# Watersheds under IWDP-I Project\*

District Sirmaur is located in outer Himalayas which is commonly known as Shivalik range. The District comes under three agro climatic zones viz. humid sub-temperate zone, humid sub-tropical zone and sub humid sub-tropical zone. The agro-climatic conditions of the District were suitable for cash crops like potato, ginger, peas, garlic, wheat, maize and capsicum. The economy of the district was largely dependent on agriculture because the industrial base is a comparatively weak. The agriculture production to a larger extent was still dependent on timely rain fall and weather conditions. Agriculture being the largest single industry and main stay of the people of district Sirmour, the importance of agriculture in economy of district can hardly be overemphasized. Agriculture, in general, was handicapped by steep and hilly terrain, hazards of climate and scattered holdings. With thin stony soil, limited irrigation and small cultivated area, the scope of the increasing the cultivated area was not much. Since alternative sources of livelihood other than agriculture were limited, the peasantry had to subsist under difficult conditions, where nature is the stern mother. High rain falls and nature of rocks combine caused erosion and landslides and hindered transport facilities. On account of remoteness of the location and hilly terrain, the district had remained virtually isolated and thus economically and socially backward too. Most of the area witnessed the overgrowth of lantana bushes which had reduced the fertility of the soil and there was a likelihood of reduction in the cultivated area as these unwanted weeds and bushes were multiplying at a very fast rate. The rain-fall in the area was very high thus the soil erosion created great threat to the area. There were heavy cattle pressured pasture lands which were quite insufficient to provide fodder to the livestock, as a result of it there was immediate need to increase the availability of fodder. The major pressure on natural forest was due to the consumption of fuel wood, fodder and timber. In order to off-load this pressure from the natural forest massive afforestation of the fuel wood and fodder species was required near the population centre. Forests are one of the most renewable resource and they purify air, control pollution, regulate the climate, replenish ground water, control floods, prevent soil erosion and maintain soil fertility. Therefore, there was a need to protect, propagate and maintain them since the district had per capita forest area of 0.13 hectare only in more than 120 villages in the area. The population of these villages totally depended upon the forests for fodder, fuel wood, timber etc. As per 1981 census, the population of District Sirmour was 3,06,952 persons which rose to 3,79,695 persons in 1991. Thus, the increase in the population during the last decade was 72,743 persons. Hence, there was a dire necessity to reclaim the wasteland and bring it to the community use. It was utmost need to increase agricultural and horticulture production \_\_\_\_\_

<sup>\*</sup>Case prepared for discussion in the training programme. It is not intended to illustrate either effective or ineffective handling of an administrative situation.

in the area. Although a number of measures including plantation, soil erosion, encouragement to horticulture activities etc. had been taken in the past but the investment made has not been adequate to achieve the desired results.

### **RELEVANCE OF WATERSHED DEVELOPMENT**

Keeping in view that the main occupation of the people of district is agriculture and allied activities with meager holding of land, it was thought by DRDA, Sirmour to promote economic development of the population living in the area with the watershed approach under Integrated Watershed Management Project-I. Over the years DRDA Sirmour had gained vast experience in implementing various rural development and poverty alleviation programmes and had a team of experts available in the field of Forestry, Agriculture, Horticulture, Social education and other allied subjects. The annual budget of DRDA was approximately Rs. 700 Crores. Sirmour was the first District in Himachal Pradesh to start total literacy programme. In the post literacy campaign, almost 100% achievement had been made under this programme. In Family Welfare Programme the success rate was about 95%. The district had also taken lead in implementation of prohibition. In view of the successful completion of many above mentioned programmes, DRDA Sirmour finally decided to undertake WATERSHED DEVELOPMENT project in these areas. The time period for implementation of this project was 1999-2000 to 2002-03. The total area proposed to be covered under IWDP-1 was 12500 hectare out of which 771 hectare was private land and 11729 hectare was government land. The project aimed at minimising the intensity of ecological degradation in the hills and improvement in the living standards of the local population through reforestation and other measures to improve the productivity of soil, water, and human resources. The projects involved long term ecological rehabilitation, mainly through afforestation and soil conservation measures, to rehabilitate eroded areas, to check further erosion and reduce down stream flooding. In addition, the projects focussed on reducing the gap between local demand and supply of fuel wood and fodder for the benefit of the rural communities.

In addition to the primary objectives elaborated above, the project was conceived to eradicate numerous problems faced by the people.

### **Project Components:**

The Integrated Watershed Management Project covered the following component which are aimed at land based activities and were relevant to the ecology of hill areas:

**Forestry** - The basic objective of this component was to halt deforestation, provide vegetative cover on degraded land and supplement fodder and fuel-wood resources available to the rural communities. These activities were labour intensive and generate considerable employment opportunities for the local people. The main elements of this component were establishing plantation with contour hedges, protection / improvement of existing vegetal cover as well as rehabilitation of degraded areas.

**Agriculture** - Support Irrigation & Soil Conservation - The component aimed to increase agricultural productivity in a sustained manner and to diversity crop production. This was being achieved through organizing farmers' training camps and exposure visits. The field activities included - field trials of HYV and distribution of improved seed mini kits, improved implements; construction of check dams, water harvesting tanks, water storage tanks and channels, repair of old naula/khala, implementing measures to check soil erosion and conserve moisture.

**Horticulture** - The activities under this component aimed to raise fruit production, diversify production and to conserve soil and moisture through establishing perennial tree crops with suitable ground cover on steep land which was unsuitable for arable production. The main activities were: establishment of private orchards, top working on wild trees, and rejuvenation of existing orchards and distribution of horticulture plant for homestead planting.

**Animal Husbandry-** The objective of the component was to improve the productivity of livestock through breed improvement programme, reduction in the number of scrub/unproductive cattle and to ensure maximum utilization of fodder resources. Key activities involved: establishment of Natural Breeding Centres (NBC), distribution of fodder seed mini kits, pasture improvement, castration of scrub bulls, animal health care and fodder utilization.

**Energy Conservation** - The main objective was to reduce pressure on forests for fuel-wood by introducing, energy efficient cooking equipments (pressure cooker, wood stoves) and encourage use of alternative energy sources (biogas, solar cooker).

**Community Participation-** Community participation is the key to ensuring success of convergent planning and joint project implementations with the village communities. The project interventions were accompanied by reciprocal obligations by the beneficiaries, under which they agreed to contribute in cash, kind or labour or to implement associated activities. The strategy of the projects was to involve local people, NGOs Mahila Mandal, Yuvak Mandal and other voluntary organizations in planning, implementation and subsequent maintenance of the developed assets by the project and by the beneficiary communities with a view to gradually make it a people's programme in place of Govt. sponsored programmes. Integrated Watershed Management Projects aimed at community resource management through an integrated approach. A clear overall strategy was based on a holistic, integrated approach, that recognizes local needs as well as wider project policies, and that is designed to bring the various components together in a truly integrated manner.

**Training and Awareness Programme** was an essential ingredient for achieving the projects' objectives which included local villagers training, motivators' training, training on organization building techniques, training of users' groups in the field of management of natural resource, exposure visits etc. Regional academic and research institutions were

involved for the benefit of the projects, so that full advantage may be taken of existing information and expertise from the institutions.

H. P. Agriculture University Palampur, Dr. Y.S. Parmar University of Horticulture and Forestry, Solan; Agriculture Research Centre, Dhaula,Kuan, Sirmour; and the H.P. Institute of Public Administration, Shimla were the Institutions identified for imparting training in the field of watershed related activities. The above Institutions, in addition to departments of Agriculture, Forest and Animal Husbandry, were the Research/Technical Institutions with which liaison was kept for undertaking this project. Remote Sensing Cell of Department of Science & Technology, Shimla was identified for the remote sensing support for the project.

### **Physical And Financial Targets**

The physical and financial targets envisaged at the beginning of the project are appended at **Annexures A & B.** 

### **Impact of the Project**

To assess the impact of the project in totality, an evaluation study was conducted with a view to ascertaining the process of Planning and Implementation of IWDP –I in District Sirmour, to document the role of people and people's organizations (Watershed Associations, Watershed Development Committees, Self Help Groups and user Groups etc., to examine the problems of watershed area and how far these problems have been tackled with the help of activities undertaken, To assess the requirements of capacity building, up gradation of the functionaries (WDT members, WSA members, WDC, Self Help Groups and User Groups etc.) and to study the impact of watershed activities on the economic development and socio economic conditions of the poor/ disadvantaged section of the people of the watershed area.

Five different sheds corresponding to five different PIAs were selected from the District Sirmour out of which four watersheds had been executed by NGOs, namely, YUMDHA, RUCHI, SUTRA, ANARDE whereas work on one Water-shed Area had been executed by Divisional Forest Office. The water-sheds represented plain, hill and Trans-Giri areas in district Sirmour. The area covered under watershed for plain land ranged a little more than one thousand hectare whereas in hills and Trans-Giri area, the area covered was a little less than one thousand hectare. In each of the selected water- shed, a minimum of 4 SHGs and five user groups representing various socio-economic groups had been covered. Total of 20 SHGs and 25 users groups which constituted about 25% of the total groups in the sample watersheds surveyed. The quantitative and qualitative information collected from these sample household/groups and PIAs were analyzed.

### SUCCESS & FAILURES

The project was sanctioned on 26.3.1998 with a cost of Rs. 499 lakhs. Government of India provided Rs. 487.93 lakhs and an amount of Rs. 12.32 lakhs was accrued as interest on the Government of India grant. The total area covered under IWDP-1 is 12500 hectare out of which 771 hectare was private land. In all sample watersheds, the watershed area was 1000 ha (more than the maximum permissible under the programme) except for Pervi Khad in Rajgarh Block where the same was 797 ha. The total watershed area almost coincided with the net sown area in all except one watershed, implying that only private agricultural land had been developed in most cases benefiting only the land owning households while the objectives of the scheme laid down that benefits should be derived for common property resources. Only in one sample watershed in the Gundah Khad, more than 100 ha of forest/ community land had been developed in addition to private land. Land leveling/ bunding and water resource development activities constitute the primary areas of intervention in all watershed areas followed by drainage line treatment and tree plantations. As mentioned earlier, about 75% of the development activities/ expenditure were confined to private crop land areas in the sample watersheds; community land development was significantly taken up in only one of the watersheds in Talon Bankala Khud. Small and marginal farmers mostly inhabited these watershed areas. The landlessness, however, was more prominent in the two watersheds in the hill area as compared to the other watersheds in the district. Field training facilities were provided to the village community and user groups were fully involved in the implementation of the watershed project and no user group conflicts were observed. Percentage of expenditure on project activities taken as percentage of sanctioned amount with regard to Kawal Khud in Pachhad Block was observed to be comparatively low. During the post project activities undertaken by Self Help Groups, uniform results were not experienced for all watersheds with regard to employment generation. In Majri Kilod and Kwal Khud watersheds, the post project activities kept SHG's engaged in activities for whole of the year. Contrary to this, in Gundah Khad and Pervi Khad, post project activities engaged SHG's for less then four months in a year. Under these projects, the area hitherto which was unavailable for cultivation owning to overgrowth of lantana bushes was brought under cultivation with the removal of these bushes which was a major factor of reduced soil fertility.

Agriculture and horticulture production was targeted to increase by 25% after the implementation of the project. As a result of the implementation of the project, area under horticulture had increased to 15% from the pre-project status of 2%. With regard to agriculture crops, production of Peas had increased by 29% whereas wheat and tomato production had increased by 33%. The land and water development activities had significantly improved the soil moisture conservation and thereby improving the crop yield in all watersheds. There was a significant increase in their crop production: while up to 25 % of yield increase was reported in the sample watersheds. The rainfall data indicated that all sample watershed areas received an average annual rainfall of about 1300-2000 mm, of which about 70 % was received during three months of rainy season i.e. June-August. Ample irrigation facilities had been created by harnessing the rain water which had directly provided sufficient water for crops and as a result suitable increase in the area under vegetation had been witnessed as 35% land was brought under vegetation in comparison to pre-project situation of 12% land under vegetation. The irrigation potential available was providing facility to only 29% of the cultivated land whereas the watershed activities provided irrigation facility to 55% of the cultivated land.

It is well known that the democratic decentralization of development activities call upon the PRIs to play an enlarged and proactive role. Interviews with the members of Watershed Association and Watershed Development Committee, revealed that Panchayati Raj Institutions played no role in the overall watershed management activity. It was observed that in consonance with the guidelines, homogeneous groups and women groups were formed for the better implementation of the project in the low hill areas. Participation of women folk indicated gender mainstreaming in the development activities in their respective areas. In the high hill watersheds namely, Gundah Khud and Pervi Khud, no women members were included in the user groups as reported by sample user groups surveyed. The frequency of the meetings of members of Self Help Groups had been similar in the entire watershed surveyed wherein all the members of SHG met regularly on monthly basis which points towards enthusiasm of SHG members involving themselves with watershed activities.

The watershed Development activities did not create any new and sustainable employment opportunities but provided only marginal employment to the beneficiaries who were already involved in agricultural and allied activities; whatever little employment generation that took place in these watersheds clearly meant that beneficiaries were able to supplement their monetary income while the projects functioned. The quality work of construction of check dams, kuhals and field channels has been found to be remarkable and there was no case of complaints in this regard. The construction of kuhal/field channel had resulted into increase in the agricultural production especially cash crops like tomatoes, peas and other off-season vegetables which is evident from the increase in the production as well as increase in the per hectare yield. Soil erosion occurring due to heavy rainfalls had been checked by constructing check dam, gully plugging and bunds. The land had a heavy pressure of cattle and the available fodder was quite insufficient to provide the fodder to the livestock. As a result of the activities under taken in the project, the fodder production rose by 24%.

The focal role has been played by the Rural Development Department being the nodal department; rest of the departments played their roles mechanically and failed to assume the ownership of the project. Tree and fodder plantation activities have been carried out mostly in private lands and community lands remained bereft of the benefits of the plantation activities. In none of the sample watersheds any livestock and grazing practices followed to protect and develop the common land resources was reported. Although ample training on watershed management was provided to the communities covering relevant areas, yet no training was provided to landless or non-beneficiaries. The overall success of the programme depends to a large extent on the vision and effective orientation of the Project Implementing agency (PIA), which is responsible for creation and capacity development of the

project/ village level institutions like Watershed Association (WA), Watershed Development Committee (WC), etc. In this context, it was found that although entire sample PIAs and NGOs had had prior experience in watershed development, but these activities were not guided by gender and equity considerations so as to attempt an all round development in the watershed areas involving diverse users' groups including landless and women groups.

The approaches of five sample PIAs had been to implement only a land development plan with no integrated planning for all user groups was adopted. So, although WA and WC were formed in these watersheds, these were not represented by all sections of villagers especially landless/ non-beneficiaries. In this connection, the roles of WDTs in all watersheds were confined to only technical supervision of watershed works and imparting limited training and extension services relating to improved crop and livestock practices. The WDT was not effective in the area of community organization. Thus, in all these watersheds, the services of the WDT and that of the PIAs had only benefited one user group the direct beneficiaries: the landless and other weaker sections had not been provided with any other income generating activities. Watershed Development Fund (WDF) of Rs 0.7-1.0 lakh was created in all watersheds to meet the future maintenance expenditure. However, no management plans had come across during the field surveys and interviews with PIAs and DRDA for the protection and development of community land resources. In the absence of any non-farm development alternatives for the non-beneficiaries, consisting of landless and women groups in the watershed areas, not only the poverty alleviation objective remained unfulfilled, but even the maintenance of existing structures were adversely affected, as the sections left out had no stakes in sustaining the watershed structures and other related assets.

The sample user groups, consisting of both landless and landowners, were asked about what they felt were the main impacts of the watershed programme in their villages. Their overall perceptions indicated that irrigation benefit was the most favourable impact of the watershed programme, indicated by more than above 90 % of SHG's/UG's in all watershed areas. Equally important was the perception regarding improvement in ground water condition overwhelmingly reported by 85-100% of beneficiaries across all watersheds. The land-owning SHG's/UG's have overwhelmingly mentioned that the project has also increased crop production.

The tangible income/ benefit flows from the watershed areas may be classified into two categories viz. recurring and non-recurring. The recurring income flows consist of the benefits from crop output, which will continue to be available even after the project period, while the non-recurring income flows from the wage bill were only one-time flows limited to the project period. It was found that while the non-recurring benefits were distributed among all groups of available villagers, the recurring benefits were confined to only some land-owning households in three of the four watersheds. It was observed that in three out of five sample watersheds, large sections of households (35-60 %) consisting of landless and other groups had no share in the recurring benefit flows.

The lopsided income distribution pattern found in most watersheds. As a result, in spite of the positive impact of the watershed programmes on crop production and soil/moisture conservation, there was no significant reduction in the gender discrimination and income inequality in the project areas.

### DIRECT FIELD OBSERVATIONS

- The NGO, SUTRA, the project Implementing Agency for Talon Bankala Khud in Nahan Block failed to associate themselves with the on spot evaluation of works.
- The activities of SHG's in these watersheds were observed to be based on watershed activities. Banks linkage was provided to these SHG's which facilitated availability of bank loan for self employment.
- It was revealed by the Secretary and Pradhan of the watershed committee of Kwal Khad Project that their experience with the Project Implementing Agency i.e. the State Forest Department has not been a good one. The Forest Department never cared to provide them any advance money for the execution of works. Even after four, five years of completion of the project, certain payments against the works executed were still pending which have not been released by Divisional Forest Office.
- Field training facilities were provided to the village community and user groups were fully involved in the implementation of the watershed project and they experienced no user group conflicts.
- While interviewing the members of Watershed Association and Watershed Committee, it was found that Panchayati Raj Institutions played no role in the overall watershed management activity.
- In the high hill watersheds, Gundah Khud and Pervi Khud, no women members were included in the user groups as reported by sample user groups surveyed.
- The frequency of the meetings of members of Self Help Groups had been similar in all the watershed surveyed wherein all the members of SHG met regularly on monthly basis.
- To check the soil erosion, beneficiaries planted local species called 'RAM BAN' which was quite effective to keep the soil intact.
- One distinct feature disclosed by the beneficiaries in the Pervi Khud watershed related to self imposed discipline for attending the meeting of SHGs by all members. The defaulter member had to pay a fine @Rs.10/- per hundred contributions.
- In Pervi Khud watershed, the sole purpose of formation of SHG had been inter-loaning and meeting social obligations. In one particular SHG, members were bound to repay their loan within a period of six months failing which they were liable to pay a penal interest @ 4% instead of normal rate of 2%.
- The project had witnessed a delay in the completion for one year and it was actually due to delay in release of funds as reported by the respective Water Development Committee Secretaries.

- It was also found that separate accounts were maintained. The procedures adopted included a resolution to be made and passed in the watershed committee, thereafter implementation of work was taken up by drawing money from bank account with the signatures of Secretary/Pradhan of the watershed committee.
- It was reported that the following WDT members visited the watershed area during implementation and after implementation:
  - a) Veterinary Doctor
  - b) Junior Engineer, DRDA
  - c) District Coordinator, Watershed
  - d) SDO
- It was also found that user groups were still active in these watersheds since they were formed in the areas of watershed associations having identity of interests. The user groups were performing activities related to watershed.
- Training to all the functionaries of watershed viz. Secretary/Chairman/ Volunteers/ SHGs and UGs was imparted and at an average five camps were organized in a year which were attended by all the functionaries, approximately.
- It was also found that Development Plan was prepared for all the surveyed blocks except for the Kwal Khud in Pachhad Block. Watershed Development Plan was prepared by the Secretary of the Committee from PIA.
- In general, the problems of the watershed areas before the implementation of the project included soil erosion, low productivity of soil, treatment and development of the drainage lines in arable and non-arable lands, shortage of fodder and grass, fuel wood and minor timber etc. During the project implementation phase, Land Development, Nursery raising, Afforestation and soil classification and land capability analysis activities were undertaken to solve the above mentioned problems.
- During the survey, Watershed Development Committee adjudged the impact and benefits of the activities undertaken as Good and reported that the problems faced in the watershed area have been resolved to a certain extent. With regard to certain specific Watershed, the reporting has been as under:-
  - In the Talan Bankala Khud in Nahan Block, it was revealed to the field team that Forest area covered and treated in not being looked after properly by SHGs/UGs which has lead to problem in sustainability.
  - In Kwal Khud in Pachhad Block, it was revealed that certain areas have remained unaddressed for Afforestation, Land Development and Soil Classification as the area of the Panchayat is quite large and irrigation facilities still need to be augmented in the Mehlog, Lal Tikkar area.
- One particular problem reported by the Secretary of Watershed Development Committee in Pachhad Block highlighted deduction of TDS from the Watershed Development Fund which attracted their attention to see this case in court on one hand and diverted them from the activities of watershed project on the other.

• In the Kwal Khud Watershed, the Watershed Development Committee was not very happy with the working style of the PIA – Forest Department which even denied them 10% advance against the works approved to be implemented.

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# **Financial Targets**

The financial targets indicated in the table below make an elaborate attempt of various activities viz. training, Afforestation Pasture Development etc. works which were proposed to be undertaken in these watershed areas.

	Particulars	Unit /Rate	Paonta	Nahan	Pachhad	Shillai	Rajgarh	
			(Majari	(Talon	(Kwal	(Gundah	(Parvi	
			Killor	Bankla	Khud)	Khud)	Khud)	
			Khud)	Khud)				
1.	Fin.Asstt.to SHG's	0.05	0.50	0.75	0.60	0.40	0.35	
	Entry point activity	-	1.20	0.65	1.40	1.40	0.90	
	Survey & Planning	-	0.33	1.16	0.37	1.98	0.34	
2.	Training							
	SHGs	0.03	0.30	0.45	0.36	0.24	0.30	
	UGs	0.02	0.40	0.80	0.70	0.40	0.24	
	WAs/WCs	0.06	0.30	0.36	0.60	0.30	0.24	
	Others/WTs	0.06	0.30	0.18	0.18	0.30	0.60	
	Exposure/tours	-	0.73	0.77	0.53	0.76		
3.	I. Work component (So	il & Moisture (	Conservatio	n Works)				
а	Vegetative barriers	20 mtr.	0.60	0.40	0.60	0.30	0.40	
b	Gully plugging	125 mtr.	0.75	0.88	0.83	0.50	1.13	
с	Contour & bunds	40 PQM	0.30	0.25	0.54	0.12	-	
d	Bench terracing	2.5M	0.30	0.10	0.30	0.15	0.25	
e	Trenching	40 M	0.10	0.28	0.50	0.32	0.12	
f	Check dam	400M3	0.00	1.07	0.00	-	-	
g	Retaining walls	-	0.70	1.12	0.00	1.81	-	
h	Unplanned/others		0.50	-	1.03	-	0.66	
	II Work Component of Water Harvesting Structure							
а	Farm ponds	0.30	1.80	1.50	3.90	2.10	2.40	
b	Nulla bunds	0.15	0.75	1.65	-	1.20	-	
с	Check dams	0.50	1.00	4.50	2.00	3.50	1.50	
d	Personal Tanks	0.25	-	1.00	-	-	1.25	
е	Storage tanks	0.50	2.75	3.25	4.50	1.00	0.75	
f	Farm resv.	0.10	0.80	1.20		0.60	0.60	
G	Channels	125MTR	6.43	3.08	4.56	3.16	2.88	
	Other	-	1.12	-	0.13	2.83	1.00	
	Other (EPA)	-	-	2.27	-	-	-	
	Earthen Dam	-	-	-	2.00	-	1.10	

# **Table- Financial Targets**

(Rs. in lakh )

	III Afforestation Works									
а	Pvt. Agri. Land	0.10	3.50	2.16	6.60	4.99	3.60			
b	Community land		2.44	4.00	2.50	2.99	1.99			
с	Un Planed		2.20	3.04	-	-	-			
d	Other/Govt.		-	1.05	-	-	6.38			
	Forest		-	-	-	-	0.78			
	IV Pasture Development									
а	Pvt. Agri. Land	0.04	2.40	1.60	2.80	2.64	2.12			
b	Community land		0.85	1.92	0.99	0.52	0.43			
	Other/Govt.	-	-	101660	-	-	-			
	V Horticulture/Agriculture Development									
а	Pvt. Agri. Land	0.06/ha	2.64	3.54	3.79	3.20	2.55			
b	Community land		-	0.56	-	-	-			
с	Other/ Un Planed		0.61	-	-	-	-			
4.	Admn. Overhead		4.07	5.12	4.75	3.99	3.19			

### **Physical Targets**

In physical terms, the targets indicated the level of financial assistance to be provided to SHG's, trainings to be provided, all the civil works, afforestation works pasture development and agriculture/horticulture development proposed to be achieved. It also gives a macro picture of the total areas to be treated in each watershed with the classification of Forest Land, Community Land and Private / other lands.

Sr.	Particulars	Unit /Rate	Paonta	Nahan	Pachhad	Shillai	Rajgarh		
No.			(Majari	(Talon	(Kwal	(Gundah	(Parvi		
			Killor	Bankla	Khud)	Khud)	Khud)		
			Khud)	Khud)					
1.	Fin.Asstt.to SHG's	Rs.(5000)	10	15	12	8	7		
	Entry Point activity	-	-	5	-	-	-		
	Survey & planning	-	-	-	-	-	-		
2.	Training								
	SHGs	Nos.	10	15	12	8	7		
	UGs		20	40	35	20	15		
	Was/WCs		5	6	10	5	4		
	Others/WTs		5	3	3	5	4		
	Exposure/tours		-	-	-	-	-		
	Total		40	64	60	38	30		
3.	I Work component (soil & moisture conservation works)								
а	Vegetative barriers	20 mtr.	3000	2000	2997	1500	2000		
b	Gullyplug	125 mtr.	600	700	660	400	900		
с	Contour & bunds	40 PQM	750	627	1350	300	-		
d	Bench terracing	2.5M	12000	4000	12000	6000	10000		
e	Trenching	40 M	250	700	1250	800	300		
f	Check dam	400M3	-	-	-	-	-		
g	Retaining walls	-	-	-	-	-	-		
h	Unplanned/others		-	-	-	-	-		
	II Work Component of water harvesting structure								
а	Farm ponds	Nos.	6	5	13	7	-		
b	Nulla bunds		5	11	-	8	-		
с	Check dams		3	9	4	7	3		
d	Personal Tanks		-	4	-	-	5		
e	Storage tanks		11	13	18	4	3		
f	Farm Resv.		8	12	-	6	6		
g	Channels	MTR	5140	2460	3650	25.25	2300		
	Other	-	-	-	-	-	-		

### Table: Physical Targets

	Other (EPA)	-	-	-	-	-	-
	Earthen Dam	-	-	-	4	-	2
	III Afforestation Works						
а	Pvt. Agri. Land	Hac.	35	21.6	66	49.99	36
b	Community land		24.36	40	24.96	29.99	19.9
с	Un Planed		-	-	-		-
d	Other/Govt.	Hac.	-	10.4	-	79.92	63.76
	Forest		-	30.4	-	-	7.8
	IV Pasture Development						
a	Pvt. Agri. Land	Ha.	60	40	70	67	53
b	Community land		21.36	48	24.96	12.92	10.76
	Forest Land oth/Govt	-	-	14.48	-	-	-
	V Horticulture/Agricultur	e Developm	ent				
a	Pvt. Agri. Land	Hect.	44	59	13.3	53.61	42.5
b	Community land		-	9.32	-	-	-
с	Other/ Un Planed		10.24	-	-	-	-
4.	Admn. Overhead	-	-	-	-	-	
5.	Area to be treated						
а	Forest Land	Hect.	100.25	80.25	150.00	77.40	68.25.
b	Community Land	Hect.	296.80	522.75	450 .00.	490.75	360.25
с	Other/Pvt. Land	Hect.	619.95	678.00	587.00	430.75	368.50
	Total area to be treated	Hect.	1017.00	1281.00	1187.00	999.00	797.00

#### ASPECTS FOR CONSIDERATION OF TRAINER

The Integrated Watershed Development Project in Sirmour was government induced and an analysis of its processes and schemes throws up certain factors which, could serve as useful pointers in project implementation and management for rural development.

While the implementation of the programme had fulfilled one of its basic objectives, viz., to increase the awareness of the possibilities of watershed development as an income generating activity, its relevance to meaningful rural development has become questionable. In giving up the concept of entitling the members to continue agriculture & allied activities on a long term basis, the opportunity for sustained improvement of their socio economic status had been denied to these members. On the other hand, the economic status of the private individuals who had taken to these activities had to be necessarily categorized as 'not poor'. Consequently, a programme which had been demonstrated as having the potential to be meaningful for improving the income status of the poor could, by the implementation process, become irrelevant to their needs.

Obviously, the distortion in the implementation process would not have crept in if the coordination among the different departments had prevailed and ensured prior to the experiment undertaken. The fact that the Panchayati Raj Institutions had not taken interest in the successfully implementing the programme after the initial thrust given by the DRDA, but also expanding the activity clearly confirms that a certain amount of attitudinal reorientation in them had definitely taken place. It also throws up the fact, rather forcefully, that the centrality in the attitudinal orientation of the senior officers is perhaps lacking. While this did not, **prima facie,** suggest that leadership might be absent; it did suggest that the attitudes and commitment to risk taking activities - entrepreneurial attitudes - in the interest of development administration might perhaps not be strong. A solution to this could lie only in reviewing the procedures for recruitment of officials and evolving a methodology for recruiting people with required attitudinal orientation for development administration.