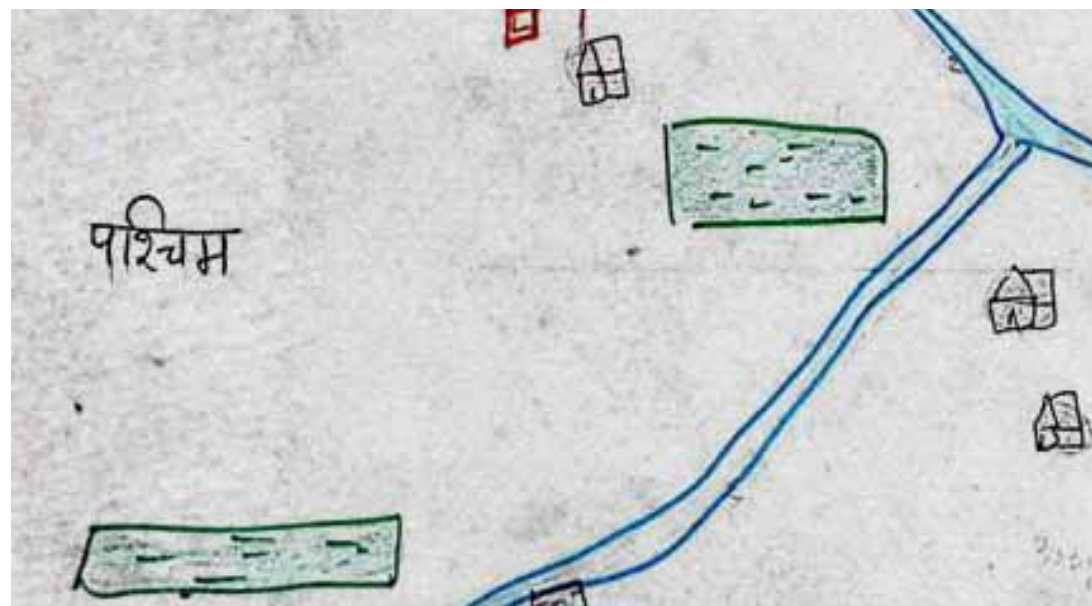
Eco-village project will popularise our village. The Swayam Sahayata group will provide sewing training to the the women of the village. This will help increase the household income and help in better livelihood. Also the water scarcity in summers will be resolved by the proper water usage techniques and will help in irrigating the agricultural fields properly.

REPLICATION UNDER INDIAN CONDITION

To replicate the basic approach of formulating an eco-village development plan, a bottom-up approach must be adopted. For an eco-village concept at a new location, consultations of different stakeholders must be conducted. A baseline data collection and analysis should be undertaken to identify issues/problems. This can help in preparing a step-by-step detail implementation actions of the Eco-village Development Plan. Including convergence with other schemes/ programmes giving clear indicators on the future environmental/adaptation benefits to implement. Taking in to account prioritized strategies including the M&E plan, implementation mechanisms, steering structures and budget for the proposed plan.

This demonstration project was realised under the Indo-German development project 'Climate Change Adaptation in Rural Areas of India' (CCA RAI) which is jointly implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, the Ministry of Environment, Forests and Climate Change (MoEF&CC), Government of India and state nodal agencies on climate change in four states: Himachal Pradesh, Punjab, Tamil Nadu and Telangana. CCA RAI is financed by the German Federal Ministry for Economic Cooperation and Development (BMZ).

Project name	Climate Change Adaptation in Rural Areas of India (CCA RAI)
Commissioned by	Federal Ministry of Economic Cooperation and Development (Germany)
Lead executing agency	Ministry of Environment, Forests and Climate Change (MoEF&CC), Government of India
Partner organisation	Department of Environment, Science and Technology (DEST), Government of Himachal Pradesh
Duration	November 2018 – June 2019
Budget	Total project cost is €1,07,622 • GIZ: €53,568 • Co-financing (Himachal Pradesh State Govt): €54,054
Webpage	www.giz.de



BUILD RESILIENCE



Published by:
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

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