

## From source of sorrow to place of prosperity, Swan River in Himachal Pradesh

### Scheme details:

- Scheme Name: Channelization of Swan River
- Target Area: Swan River watershed, Una district, Himachal Pradesh
- Total Project Cost: Rs. 945.49 Cr.
- Broad Scope:
  - Afforestation
  - Civil works for soil and river management (check dams and embankments, etc.)
  - Soil protection and land reclamation (terracing and soil addition, etc.)
  - Livelihood improvement activities (agricultural development, small-scale infrastructure installation, income generating activities, etc.)
  - Institutional building (purchase of equipment, training, hiring of facilitators, etc.)
- Implementing Agency: Forest Department and Irrigation and Flood Control Department, Government of Himachal Pradesh
- Area covered: 95 Gram Panchayats of Una District, within which 61, 900 Ha of land were treated to protect the land from soil erosion and floods, regenerate the forest cover and enhance agricultural productivity.

**The Problem:** District Una is situated on the bank of Swan River, which flows from North to West direction. This river during monsoon period creates devastating floods in District Una. Due to continuous silting, the bed of Swan River had risen constantly due to which meandering action took place. The width of the river had increased, and fertile land situated on both banks was turning barren due to silt deposits. Besides, some of the fertile land situated near the banks had been lost during the floods.

Approximately, 10,000 ha. of agriculture land was affected by floods and annually 2,000 ha. of fertile land were not being cultivated owing to fear of floods. During the past 10-12 years extensive damage to civil structures, properties, human life and livestock had been reported. The estimated loss to crops and property was to the extent of Rs. 15 Cr. per annum.



**Intervention:** The forest department was the nodal department for the project. The participating line departments were agriculture, horticulture and animal husbandry. The overall administration, planning and implementation of the project was with the Project Management Unit (PMU). The Chief Project Director was the overall in charge of the project and responsible for all administration and financial matters and maintaining liaison with the government. He was assisted by a team of Additional Director, Joint Director (administration), Deputy Project Directors Agriculture, Horticulture, Animal Husbandry, Social Development Expert, Environment Education Expert and Training Expert. Three Project Implementation Units were established at Una, Amb, and Gagret headed by the Deputy Directors. At Panchayat level Panchayat Development Committees (PDCs) were established in all the 96 Gram Panchayats of the Project area.

The Detailed Project Report for providing embankments on both banks of Swan River for a length of 16.67 km. from Jhalera bridge to Santokhgarh bridge in Phase-1 was prepared based on mathematical modelling studies carried out by Central Water Power Research Station (CWPRS), Pune. This project amounting to Rs. 102.71 Cr. was accepted by the Technical Advisory Committee of Ministry of Water Resources, Govt.

of India. To adopt an integrated approach, it was proposed to treat the entire catchment instead of just the sanctioned portion of 16.67 km. In all 42 most vulnerable points requiring emergent flood control works were identified. Out of these, 40 have since been completed at a cost of Rs. 9.28 Cr. An additional amount of Rs. 24.57 Cr. has been approved under NABARD for phase-I.

Also, a provision of Rs. 106.83 Cr. has been made for treatment of catchment area of tributaries falling from Jhalera bridge to Santokhgarh bridge. The Forest Department has planted around 60,000 trees of different varieties in 50 ha. In addition to this, check dams in the tributaries and planting of grass and bushes for bank protection have also been done.

**Community involvement:** People's participation was key to the success of this project and community participation was seen as an important aspect. No fund needed to be allocated for land acquisition as the villagers had come forward and donated their land for the project. This led to savings to the tune of Rs. 500 Cr. The people donated their land with the expectation that the agriculture in the remaining portion of land after construction of the project would give them better returns. The report by JICA says that "The project will be implemented on national forests and on private land chosen through community participation. The project will not involve any land acquisition or involuntary resettlement."

**Impact:** The Swan River Project has benefitted the villages situated by the side of the river from the massive erosion and siltation caused by the flash floods. During the Focus Group Discussion with villagers of Una, the villagers reported " *Since the Channelization of Swan River has been implemented by the Government, it changed our destiny for better as today, we are earning a reasonable money by producing seasonal vegetables and cash crops on the reclaimed land and have shifted back to our traditional vocation of farming*". Some of the benefits are summarized below:

- The analysis of cropping pattern revealed that the total area under cereals decreased from 69% to 54%; however, with the increase in the irrigation facilities by the project interventions, the area under vegetable crops increased from 31% to 46 % of total cropped area. The cropping intensity increased from 193% to 199% after the project implementation.
- During the project implementation period, the average size of livestock unit increased from 1.62 to 2.71. The share of milk to the total income from livestock was found to be highest among different livestock products.

- As a result of increases in the income from agricultural crops, fruit crops and livestock by about 43%, 35%, and 55%, respectively, the overall farm income has increased by 50% during the project implementation period.
- The employment generation in agriculture has increased with the implementation of the project. The annual per farm labour employment in horticulture and livestock, showed an increase of 213% and 65% respectively.
- Community-based groups formed under the project are involved in marketing of produce.

**Sustainability:** In order to ensure the proper utilization of created facilities over time, there is a need for adopting certain measures at local level - local asset management committees may be formed under the guidance of the block and district authorities.

(References: *FGD & KII as part of primary survey; Research Report No. 70: Impact analysis of integrated watershed project in Swan catchment, Una district, Himachal Pradesh, Department of Agricultural Economics, Extension Education and Rural Sociology, CSK HPKV, March 2014*)