ICIWRM – 2000, Proceedings of International Conference on Integrated Water Resources Management for Sustainable Development, 19 – 21 December, 2000, New Delhi, India

# Community participation in watershed management - Haryana experience in World Bank aided project

**H. S. LOHAN**
Project Director, Integrated Watershed Development (Hills-II) Project, Haryana, Panchkula, India

## Abstract
Watershed Management is recognised as the effective way for treating the degraded areas. It has been found to be effective by way of restoring the ecological balance. More emphasis on mobilisation of communities in various activities of the project has found to be highly beneficial in sustaining the assets created. This philosophy was adopted in the Integrated Watershed Development Project Hills being implemented in five States with the assistance from World Bank. This project was started in April, 1990 and its phase ended in March, 1999. After assessing this project as a successful proposition, its second phase started in March, 1999. Major plank of this is to put more stress on community participation by forming Village Development Committees. Cost sharing has been experienced as one of the effective method of the involvement of the beneficiaries. In this paper Haryana experience of the project is being shared.

## INTRODUCTION

Land and water are the most important resources and all form of life revolves around these invaluable nature's gift. But due to increase in the developmental activities allaround, we have neglected these. Now there is realisation everywhere for managing these judiciously so that their sustainability is ensured on long term basis. The concept of watershed management take care of these two natural resources in a scientific way. The involvement of the community in watershed management is considered to be very effective. Earlier the participation of people in various programmes was negligible. However now community participation is proving to be useful tool for managing natural resources. Keeping this in view, this concept is gaining importance.

Land in the shivaliks are undulating and steeply slopping. Area is highly ecologically degraded due to lack of vegetative cover, dispersible and erodible nature of soils, which are also low in organic matter. Soil erosion in some of the catchment is as high as 225 ton/hect. Though there is good rainfall in the area of about 1200 mm per annum but still there is always scarcity of water. Subsistence rainfed agriculture is the prevalent production system in the shivaliks. Shivaliks are considered eight most degraded rainfed agro-eco-systems of the country and hence included in the priority areas.

With this background in view, a World Bank Aided Project was started in Shivalik hills in 1990. When its successful implementation convinced by the World Bank and Govt. of India, second phase of the project was negotiated with effect from April, 1999. Project has been focused on the most degraded watersheds in the rainfed areas and thus on the poorest population of the five States namely Haryana, Punjab, Himachal Pradesh, Jammu

& Kashmir and Uttar Pradesh (joined in second phase only). Project is aiming at to provide benefits to the most marginalised and vulnerable segment of population by enhancing the productivity of the area. It is to be done by following watershed treatment technologies and community participation approaches. The project is designed to contribute significantly in decreasing soil erosion, increasing water availability and alleviating poverty in the contiguous areas of Shivalik Hills in the five project States.

## PROJECT AREA

Comparatively very less area of Shivalik lower hills fall in Haryana. About 1.92 lakh hectares falling in the districts of Ambala, Panchkula and Yamunanagar. The project areas touches the boundaries of Himachal Pradesh in its north, UP in the eastern side separated by Yamuna river and towards north-west it is Punjab. It receives an annual rainfall of about 1200 mm, about 80% of which in the months of July to September. Its area lies between 320 meter to 1100 meter above sea-level. Topography is undulating with slope varying from 3% in the lower area to more than 30% in the upper catchment. Number of rivers and rivulets dissect the area resulting into large scale erosion leading to poor vegetation and low agricultural production. But earlier this area used to have thick forest cover and many perennial streams. Names of one its district Panchkula drive its name from five (Panch) Kuls (water channel originating from perennial source). Now the people are rearing large herds of cattle so as to maintain themselves. Many of the cattle have poor health due to lack of food and water. Some of the people migrate their cattle during summer in search of water and fodder.

In the second phase, an area of about 70,000 hectare falling in five watersheds covering 219 villages, has been taken for treatment. The area is to be treated in phases in five years' period. In the first phase it was 1,04,000 hectares.

## COMPONENTS OF THE PROJECT

Following are the main components of this project:-

### Treatment of arable areas

Under this item, vegetative field boundaries are raised in the farmer's fields in order to improve in-situ moisture conservation. Besides this, crop demonstration and horticulture plantation are also raised in the arable areas. In the second phase of the project, farm forestry component has also been added. All these components are carried out on the private lands of the farmers and cost sharing is mandatory to take up these activities. In about 1200 hectares, fruit plants were planted.

### Treatment of non-arable lands

As a result of high rainfall and rolling topography, the area is dissected with number of streams. The streams are of mandering nature which has left many productive area as waste lands. To restore the productivity of these waste lands, plantation activities have been taken on an extensive scale. Such type of lands are available as private lands, common lands and Govt. lands. The plantation in these areas are planned according to choice

of farmers, suitability of species. In the first phase, more than 16000 ha. area have been planted under different species. Most plantation raised are of Acacia Catechu and Dalbergia sishu which are also native plants of the area. As a result of plantation in contour trenches, a good stand of plants exists. Lot of regeneration in area has taken place. Landless people also get grass and fuel woods. Quality of soil improved with addition of organic matter. According to remote sensing studies, a good green cover has come up as a result of project intervention.

## Drainage Line Treatment

As stated earlier, the area has streams of different width and these are creating problem in the agricultural fields and inhabitants specially during rainy season. For reducing their menace of floods and degradation of land, various activities of stream bank protection and plugging of these streams have been taken up on watershed basis. These measures not only conserve the water and soil but also in turn help in retrieving the lost land and saving of existing fields from further erosion. The conserved moisture also recharge the groundwater and provide life saving irrigation wherever possible. As per evaluation studies, above activities saved more than 10,000 ha. of land from further damage and retrieved 3000 ha. land available for cultivation. The area which has brought under limited irrigation is about 350 ha. Tapping of sub-surface water has significantly enhanced the level of participation.

## Live Stock Development

Due to lower productivity, health of cattle is poor and people keep large herds of cattle. These cattle do damage the area on account of their dependence on grazing. In order to minimise the damage under live stock development, two prong strategy is followed, one is the improvement of cattle breed by artificial insemination or bringing bull of better quality for natural breeding. The other is to improve the health of the cattle by providing health cover through opening of more vety. Dispensaries and hospitals. In the first phase of the project, 49120 cattle were artificially inseminated. Three hospitals and 12 dispensaries were opened in the project area. As per the studies done, there has been reduction in cattle population, decrease in migration of cattle in summer months and increase in stall feeding.

## Institutional Development

The other main component of the project is the institutional development around which all activities of the project are revolving. A bottom up approach is an integral part of the project to involve all stake holders during planning and implementation. In this process, after selecting the area during project preparation, people are made aware about the project, its philosophy, concept and approach. Thereafter, already decided during design of the project, villages are selected. Meetings are held in all the villages. Formation of committee in each village is initiated. Participatory Rapid Appraisal (PRA) exercises are carried out in each village where map of natural resources are made and then the problems being faced by the villagers are discussed and enlisted. Field visits are also made during PRA meetings. Keeping this in view, detailed village development plans are made jointly (project team and villagers) of all the selected villages. In the second phase, in our State we have selected 88 villages and all their plans have been prepared. Accordingly

priorities are also made. After the preparation of village Action Plan, a copy is given to the Village Development Committee (VDC) also. The village plans are made in local language. Each action plan contains all possible data concerning village. The VDCs are also registered. After this, implementation plans of activities are prepared. In the second phase of the project, even the activities are being implemented through the VDCs. It is mentioned here that VDCs are also having representative of panchayats (constitutionally elected body).

By following this practice, involvement of the people is ensured right from beginning. With this, villagers also develop a sense of belonging. We have constituted more than 150 village Development Committees in the project area and about 100 are registered as well. Some of the VDCs are functioning and take care about the assets created. This process would be further strengthened as we proceed further. This helps in sustaining the activities upto a great extent.

### Cost Sharing

The process of cost sharing for all the activities of the project was started in the first phase and further strengthened in the second phase. Cost share varies from activity to activity. Its proportion is more in the component like rainfed crop demonstration, raising of horticultural crops, farm forestry etc., it is less in the activities being done on common land and Govt. land. Cost of the items are shared in the form of manual labour. Its response is more in those activities where the returns are immediate like harvesting structure, drinking water and construction of spurs to save private lands. However, with respect to cost sharing, initial response was very poor but later on it improved after repeated meetings. Now it has been made mandatory for the field staff to start only those works, where cost share is ensured.

However, now since the works are to be done through VDC, so it has to become easier and more transparent. This approach of the project has helped in sustaining the project activities upto great extent. Keeping its usefulness in view, now the State Govt. has also taken a decision to have cost share in all activities of watershed management in all the States and centrally sponsored schemes of various departments. This project approach would definitely go a long way in sustaining the various rural development programmes in the State.

## LESSONS LEARNT

Out of the project, some lessons have been learnt, based upon the Project Completion Report prepared by FAO/World Bank Co-operative program (FAOICP) Mission in November, 1999.

**Sustainability:** Establishing community based organisations and making them responsible for identification, planning, implementation and post project operation and maintenance is the only way to ensure sustainability. To ensure long-term sustainability, the local organisations should also be linked to local level institutions for operation and maintenance beyond the project.

**Building/strengthening local organisations:** More emphasis should be put on mobilising communities as a part of project activities. The best projects are truly participatory. This enables adoption of "bottom-up" and demand-driven measures and taps the creativity of local people to develop project innovations.

**Targeting the poor:** Social organisation must address the needs of each interest group (farmers, landless, women, tribes) to give them an integral stake in the project success. Recognition of their role in watershed development and sustainability should be linked to particular investments and proactively involve them in watershed development.

**Flexible Project Design:** Project design should be flexible and should leave room for the changing needs and priorities of the communities.

**Comprehensive Development Approach:** Watershed activities alone cannot lead to better development and increases in agricultural productivity. Land-based activities have important, but limited scope for improving the economics of rainfed areas. The projects should also include investments in complementary infrastructure (e.g. drinking water, and rural roads), livestock activities, marketing and sustained institutional capacity.

**Joint Decision-Making:** Local people should jointly decide with project management, not only on the selection of treatments, but also on the sequencing of watershed activities, revising plans to adjust to changing conditions and managing the budget to reduce the likelihood of misuse of funds. That empowers villagers in project design and decision-making.

**Systematic Monitoring and Evaluation:** Systematic monitoring and evaluation are needed to assess performance and remove bottlenecks. This requires clear monitorable indicators of project performance and achievement of development objectives.

**Harmonisation of Guidelines:** There is need for a common conceptual approach and guidelines for watershed development. Watershed development programs are being implemented by various central and state schemes, NGOs, some with assistance from bilateral and multi-lateral donors, and these activities are often implemented using different conceptual approaches. There is thus a need to develop and follow a common conceptual approach and harmonize guidelines.

## CONCLUSIONS

For treating the watershed areas, besides following scientific approach of treatment, involvement of the community is very necessary right from planning to execution. This will help in sustaining the project activities. Cost sharing in various works should also be integral part of the project design.

## References

Project Appraisal Document for the Integrated Watershed Development (Hills-II) Project, May 18, 1999.
Implementation Completion Report of Integrated Watershed Development (Hills) Project—November, 1999.
Draft Performance Audit Report of IWDP (Hills & Plains)—May, 2000.