



A project by BAIF - AFB - NABARD in the state of Uttarakhand

Climate smart actions and strategies in North Western Himalayan region for sustainable livelihoods of agriculture-dependent hill communities"

PROJECT SNAPSHOT

Project Focus



Climate-resilient actions in Himalayan Region

Location



Cluster of 10 villages / Gram Panchayats of 2 blocks (Pati & Lohaghat) of District Champawat in Region –Kumaun, Uttarakhand state

Project Finance



Total Budget:- Rs. 53,638,200/-

Duration



4 Years (2016 – 2020)

Name of Executing Entity



BAIF Development Research Foundation – HO and Uttarakhand Team

Project Beneficiaries



Direct : 800 families encompassing 4000 individuals of small and Marginal farming communities
Indirect : 400 families encompassing 2000 individuals of the Project Villages

Context

Zone-I of the Indian Himalayan Region, covering hilly areas of Uttarakhand, Himachal Pradesh and Jammu and Kashmir.

Key Development Challenges

Fragile physical environment marked by high soil erosion and vulnerability to climate change; low available of land per capita for agriculture; scarcity of water for irrigation; overexploitation of forests and other natural resources; fodder deficit; high working men; scattered and remote settlements; poor infrastructure; under-explored potential of agriculture and livestock.

Model Introduced by BAIF in Himalayas includes following interventions

- Agro-horti-forestry initiatives including cultivation under protected conditions (polyhomes lowest Bamboo band)
- Development of fodder resources and regeneration of vegetation on degraded community owned lands
- Increasing productivity of livestock through improved breeding and scientific health services
- Water Resource Development mainly Spring Rejuvenation and Rooftop Rainwater harvesting
- New income sources for Hill women through SHG income generation activities.
- Adoption of Gender Sensitive Approach
- Mobilization of hill communities for collective actions aiming at improved adaptation

The design, implementation and assessment of this approach is done after taking in to account the mountain specificities



Community mobilisation



Display Board



Women centrality is ensured in the project



Produce from Polyhouses



Fodder Tree Plantation in Vanpanchayat lands by hill women

“Climate Smart Actions and Strategies in North Western Himalayan Region for Sustainable Livelihoods of Agriculture-dependent Hill Communities”

Issue:

- Increase in glacier melt
- Flashfloods leading to large landslides
- Increase in mean and maximum temperature and lower minimum winter temperature
- Loss of permanent pasture and grassland to arable cultivation Changing cropping patterns and deficit in food production
- Decline in production of horticultural crops like apple due to decline in snowfall
- An upward movement of natural vegetation
- Increased frequency of forest fires
- Early flowering and fruiting of native trees

These changes have a direct bearing on livelihoods and health of the human population

Target groups Vulnerable Himalayan Community :

- Families with sole dependence on agriculture / primary sector which are climate sensitive as only source of income and livelihoods
- Families staying in remote hill areas, where alternative livelihood options are limited
- Farmers with basic minimum resources to meet their livelihood requirements
- Women headed families where productive men have migrated to cities and thus females are taking care of farming and thus bear direct burden of degradation of natural resources due to falling effects of climate change/variability
- Poor households(Including Scheduled caste households) to be jointly identified by villagers using participatory processes (considering poverty and marginalization perspectives of the villagers)

Project Approach:

The project to focus on diversification of production systems and improving the institutional capacities to adopt climate smart technologies and practices in Himalayan Hill context. As a strategy, linkages and partnerships are developed with relevant technical and scientific institutes in the region for required technology back stopping. The collaborative areas include strategic research, technology demonstrations and transfer, applied field-based research, capacity building and improved outreach. The Project also strives to complement on-going government programs and thereby try to achieve an objective of convergence for effective adaptation.



ADAPTATION FUND

Fostering Adaptation in India



Spring Rejuvenation



Rain Water Harvesting and Micro-Irrigation System



Produce from Protected Cultivation (Polyhouse)



Improved Breeding Services



Community seed banks for conservation of agrobiodiversity

Project Impacts:

1. Social Impact:

- Collective and harmonious way of working and reduced disparity
- Creating platform for women leadership and empowerment
- Improved opportunities for earning income for women
- Reduced drudgery of hill women
- Improved food and nutrition security
- Creating hope and building confidence amongst villagers
- Better community bonding
- Reduced migration
- Improved awareness about various aspects of climate change and govt. schemes, better networking and connectedness

2. Ecological Impact:

- Regeneration of 136 ha with native tree species.
- Recharge of Natural spring rejuvenation Improved water security
- Revival and conservation of local biodiversity and niche crops
- Plantation of new 120000 trees in the region
- Creation and conservation of habitat
- Eco-restoration and soil water conservation and community pastoral land (Van Panchayat)
- Community collective actions for natural calamities e.g. Forest fires and conservation of forest
- Improved awareness on climate change, climatic hazards and adaptation pathways

3. Economic Impact:

Introduction of interventions such as polyhouse, wadi, and roof top rainwater harvesting tank, drip, cattle development and fodder development at the level of family can help generate additional income up to Rs. 1 lakh from fifth year onwards up to 10-15 years.



community led management & regeneration of vegetation on degraded common lands (Vanpanchayats)

While agricultural land is the main source of dry and green fodder in the plain areas of Uttarakhand, natural grasses and tree leaves are the main sources of fodder in the hill districts. The main sources of natural grasses are forest lands. However, biomass production in forests is low due to high degradation.

This project has demonstrated how forests can be regenerated with community participation and management. Sizable area has been regenerated through a sequential process involving:

- Formation of local committees for implementing the programme
- Preparation of an inventory of forest trees and grasses by the people, with ranking of choice
- Fencing using stonewalls or hedges and trenches to prevent entry of cattle, and appointment of paid guards
- Removal of unwanted thorny plants
- Contouring and terracing
- Encouraging farmersto establish nurseries for grasses and fodder trees

- Pit digging ,plantation and staking of selected trees like bheemal (*Grevia optiva*), khadik (*Celtis australis*) and aangu (*Fraxinus micrantha*); removal of dead saplings and re-plantation cultivation practices
- Increasing knowledge about and access to quality seeds

Increased biomass production

BAIF has demonstrated in Champawat district how forests can be regenerated with community participation and management. Hill women have played key role in this work. A key requirement is community pressure to ensure that no grazing is allowed in the first three years and only cut and carry' is permitted.. There are many norms set up by community and consensus is arrived, on payment of entry fees to the Van Panchayat. With these measures, production of grasses has increased by around 30%. More importantly the area today is providing many ecosystem services to adjacent communities

