

**HARYANA COMMUNITY FORESTRY PROJECT
FOREST DEPARTMENT
GOVERNMENT OF HARYANA**

VILLAGE BENEFIT STUDY 2006



**JOSEPH VIRUTHIYEL
TECHNICAL ASSISTANCE TEAM**

WITH SUPPORT FROM A TEAM OF FIELD RESEARCHERS

APRIL 2006

PREFACE

Haryana has been in the forefront of Joint Forest Management experiments. With a very small proportion of the total geographical area under forests, the most obvious option available to the State has been to work with the village community to increase tree cover on land owned by the Village Panchayats and farmers.

The efforts of the HCFP have been centred on developing an enabling environment in villages through institution building, capacity building and information and communication campaigns. In its seventh year, the HCFP is operating in 337 villages in 11 districts of Haryana. The project works closely with Village Resource Management Committees, which are the village level resource management institutions that assist the Village Panchayats in fulfilling their mandate for management of the commons and undertaking environment friendly activities. The project understands that projects are temporary interventions and that the future of forestry in Haryana depends on the attitudes of village people and the capacity of their representative institutions. The project's exit strategy, which is still under development, is closely linked to development of the capacities of the VRMCs. The project has laid great emphasis on participatory project planning, implementation, monitoring and evaluation of the quality of the processes and implementation and their outcomes and impacts. Replicability of project processes and strategies for sustainable community forestry is the *raison d'être* of the project. Replicability of project processes have been partially proved by adoption of these by some newer projects in Haryana and elsewhere.

The project has undertaken a number of formal and informal process documentation and evaluation studies to draw lessons for its own planning as also for formulation of future policies. These include participatory village capacity assessments (3 rounds already completed), participatory assessment of capacities of Self-Help Groups, surveys of use pattern of smokeless chulhas, participatory tree survival surveys, training impact assessments etc.

All the above studies were focused on specific stakeholder groups. In 2004-2005 the first comprehensive study aimed at assessing the trends of changes at household and village levels based on benchmarks already established, as well as obtaining feedback from multiple stakeholders on project benefits, was undertaken. The present exercise is the second in a series of impact assessments, conducted in a sample of 40 project villages. The tools developed in 2004 were adopted with minor modifications for the current study. A team of field coordinators comprising Ms Shiva Yadav, Mr. Jagdish Sharma, Mr. Rajesh Bhardwaj and Mr. Neeraj Sharma did the data collection together with Link Workers. The data was analysed and a report written by Dr. Joseph Viruthiyel, National TA Sociologist. We do hope that the findings of this study will give an indication of project induced changes, which, on the whole are in the desired direction.

S.K. Dhar
Project Director

CONTENTS

<u>Chapter</u>	<u>Pages</u>
I INTRODUCTION	1-6
The Project	
The Processes	
Process Documentation	
Village Benefit study	
Methodology	
Limitations	
II HOUSEHOLD LEVEL CHANGES	7-21
Women Headed Households	
Social Categories	
Tree Ownership	
Average Trees per ha	
Source of Cooking Fuel	
Sufficiency of Tree Resources	
Tree Survival and Tree Coverage	
Willingness to Plant Trees	
Livestock Ownership	
III STAKEHOLDER ANALYSIS	22-29
Training	
Meetings	
Interaction with Stakeholders	
VRMC & Development	
Support to Stakeholders	
Benefit from Project Activities on Commons	
Benefit from Labour	
Other Project Benefits	
Beneficial Tree Package on Farms	
Problems solved by VRMCs	
Beneficial Tree Packages on Commons	
Use of Smokeless Chulhas	
IV CASE STORIES	30-33
V General Conclusions & Recommendations	34-38
Appendix 1 Village Sample	39

I INTRODUCTION

The Project

The Haryana Community Forestry Project has completed two thirds of its nine year old tenure. The goal of the project is sustainable management of natural resources in the State of Haryana. The total number of villages covered by the project is 337 in 11 districts. Primary emphasis has been placed on involving the village communities in planning, implementation, monitoring and evaluation of natural resource development plans in the context of the overall development needs of village communities. The purpose of the project is to initiate a process of self-directed development, in which disadvantaged sections and women have a dominant say in decision-making.

The institutional arrangement for participatory development is the Village Resource Management Committee (VRMC), which is a sub-committee of the Village Panchayat, selected by the village community through a process of consultations among different stakeholders and resulting in a consensus. In order to give a prominent role to stakeholders who tended to be left out of the mainstream, provisions were made that one-third of executive members must be drawn from socio-economically backward sections and one-third must be women. The VRMCs have been delegated powers by the Gram Panchayat to develop village forests on common lands as well as to promote tree planting on private lands through provision of inputs, services and technical advice through the help of staff of Haryana Community Forestry Project. The plantation programme is developed in the context of the general development needs of the village and integrated with it.

Before launching of forestry activities, the project had at its disposal one full preparatory year for organizational development at State, Circle, Division and cluster levels, development of field procedures and protocols for planning and implementation, capacity building of staff and to initiate project processes in the first batch of villages.

Capacity building of the VRMCs through a well planned training and information and communication plan has been one of the major activities of the project. The project also supports the financial strengthening of the VRMCs through contribution of a resource management fund in proportion to the size of the woodlot plantation area of the village and through construction of a community hall named Chetna Kendra. Women's livelihood needs are promoted through formation of Self-Help Groups (SHGs) in about 100 villages. For environmental improvement and fuel efficiency, smokeless cooking stoves have been introduced in 117 villages. In the Shivalik belt 17 water harvesting earthen dams have been constructed. In the arid south-western part, 18 village ponds (johads) were rehabilitated, which was basically a demand-driven scheme (that was not in the original design of the project).

The major interventions of the project are development of village woodlots on common land, tree groves, sand dune fixation plantation of private degraded land, kitchen gardens, farm forestry and poplar plantation. To encourage village people to protect the plantations financial incentives were provided to VRMCs and farmers on the basis of survival percentages.

Project activities including plantation were carried out in a phased manner with a set of 50-60 new villages taken up each year from 2000-01 onwards. Thus villages in plantation year 2000-01 are designated as Batch 1 villages and those in plantation year 2005-06 as Batch 6 villages. It is expected that by the end of project year 9 village level capabilities would have developed to such an extent that the community can carry on the natural resource development agenda on their own steam, thereby setting an example for the village community for the rest of Haryana.

The Processes

As a process oriented project HCFP follows a seven-step process at village level:

Village entry – introduction of project concepts and protocols, identification of problems through various participatory methods, implementation of entry point activity

VRMC formation – a representative body of the community, constituted as a sub-committee of the Panchayat, their training and capacity building (in the areas of planning, organizational and financial management, leadership, tree plantation etc); selection and training of Link Workers

Microplan preparation by VRMC (facilitated by project staff) and approval by Gram Sabha and forwarding to HCFP

Microproject preparation – technical appraisal by HCFP, year-wise phasing and sanction; constitution of Village Resource Management Fund

Microproject implementation – jointly by VRMC and HCFP; development of other stakeholder groups like SHGs

Monitoring and on-going evaluation – jointly by VRMC and HCFP – input to output monitoring including plantation survival, evaluation of VRMC capacity building and maturity, impacts of various interventions; refresher training

Microproject completion and taking over of natural resource management responsibility

by the Panchayat through its VRMC.

Process Documentation

According to the revised project logframe there are seven indicators for measuring progress towards reaching project purpose. These are:

- HCFP has developed new policies, systems and organizational structures for participatory community forestry
- HCFP is active in 10 districts and 330 villages
- 80% of HCFP staff have been trained
- VRMCs are active in 75 percent of the villages
- In 25 percent of the villages VRMCs act autonomously
- All VRMCs have been offered the full training package
- In 330 villages tree cover has increased to 30 percent of common land

Though some of the above indicators are vaguely stated, they point to the directions for documentation of lessons. In the course of seven years the HCFP has in-built into its working processes a methodology to enable village communities to proactively engage with departmental staff in development of CPRs. The process has enabled smoothening out of several angularities within the communities themselves revolving around access to or exclusion from the resources. Some of these experiences have been drawn upon by new international cooperation projects in Haryana as well as in the ongoing projects of the department.

The capacity building outcomes of village institutions like VRMCs and Self-Help Groups have been sufficiently documented using participatory capacity assessment tools. VRMC capacity assessment took place in 2003, 2004 and 2005. While the capacity of VRMCs on several aspects like organization strengths, conflict resolution, resource protection, planning etc have been showing substantial improvements over the years, the main area of concern centres around their ability to take up development initiatives on their own and the sustainability of the system in the long run.

The SHGs, by the very nature of their composition, size and financial stake of members, appear to have more sustainable structures and systems.

Tree cover data is available for most project villages. Beside, annual survival surveys for all plantation models are conducted by HCFP, through village level microproject monitoring teams.

Training effectiveness studies have been conducted to understand behavioural changes at different levels - field staff as well as members of VRMCs. These studies point towards some positive behavioural changes but also constraints.

Rich benchmark data is available in every project village on socio-economic aspects as well as tree cover related aspects.

Village Benefit Study

All the studies taken up so far targeted specific groups of the village community – either the VRMCs, or the SHGs or adopters of farm forestry packages. A benefit study reaching out to a cross section of the village community was first attempted during 2004-05 in a sample of 35 Batch 1-2 villages. The aim of the study was to find out the impact of HCFP interventions at the household and stakeholder levels. The questions the study attempted to answer were the following:

- Is the present exit strategy realistic?
- What impact did the project have on common and private lands?
- How do the people perceive the VRMCs?
- How do different stakeholders – SHGs, women, common land users, and VRMC members perceive HCFP interventions?
- Will VRMCs continue to function after project exit?

This second village benefit study has covered the same issues in a different sample, with data collection carried out October-December 2005.

Methodology

The total village sample comprised 40 villages from the first four batches in all the five Community Forestry Divisions. 10 villages were selected from each of these batches (see Appendix 1, page 39).

To answer the impact questions, six sets of databases were used. The first consisted of the baseline survey data collected in the first year of village entry. The baseline data for batch 1 villages was collected in 1999, for batch 2 villages in 2000, for batch 3 villages in 2001 and for batch 4 villages in 2002. The total sample size for the baseline survey comprised 7519 households. The survey tool was a simple household questionnaire designed in the form of a spreadsheet.

All the remaining data sets consisted of data collected for the current survey. The first is household survey Part I wherein the same baseline survey questions in the form of a spreadsheet were canvassed from a stratified sample of households. The strata consisted of five economic categories, namely the landless, marginal farmers, small farmers, medium farmers and big farmers. The sample size consisted of 2720 households, which is approximately 37 percent of the baseline survey population.

There were some significant methodological differences in the selection of samples in the two sets of surveys. The baseline survey was a 100 percent enumeration of all households in the village area. On the other hand, the current survey adopted a purposive stratified sampling methodology with the five economic groups based on size of landholding as the basis of the strata. The analysis of the baseline survey data was not done before undertaking the current survey. Hence the exact proportion of different economic groups was not available. Data analysis showed significant differences in the proportion of economic groups in the two sets of

surveys. The current survey showed lower representation of the landless, marginal farmers and small farmers and a corresponding over-representation of the other two categories. This may slightly affect the comparison, but not to such an extent as to be serious. In fact, the higher representation of the medium and large farmer groups helped to compensate for their lower representation in the population and maintain statistical significance.

As the size of the VBS sample was approximately 37% of the baseline population, there was a possibility of some statistical errors occurring while comparing the two data sets. To know the extent of variance, analysis of a few variables was done by reducing the size of the baseline sample through random sampling and looking at the variance between the aggregate sample and the random sample. This exercise showed minor variations in the results, which we considered not very significant.

Keeping in view the above two methodological difficulties, the current survey data was analyzed and compared with the baseline data to compare the changes taking place in the intervening period.

In order to understand the other impacts of the project certain additional information was collected. These included perceptions, behaviour and attitudes of different stakeholders towards project interventions including the associated village institutions. The stakeholders and the associated databases are:

- the village community in general (Current household survey Part II);
- common land users (CLU database);
- members of SHGs in 21 villages where the project promoted SHGs (SHG data base);
- women not attached to any SHGs in 19 villages (non-SHG database); and
- VRMC members (VRMC database).

The sample size of each of these categories is provided in Section 2 of this report. The Common Land Users (herders, graziers, collectors of various biomass products from common land, farmers who leased in common land for cultivation etc) were identified as an important stakeholder group, as it was felt that the closure of grazing on common lands for plantation would adversely affect their interests initially. Self-Help Groups (all were exclusively of women) as well as women in non-SHG villages would give a woman's perspective of project interventions. Interaction with the members of the village community would give an indicator how the VRMCs and the project are "owned" by the community.

The method of data collection for VRMCs, SHGs, women in non-SHG villages and common land users was to request them to assemble at a common place in the village (each group separately), and after an introductory session explaining the purpose of the meeting, and to record each individual's response in the spreadsheet. Door-to-door survey was conducted for the household survey Part I and II as the sample size was larger.

Limitations

Though the study was piloted in the previous year and certain shortcomings addressed, there were other limitations, including the methodological issues discussed above. One of the limitations was data gaps in the baseline survey due to inadequate understanding of the instructions and coding system by the investigators. The database was not adequately checked for consistency and cleaning done. Even in the current survey there were some data gaps and omissions. Some of the new databases also suffered from inadequate coding and instructions, due to which different investigators may have interpreted the questions differently. The most obvious mistakes had to be corrected through applying logical consistency checks. This delayed data analysis and interpretation.

Still, the current exercise remains a serious attempt by the project for performance assessment at the output to purpose level. The exercise needs to be perfected and further studies taken up in the future.

II HOUSEHOLD-LEVEL CHANGES ON SELECTED INDICATORS

A baseline survey was carried out at the start of initiation of the HCFP in every village selected for intervention. The baseline survey was aimed to establish benchmarks on selected indicators on which the programme was expected to have an impact. These indicators were medium of cooking fuel, number of trees on individual farms, tree species on farms, willingness to grow trees on individual farms, perceived sufficiency of tree products, number of livestock owned by the households etc. The independent variables were economic groups (grouping of households on the basis of land-ownership size classes), social categories, and gender.

A sample survey of a smaller sample of households in 40 villages was conducted in October-December 2005 to understand the changes caused mainly by the tree planting and awareness creation activities under HCFP. These villages belonged to the first four batches (year of plantation initiated in the concerned village). For batch I villages, the baseline survey was conducted for the respective village one year prior to commencement of plantation activities in that village. For example, baseline survey year for batch I villages was 1999-2000. For batch II villages it was 2000-01. Thus the survey years vary between batches.

In this section of the report we present the comparative analysis of data between the two data sets to understand what has taken place as a result of interventions by HCFP. Baseline Survey is denoted by the abbreviation “BLS” and the current survey as “VBS” (Village Benefit Study).

Women Headed Households

The proportion of women headed households was very small in both the sets of surveys, though it was substantially higher in the current survey compared to the baseline survey.

Table 1: Percentage Distribution Households by Gender and Forestry Circle

Gender	Ambala		Hisar		Total	
	BLS	VBS	BLS	VBS	BLS	VBS
Male	96.9	97.1	97.6	95.1	97.4	95.8
Female	3.1	2.9	2.4	4.9	2.6	4.2

Economic Groups

Landless households had a greater representation in the Baseline Survey compared to the current survey. The proportion of medium and large farmers was more in the current survey. The sample size was designed to allow a higher representation of medium and large farmers because of their low numbers in the total population (to achieve statistical significance). The high number of landless and marginal farmers allowed for reduced sampling of these categories, with statistical significance maintained.

Table 2: Percentage distribution of Households by Economic Group and Circle

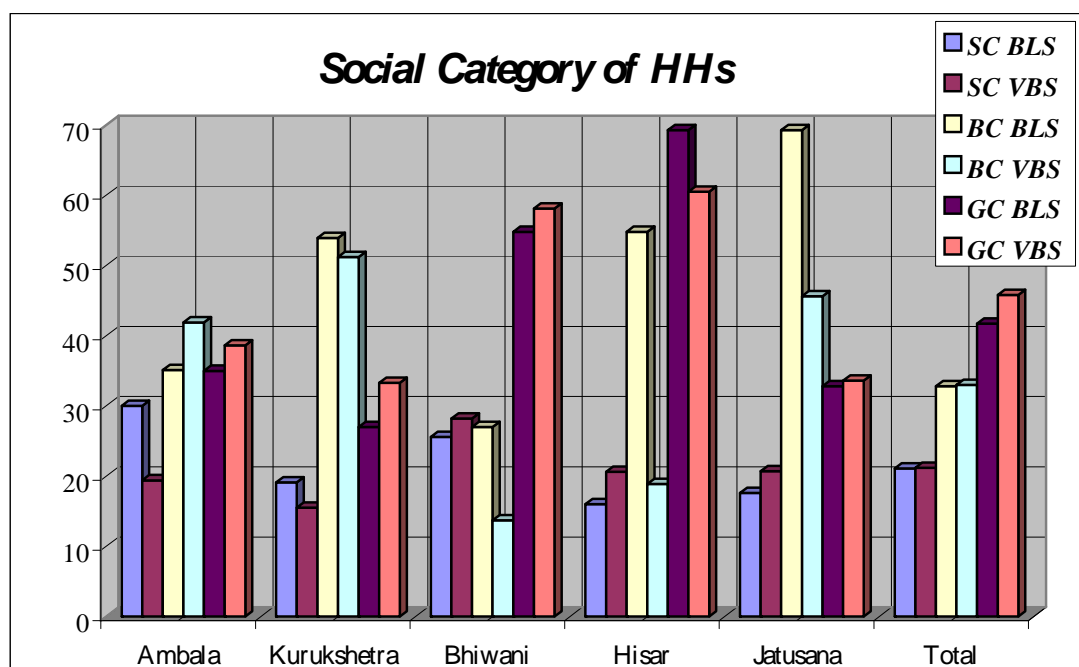
Economic Group	Ambala		Hisar		Total	
	BLS	VBS	BLS	VBS	BLS	VBS
Landless	40.9	29.7	30.9	20.7	34.6	23.9
Marginal Farmers	26.1	22.5	21.7	17.6	23.4	19.3
Small Farmers	15	20.5	18.3	14.3	17.1	16.5
Medium Farmers	17.2	24.6	27.2	40.1	23.5	34.5
Large Farmers	0.8	2.8	1.8	7.1	1.4	5.6

Social Category

Scheduled Castes comprised one fifth of the households in both the sets of surveys, backward castes one third, the general castes being the most numerous category in both surveys.

Table 3: Division wise distribution of Households by Social Category

Division	SC		BC		GC	
	BLS	VBS	BLS	VBS	BLS	VBS
Ambala	30	19.4	35.1	41.9	35	38.6
Kurukshetra	19.1	15.5	53.9	51.2	27	33.3
Bhiwani	25.6	28.2	27	13.7	54.8	58.1
Hisar	16	20.6	54.8	18.9	69.3	60.5
Jatusana	17.6	20.7	69.3	45.6	32.8	33.6
Total	21.1	21.2	32.8	33	41.7	45.8



Tree Ownership

The average number of trees owned by households in sample villages was 27 at the time of baseline survey. Ambala (105) and Kurukshetra (32) had a much higher average tree ownership. Eucalyptus and poplar were the major species in these northern districts. Among the southwestern districts, the average number of trees per farm was highest at 19 in Bhiwani, while in Jatusana and Bhiwani the average was 6. Jand was the most common tree species on farms in the southwestern circle.

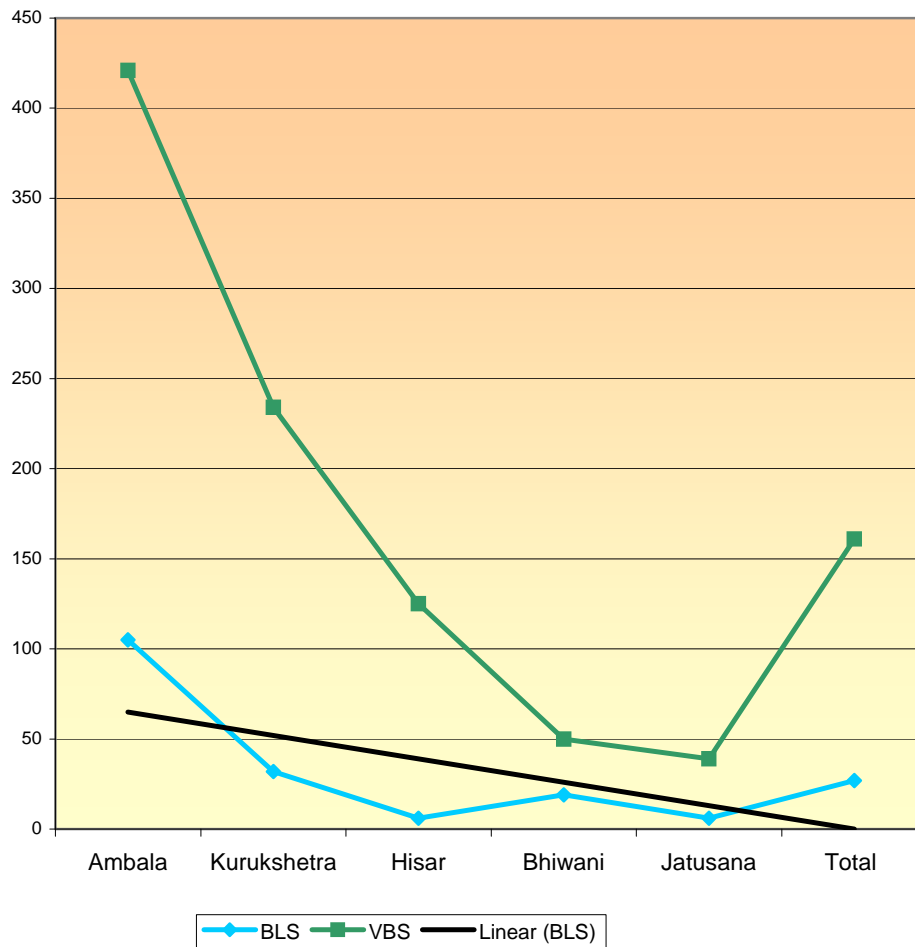
The average ownership of trees per household has increased drastically to 161 at the aggregate level at the time of the current survey. The increase has been six times overall - seven times in Hisar Circle and five times in Ambala Circle.

Table 4: Species-wise average number of trees per household in Forestry Divisions

Tree Species	Ambala		Kurukshetra		Hisar		Bhiwani		Jatusana		Total	
	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS
Eucalyptus	71	338	23	194	0	7	0	0	0	0	15	94
Poplar	30	69	6	23	0	0	0	0	0	0	5	16
Shisham	0	2	0	1	2	14	1	5	1	8	1	6
Jand	0	0	0	0	1	68	15	24	3	5	3	22
Kikar	1	5	0	1	0	10	1	3	1	1	1	4
Roheda	0	0	0	0	0	0	1	1	0	2	0	1
Ber	0	1	0	0	0	9	0	1	0	1	0	2
Mango	1	1	1	4	0	0	0	0	0	0	0	1
Ailanthus	0	0	0	0	0	9	0	6	0	11	0	5
Neem	0	1	0	0	0	2	0	3	0	1	0	1
Others		2		9		0		0		0		2
Amla		1		0		0		6		7		3
Guava		2		1		2		0		0		1
Jatropha	1	0	1	0	1	1	0	0	1	2	1	1
Anar		0		0		1		1		0		0
Bakain		0		0		1		0		0		0
Unspecified fruit trees		0		0		0		0		1		0
All Trees	105	421	32	234	6	125	19	50	6	39	27	161

While eucalyptus and poplar continue to be the most preferred tree species in the North and Jand in the SouthWest, other tree species like fruit trees, Amla, Ailanthus, Shisham etc have been planted in good numbers. These species have been promoted by HCFP.

Average no. of trees per HH at BLS and VBS



As is to be expected, with increase in size of holding, the number of trees on farm also increased. At the benchmark level, the landless households on an average had one tree on their homesteads, the Marginal Farmers owned 20 trees, Small Farmers 32, Medium Farmers 67 and Large Farmers 141. Currently, the landless have 5 trees on the average, Marginal Farmers 81, Small Farmers 153, Medium Farmers 198 and Large Farmers 892. It is interesting that increase in tree ownership cuts across all economic groups. Even the landless are now planting trees in the small available patches around their homesteads. In fact, their increase of tree ownership has been five times, only matched by the more than six times increase among large farmers.

Table 5: Economic Group-wise average number of trees per household

Survey type	Landless	Marginal Farmer	Small Farmer	Medium Farmer	Large Farmer	Total
BLS	1	20	32	67	141	27
VBS	5	81	152	198	892	161
% Increase over BLS	400%	305%	375%	196%	533%	496%

Adoption of tree farming cuts across all social groups as shown in Table 6, ranging from an increase of almost five times among scheduled castes to nearly six times among the other castes. During fieldwork for the current survey, it was observed that even the shelter-less families living in tents in Hisar region have planted trees around their dwelling places and are taking good care of them.

Table 6: Social Category-wise average number of trees per household

Social Category	Average No. of trees: BLS	Average No. of trees: VBS	Percentage increase over BLS
Scheduled Caste	5	24	380
Backward Caste/OBC	20	116	480
General Caste	44	258	486
Total	27	161	496

(Note: As the comparison is between the number of trees at baseline and current levels, the overall percentage increase in the total row may not necessarily be the average of percentages for the sub-groups)

It is obvious that the project strategy in promoting community forestry through involving people through microplanning, promoting village institutions, training and awareness generation activities is bearing fruit. If the pace continues, the project goal of sustainable community forestry will become a reality by end of project.

Average Number of Trees per ha

The average number of trees per hectare of farmland has increased from about 20 to around 61, a threefold increase. At baseline, large farmers had the smallest number of trees per ha, but there has been a very high increase in this group. Marginal farmers had the largest per ha tree density at baseline level. Tree density has also shown a dramatic increase in this economic group.

Table 7: Tree density per ha at baseline and current levels

Economic Group	Baseline (Full: N = 7519)	Baseline (No. adjusted to the same size as VBS: N = 2720)	VBS (N = 2720)
Marginal Farmer	36.53	40.75	135.7
Small Farmer	23.43	17.94	112.32
Medium Farmer	18.51	19.65	46.64
Large Farmer	9.40	8.34	60.75
Overall	19.73	19.61	60.91

Sources of Cooking Fuel

The large-scale tree plantation in project villages by HCFP is expected to enhance the availability of cooking fuel for the primary stakeholders and this is one of the major incentives for the stakeholders to participate in the programme and make community forestry sustainable. In this section, we attempt to examine whether this result has actually taken place.

The main source of cooking fuel continues to be animal waste in all the divisions. However the proportion of households using this medium has declined substantially in Jatusana and to a marginal extent in Bhiwani. On the other hand the proportion of households using this medium has increased in the other divisions. The proportion of households using agricultural waste has substantially declined in Ambala and Jatusana and at the aggregate level, but increased in the other divisions. Dependence on wood from private as well as common land has increased substantially, most probably due to availability of biomass from HCFP plantations. The need for purchase of fuelwood has decreased marginally, but it has increased in Ambala and Jatusana.

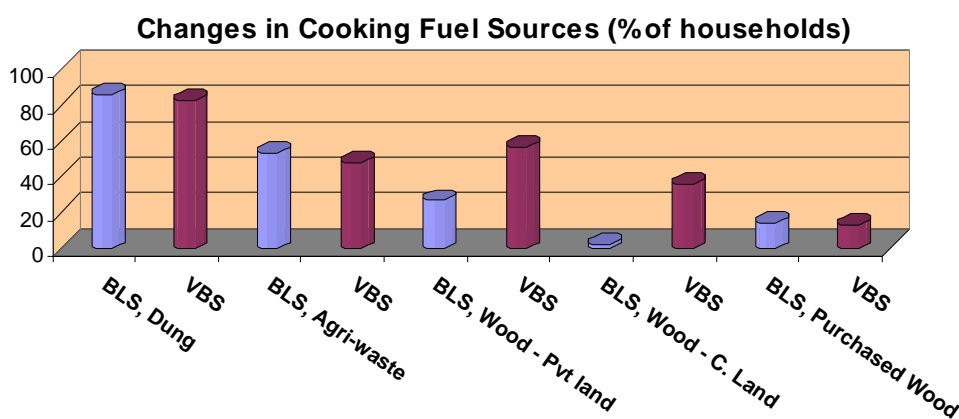


Table 8: Division-wise percentage of households using different types of cooking fuel

Source	Survey Type	Ambala	Kurukshetra	Hisar	Bhiwani	Jatusana	Total
Animal waste	BLS	73.3	77.8	78.4	99.9	96.5	86
	VBS	80.1	96.2	84.1	93	60.9	83
Agri-Waste	BLS	25.8	6.1	87.8	54.6	70.3	53.2
	VBS	0.7	8.5	88.4	86.1	38	48.3
Wood from Private Land	BLS	13.5	13.1	43.5	27.8	34.4	26.6
	VBS	43.5	56.3	46.7	78.1	52.9	56.3
Wood from Common Land	BLS	1.9	0.9	0.5	0.2	4.8	2
	VBS	35.3	49.9	39.4	39.9	15.5	35.8
Purchased Wood	BLS	14.6	13.3	7.8	15.7	16.6	13.6
	VBS	16.8	10.5	3.8	10.3	22.5	12.5

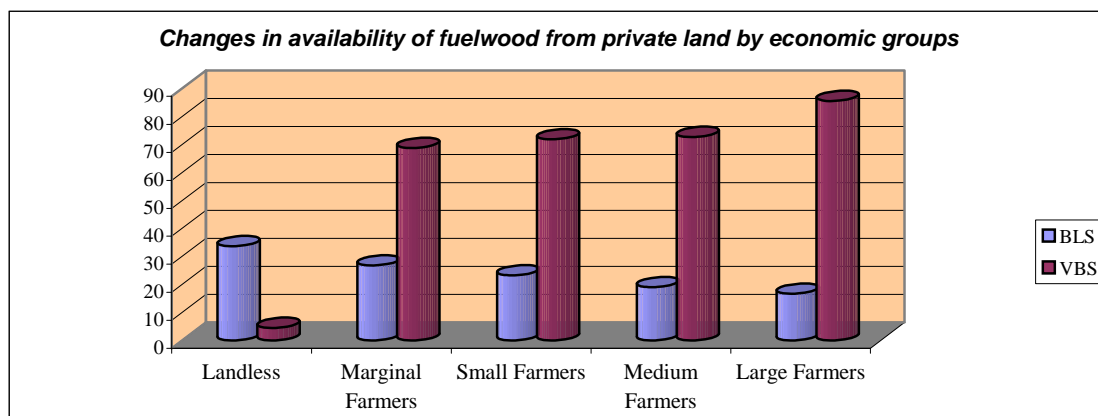
It would be interesting to know the differential effect of the afforestation efforts under HCFP on different economic groups. All, except the large farmers, have shown decrease in the use of cow dung and agricultural waste as cooking fuel. However, animal dung continues to be the major cooking fuel for all economic groups. Use of

agricultural waste for cooking shows a decreasing trend except for the large farmer group.

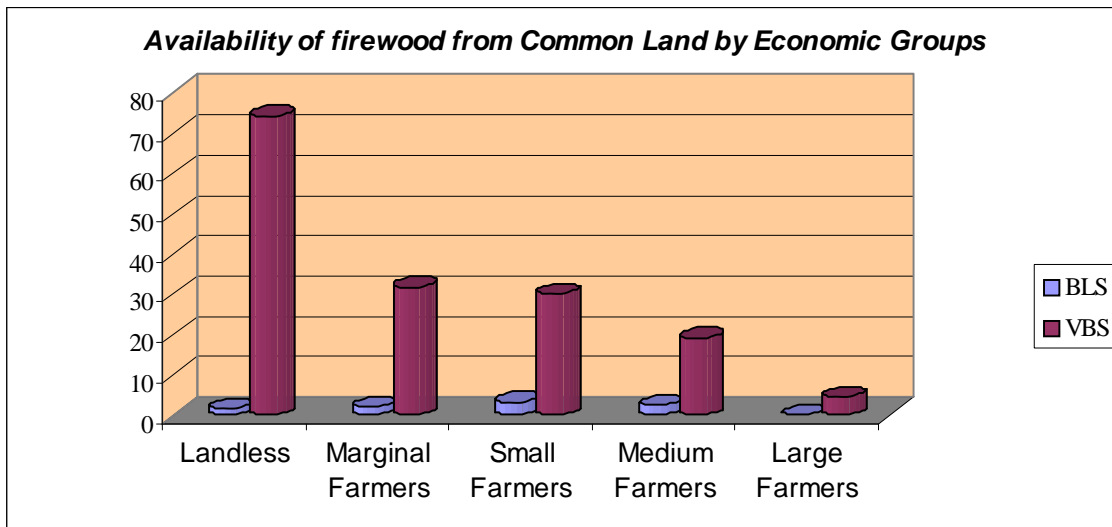
Table 9: Percentage distribution of HH by economic groups and source of cooking fuel

Economic Groups	Animal waste		Agri-waste		Firewood from private land		Wood from common land		Purchased wood	
	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS
Landless	82.2	78.2	38.9	18.3	33.7	4.5	1.6	74.3	10.9	25.7
Marginal Farmers	85.6	80	55.2	50.2	26.8	68.8	1.9	31.7	11.6	12.2
Small Farmers	90.1	86.6	64.1	45.6	23.2	71.9	3.2	30.1	15.1	7.8
Medium Farmers	88.3	83.8	64.1	63.9	19	72.7	2.4	19.2	19.2	7.7
Large Farmers	71.6	98	61.8	80.4	16.7	85.6	0	4.6	28.4	0
Overall	85.6	83	53.2	48.3	26.6	56.3	2	35.8	13.6	12.5

Excepting the landless group, all economic categories have experienced increases in availability of firewood from private land. The landless group has in fact experienced a drastic decline, but this is compensated by a substantial increase of dependence on wood from common land.



In case of landless households, there is a remarkable increase in availability of firewood from common land – probably in the form of dead wood, lopping and pruning. While only 1.6% of the landless got their fuel from common land pre-project, 74.3% are now getting fuelwood from woodlots. But the woodlots provide benefits for the entire community. All economic groups, including the medium and large farmer groups, are able to get firewood from common land more than at the time of the baseline survey.



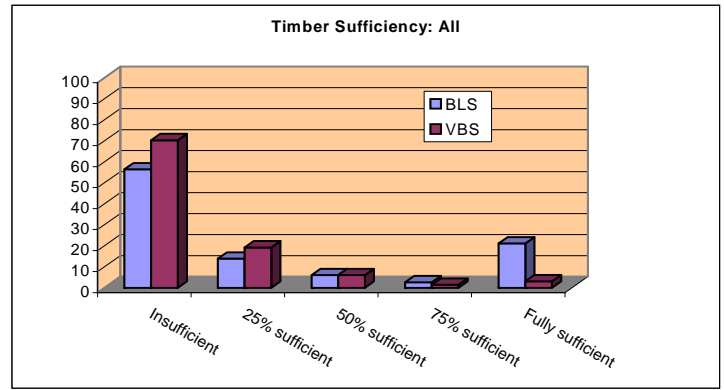
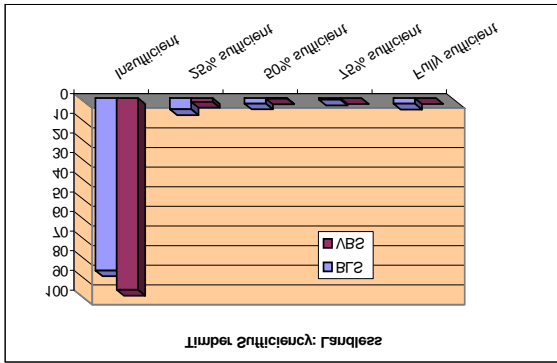
Despite this, the need for firewood purchased from the market has increased both for the landless and marginal farmers. This shows that though tree plantation on common land has helped the poorer groups, it cannot be said to be sufficient for the firewood needs of poorer sections. Fuelwood scarcity is also an effect of vigilant protection of woodlots by VRMCs, which impose fines and other sanctions on illicit harvesting of trees.

Sufficiency of Tree Resources

The current situation about people's perception about sufficiency in tree products was compared to the baseline situation. With regard to timber, the proportion of people stating that they have sufficient timber for their use has decreased from 21.1 percent at the benchmark level to 3.1 percent currently. The decline in the proportion of persons reporting full sufficiency has cut across all economic groups. Apart from the possible problems in data reliability, the fact that the HCFP Farm Forestry plantations of timber species have not reached the harvesting stage compared to the rising need for timber might explain this trend. Another factor could be the increased demand for tree resources through changes in demographic structure and standard of living.

Table 10: Percentage distribution of households in economic categories by extent of Timber sufficiency

Sufficiency in Timber	Landless		Marginal Farmers		Small Farmers		Medium Farmers		Large Farmers		Total	
	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS
Insufficient	87.8	97.7	49.4	77.2	36.9	63.3	32.9	57.8	27.5	27.5	56.4	70.3
25% sufficient	5.7	2	20.8	15.8	20.9	28.4	14.3	28.6	10.8	19	13.9	19.2
50% sufficient	2.8	0.3	5.4	5.9	9.1	5.8	8.7	7.7	12.7	20.9	6	6
75% sufficient	0.8	0	2.1	0.8	3.1	0.2	5.6	2.5	0	6.5	2.6	1.4
Fully sufficient	2.8	0	22.3	0.4	30.1	2.2	38.4	3.3	49	26.1	21.1	3.1



In the matter of fuelwood, the proportion of households reporting full insufficiency has declined by nearly 14 percentage points from the benchmark level. The decline cuts across the economic groups, but is more pronounced with higher land ownership. The incidence of households reporting one-fourth sufficiency has increased by a corresponding volume, again cutting across the economic groups. The proportion of people reporting sufficiency to the extent of 50 percent of their needs has also increased. However, those reporting full sufficiency are fewer now compared to benchmark.

Full sufficiency in fodder and fruits has declined for all economic groups. However, full insufficiency in fruits has generally moved up to 25% sufficiency for small, medium and large farmers, while the insufficiency pattern remains more or less the same for marginal farmers and the landless. Deteriorated sufficiency in fodder is recorded especially in case of marginal and small farmers.

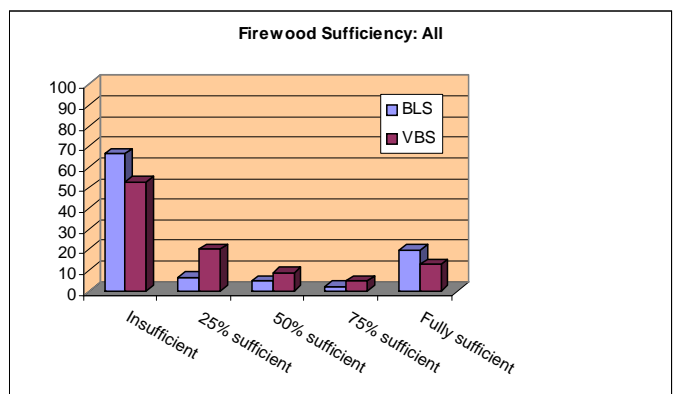
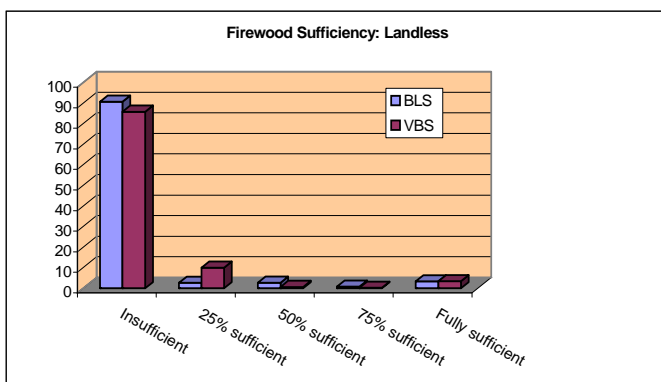


Table 11: Percentage distribution of households in economic categories by Fuelwood sufficiency

Sufficiency in Fuelwood	Landless		Marginal Farmers		Small Farmers		Medium Farmers		Large Farmers		Total	
	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS
Insufficient	90.6	85.8	60	64.3	51.7	44.7	48.8	33.5	56.9	18.3	66.5	53
25% sufficient	2.6	10	10.4	20.7	9.2	29.1	7.8	24	2	15	6.8	20.3
50% sufficient	2.7	0.6	7.4	4.9	6	11	4.4	13.7	1	22.2	4.7	8.9
75% sufficient	0.8	0.2	1.8	1	2.6	5.6	3.8	9.9	3.9	6.5	2.1	4.9
Fully sufficient	3.3	3.4	20.4	9.1	30.6	9.6	35.1	19	36.3	37.9	19.9	12.9

Table 12: Percentage distribution of households in economic categories by Fodder sufficiency

Sufficiency in Fodder	Landless		Marginal Farmers		Small Farmers		Medium Farmers		Large Farmers		Total	
	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS
Insufficient	94.7	99.2	70.8	88.8	68.6	82.3	70.8	65.7	68.6	66.0	78.7	80.9
25% sufficient	2	0.8	6.2	8.4	3.3	10.3	1.4	18.1	0	7.2	3	10.2
50% sufficient	1.3	0	6.4	1.7	5.1	4.3	3.4	6	1	7.2	3.6	3.5
75% sufficient	0.4	0	1.6	0.8	1.6	1.3	2.3	3.6	4.9	2.6	1.4	1.8
Fully sufficient	1.7	0	14.9	0.4	21.4	1.8	22.1	6.6	25.5	17	13.3	3.6

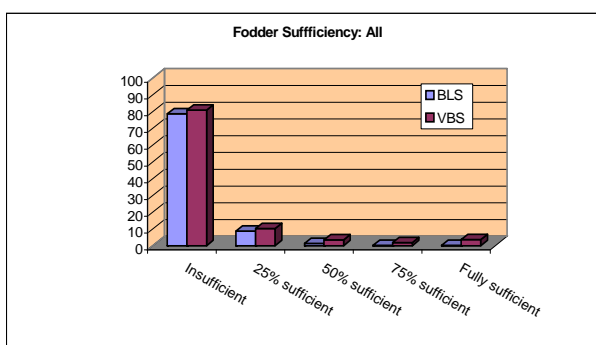
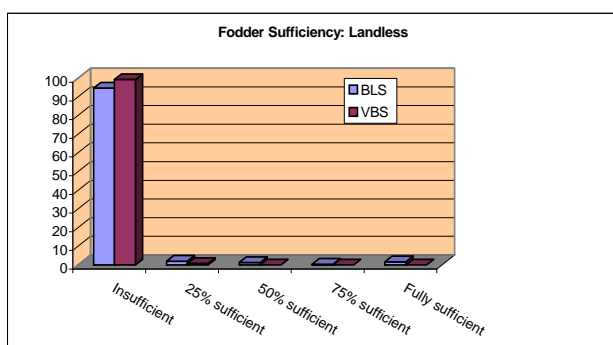
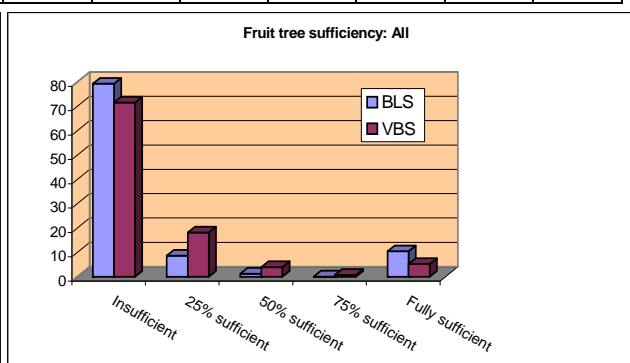
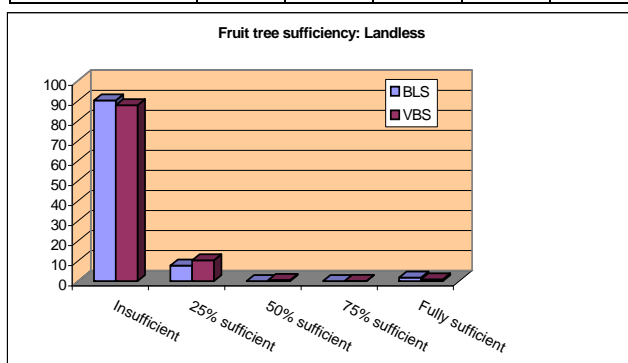


Table 13: Percentage distribution of households in economic categories by sufficiency in Fruits

Sufficiency in Fruits	Landless		Marginal Farmers		Small Farmers		Medium Farmers		Large Farmers		Total	
	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS
Insufficient	90.2	87.8	74.6	74.1	73.8	63.5	72.3	65.6	73.5	54.9	79.3	71.6
25% sufficient	7.8	10.5	13	14.4	8.9	23.5	5.9	23.1	2.9	19	8.7	18.2
50% sufficient	0.1	0.6	2.1	3.6	2.1	5.4	1.9	5.4	1	7.8	1.3	4
75% sufficient	0	0.2	0.1	0.6	0.4	0.9	0.2	0.6	0	4.6	0.1	0.8
Fully sufficient	1.9	0.9	10.2	7.2	14.8	6.7	19.8	5.3	22.5	13.7	10.5	5.3



Tree Survival and Tree Coverage

During five years, the HCFP has been able to plant 4165.6 ha in the 40 villages covered by the study. Totally 3.47 million trees have been planted. Out of these, 1.98 million trees (57%) are surviving. Survival percentage has been as high as 82 percent in village woodlots and 72.7 percent under sand dune fixation, but it has been lower at 35.5 percent in farm forestry and 29.3 percent in poplar. Almost all sand dune fixation is on private land.

Table 14: Survival percentages under different HCFP tree packages

Tree package	Area planted (ha)	Trees Planted	Trees Surviving	Percentage of trees surviving	Appr. Area with good tree cover (ha)
Village woodlot*	1284.7	1,284,700	1,049,309	82	1049.3
Sand dune fixation					
a) Original SDF*	339.48	339,480			
b) Modified SDF**	316.10	158,050			
c) Total	655.58	497,530	361,485	72.7	455.6
Farm Forestry*	1150.64	1,150,640	408,588	35.5	408.6
Poplar**	921.43	460,715	134,765	29.3	269.5
Tree Groves (number of groves) 19 trees per grove	(356)	6,764	5,111	75.6	21.5
Roadside plantation (road km) 166 trees per km	(97.7)	16,218	14,168	87.4	60
Kitchen Gardens (number of households) 4-5 trees per garden	(11296)	50,000	6,963	14 (4 to 49%)	8
TOTAL	4165.6	3,466,567	1,980,389	57.1	2272.5

*1000 trees per ha

**500 trees per ha

The reason for good survival, despite adverse weather conditions in some years, has been the strict supervision by forest guards, social fencing enforced by VRMCs, restriction to open grazing and the general enabling environment resulting from project processes.

The reasons for poor survival in farm forestry, mainly in the arid, drought prone south western circle, have been the marginal nature of land, extreme weather conditions, inability of farmers to undertake irrigation and plant protection measures, despite incentive payments for good survival rates. For poplar, the performance has been disappointing, but this is mainly accounted for by farmers' premature felling due to depression of poplar prices in the market.

The 40 villages studied have a total common land area of 4839 ha. Only 10 percent of the area were under tree cover prior to project interventions. HCFP has afforested another 31 percent, mainly through woodlot plantation, with 41 percent of common land now under tree cover. Allowing for 18 percent mortality of project plantations, common land covered by trees is still more than 35 percent, well above the logframe target of 30 percent.

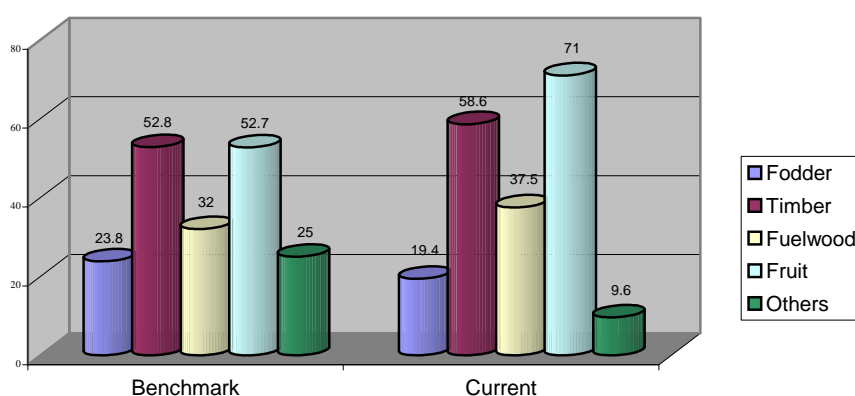
Willingness to Plant Trees

The willingness for planting timber, fruit and fuelwood trees on farmland has increased somewhat between the intervening period of the two surveys. With regard to timber, the willingness has increased from 52.8 percent of households at baseline level to 58.6 percent in the current survey. The willingness to plant fuelwood trees has increased from 32 percent at baseline to 37.5 percent now. Fruit tree demand has gone up from 52.7 percent to 71 percent of the households. Correspondingly, the demand for fodder trees and that of other category trees has declined. Demand for fuelwood trees has increased for marginal and small farmers, whereas it has declined for medium and large farmers. The only demand that is now consistently higher amongst all economic groups is that of fruit trees.

Table 15: Economic group-wise percentage of households willing to plant trees

Economic Group	Fodder		Timber Trees		Fuelwood Trees		Fruit trees		Other trees	
	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS
Landless	14	15.6	21.9	17.8	16	16.9	34.5	48.5	11.4	2.6
Marginal Farmers	25.6	19.6	70.3	68.8	34.4	49.5	64.6	73.4	34.8	12.2
Small Farmers	28.3	23.9	74.3	76.1	43.4	50.7	63.1	76.1	35.5	13.2
Medium Farmers	29.6	21.9	71.1	71.4	46.3	40.7	56.8	80.9	30.4	10.1
Large Farmers	25.5	5.9	68.6	66	32.4	24.8	55.9	83	20.6	17.6
Total	23.8	19.4	52.8	58.6	32	37.5	52.7	71	25	9.6

Change in Willingness to Plant



The demand for timber trees has gone up in four of the five divisions, especially in Ambala, while it has declined in Hisar. Demand for fuelwood trees presents a varied picture; there is a very high increase in Ambala and Jatusana, an almost stagnant situation in Kurukshetra and Hisar, and a sharp decline in demand in Bhiwani. Proportion of people willing to plant fodder trees has shown a sharp increase only in Jatusana, a sharp decline in Bhiwani, a marginal increase in Hisar and marginal decline in Ambala and Kurukshetra. Increases in preference for fruit trees are evident in all divisions, indicating that horticulture is emerging as a priority for

farmers across Haryana.

Table 16: Division-wise percentage of households willing to plant trees

Division	Fodder		Timber Trees		Fuelwood Trees		Fruit trees		Other trees	
	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS	BLS	VBS
Ambala	13.4	4.6	37.6	62.3	27.7	67.3	33.2	70.9	21.5	14.8
Kurukshetra	11.6	8.3	40.9	50	24.1	23.8	60.2	58.3	44.8	12.9
Hisar	0.3	4.3	60.6	50	17.3	24.4	24.7	62.1	8.6	14.1
Bhiwani	54.7	10.1	54.6	60.9	52.8	8.7	52.3	71.5	14	3.4
Jatusana	39.1	68.4	61.8	70.2	40.3	71.8	76.1	92	29.1	4.4
Total	23.8	19.4	52.8	58.6	32	37.5	52.7	71	25	9.6

Livestock Ownership

The percentage of households owning all kinds of livestock, except the “other” category, has increased. The “other” category includes camels, ponies etc. Households owning buffaloes has increased by 9.7 percentage points, households owning cows by 8.9 percentage points, and households owning bulls by 4.2 percentage points. What is interesting is that the increase in livestock ownership cuts across all economic categories, including the landless and marginal farmer groups, which are the poorest segments. Decline in the “other” category animals may be due to increased mechanization of transport, ploughing etc.

Table 17: Percentage of households owning livestock at benchmark and current levels

		Economic Group					Total
		Landless	Marginal Farmers	Small Farmers	Medium Farmers	Large Farmers	
Buffalo	VBS	57.2	79.7	86.4	91	96.1	80.3
	BLS	45	78.4	85.9	88	100	70.6
Cow	VBS	25.4	29.3	37.3	37	52.9	33.7
	BLS	19.7	25.5	24.8	30.1	54.5	24.8
Sheep	VBS	3.8	1.5	2.0	1.9	0	2.2
	BLS	3	0.8	0.2	1.2	0	1.6
Goat	VBS	9.2	3	4	4.8	0.6	5.5
	BLS	6.3	7.6	4.9	2.2	0	5.3
Bull	VBS	1.7	9.9	17.4	16.1	11.8	11.4
	BLS	1.6	9.7	11.5	9.6	15.1	7.2
Others	VBS	17.2	16.3	23.1	29.7	45.8	23.9
	BLS	22.1	29.5	35.1	39.8	57.6	30.7

Note: The size of the Baseline sample has been reduced by 36.18 percent by random sampling to make it almost equal to the current sample to make comparison even more meaningful. VBS = Current Household survey; BLS = Baseline survey.

The average herd size per livestock-owning household has increased most with respect to sheep (from 16 to 27) and goats (from 5 to 9). The sheep herd size has increased for small and medium farmers and the landless. Goat herd size has increased in all economic categories, except for medium farmers. With respect to buffaloes, the herd size has increased for large and small farmers. Cow herd size has increased only for small farmers. The general trend is that the resource-poor households have increased the ownership base as well as herd size of less capital intensive livestock, whereas the better-off sections have benefited from increased

ownership of buffaloes and cows. Ownership of oxen is not very valuable in rural Haryana as most farmers have recourse to tractors for ploughing and oxen are needed only by the resource-poor or for draft purposes.

Table 18: Average number of livestock ownership, economic group-wise

		Economic Group					Total
		Landless	Marginal Farmers	Small Farmers	Medium Farmers	Large Farmers	
Buffalo	VBS	2	2	3	3	5	3
	BLS	2	2	2	3	4	2
Cow	VBS	1	2	3	2	2	2
	BLS	1	2	2	2	2	2
Sheep	VBS	32	22	32	19	0	27
	BLS	18	22	10	5	0	16
Goat	VBS	10	11	11	8	4	9
	BLS	6	4	4	9	0	5
Bull	VBS	2	2	2	1	2	2
	BLS	1	2	2	2	1	2
Others	VBS	2	2	2	2	2	2
	BLS	2	2	2	2	2	2

The increase in livestock wealth, though not very dramatic, could have been made possible by the increased availability of biomass for fodder. And the fact that the resource-poor households are now able to own livestock more than before could vindicate the assumption that the benefits of forestry activities under HCFP are flowing to these groups. This could further be elaborated through more focused studies on this aspect.

III STAKEHOLDER ANALYSIS

In addition to the comparison between the baseline survey and the survey of the current situation, analysis of different sections of the primary stakeholders was also done through separate questionnaires. The variables included training received under HCFP, type of benefits received from project implementation, assessment of the role played by VRMCs in tackling the interests of the stakeholder group, assessment of the beneficial tree planting packages, opinions about the tree plantation packages preferred for the future etc. The stakeholder groups were:

- A random sample of members of the village community (the same set of people who responded to Part I of the questionnaire)
- All members of the VRMC in the sample village
- Members of SHGs operating in the sample villages
- In those villages where SHGs were not functioning, a group of women who agreed to participate in a meeting
- A sample of the Common Land Users (CLU) who agreed to participate in a meeting.

The sample of different stakeholder groups is given in the table below. A total of 4147 persons were contacted.

Table 19: Sample size for Village Benefit Study

Stakeholder Group	Ambala	Kurukshetra	Hisar	Bhiwani	Jatusana	Total
Household Survey II (VBS)	453	504	602	611	550	2720
VRMC Members	92	89	75	71	90	417
SHG Members	59	22	55	83	39	258
Non-SHG Women	33	60	41	24	55	213
Common Land Users	99	83	124	117	116	539
Total	736	758	897	906	850	4147

Training

73.1 percent of the VRMC members and 72.2 percent of the SHG members stated that they participated in various training programmes organized by HCFP. Gender differentiation was marginal, with 74.5 percent of the male VRMC members and 73.1 percent of the female VRMC members receiving training. Among SHGs, all members were, of course, women. It may be remembered that the training input has been extensively used as a project strategy to build up the capacities of village communities to achieve the goal of sustainable natural resource management.

Table 20: Percent of persons who participated in HCFP training

Division	VRMC Members	SHG Members
Ambala	71.7	55.9
Kurukshetra	77.5	100
Hisar	52	61.8
Bhiwani	59.2	85.5
Jatusana	98.9	66.7
All divisions	73.1	72.2

Meetings

As an indicator of the relevance of village level institutions, the respondents were queried on meetings of these institutions. Only three of the stakeholder groups, namely VBS survey members, VRMC members and SHG members were posed this query. The questions were slightly different for the three groups. VBS respondents were asked whether activities of VRMC formed an agenda in the biennial meetings of the Gram Sabha. VRMC members were requested to respond whether they regularly attended meetings of the VRMC. Similarly SHG members were asked whether they regularly attended meetings of their SHGs. The percentage of the respective samples having positive response on this aspect is presented in Table 21.

Table 21: Percent of positive responses on village level meetings

Division	VRMC Members	SHG Members	Community (VBS survey)
Ambala	37	98.3	64.5
Kurukshetra	46.1	100	52.5
Hisar	56	65.5	37.2
Bhiwani	77.5	66.3	20.1
Jatusana	88.9	100	40.2
All divisions	60.4	81.1	41.4

In the aggregate, about 60 percent of the VRMC members are regular in the meetings of their VRMCs. The proportion of women members who were regular in meetings was 44.9 percent compared to 67.4 percent among males. Attendance was lowest at 37 percent in Ambala and the second lowest in Kurukshetra (46.1%).

Compared to this, more than 80 percent of SHG members regularly attend SHG meetings. The reason for relatively more attendance in SHGs compared to VRMCs is that the former are homogeneous groups, in which the members have a direct financial stake.

In the opinion of about 41 percent of members of the village community, VRMC activities constituted an agenda of Gram Sabha meetings. Positive response was lowest in the divisions of the South-western Circle. It was 19.3 percent among women compared to 42 percent among men. Being a sub-committee of the Village Panchayat, VRMC issues should have occupied a key position in the agenda of the Gram Sabha, to give a sense of ownership and a modicum of transparency.

Interaction with stakeholder groups

Less than a quarter of the VRMC members were of the opinion that they interact with SHGs. The interaction appears to be relatively more in Ambala division. It is to be noted that SHGs have been formed in only 21 of the 40 sampled villages, with uneven distribution in between divisions (lowest in Kurukshetra and Jatusana). 56.2 percent of the SHG members reported that they interact with the VRMC, the proportion being less than the overall average in Hisar and Bhiwani. The non-SHG women had very little interaction with the VRMC, except in the divisions of Ambala and Kurukshetra.

One of the important roles of the VRMC is to keep close relations with other interest and user groups in the village with a view to providing them technical support and guidance as well as to be sensitive to their needs. VRMCs need to take more efforts in this regard.

Table 22: Percentage of positive responses regarding interaction with other groups

Division	VRMC members	SHG Members	Non-SHG Women
Ambala	38	59.3	72.7
Kurukshetra	11.2	50	61.7
Hisar	21.3	45.5	12.5
Bhiwani	19.7	42.2	17.1
Jatusana	16.7	50	7.3
All divisions	21.6	56.2	17.6

VRMC as a contributor to village development

To know the opinion of the stakeholders regarding the efficacy of the VRMC as an institution aiding in village development, two sets of questions were posed: whether the VRMC has solved village problems and whether it has created problems for the village/stakeholder group.

There is considerable variation in the assessment by different groups about the problem-solving role of the VRMC. More than 80 percent of Common Land Users and VRMC members themselves feel that the VRMC has solved problems. About 65 percent of the general membership of the village community also feels so. However, 42 percent of non-SHG women and 56 percent of SHG women think so. This means that while common land users appear to have a very positive assessment of VRMCs, women in general are less positive. However, there are huge variations in between divisions as regards women's perception of the VRMC.

Table 23: Percentage of sample stating that the VRMC has solved problems

By Division	VRMC Members	SHG Members	Community Members	Non-SHG Women	Common Land Users
Ambala	60.9	10.2	68.4	30.3	86.7
Kurukshetra	65.2	50	91.5	43.3	100
Hisar	92	87.3	76.1	63.4	99.1
Bhiwani	97.2	65.1	42.4	87.5	62.9
Jatusana	98.9	69.2	40.8	12.7	79.5
All divisions	81.8	56.4	64.8	42.3	86
By Gender					
Male	87.9	NA	64.8	NA	87.4
Female	67.7	56.4	65.1	42.3	77.6

In general, only an insignificant percent of any category of stakeholders was of the opinion that the VRMC had created problems for the village or for the stakeholder group. Common Land Users in Hisar and Bhiwani have suffered from closure of grazing land (though they also admit that the VRMC has solved such problems); non-SHG women in Hisar seem to have their reservations about the VRMC.

Table 24: Percent of sample stating that the VRMC has created problems

By Division	VRMC Members	SHG Members	Community Members	Non-SHG Women	Common Land Users
Ambala	7.6	10.2	4.2	0	3.1
Kurukshetra	10.1	0	10.4	5	2.4
Hisar	10.7	1.2	9.8	26.8	17.7
Bhiwani	1.4	0	2.5	0	17.9
Jatusana	0	0	1.8	1.8	0
All divisions	6	2.7	5.8	3.5	2.4
By Gender					
Male	6.2	NA	5.8	NA	10
Female	5.5	2.7	4.8	3.5	2.6

VRMC supports stakeholder groups

To understand if the VRMC tries to meet the needs of stakeholders, women and common land users were asked if they feel that the VRMC is supporting them. Perception of support is nearly 87 percent of the sample of Common Land Users, followed by 47 percent of SHG members. Non-SHG women felt neglected - it is clear that women have to organise themselves to get support.

Table 25: Percent of sample stating that the VRMC has supported the group

By Division	SHG Members	Non-SHG Women	Common Land Users
Ambala	18.6	15.2	93.9
Kurukshetra	31.8	21.7	84.3
Hisar	54.5	51.2	91.5
Bhiwani	54.2	66.7	95.6
Jatusana	74.4	9	69
All divisions	47.1	28.2	86.7

Among common land users, 87.4 percent of males and 82.6 percent of females stated that the VRMC extended support to them.

Participation in project activities on commons

The three stakeholder groups, namely SHGs, non-SHG women and Common land users were asked whether they participated in plantation and other activities on common lands. More than two thirds of SHG members and more than half of the non-SHG women and Common land users have participated in village woodlot development, establishment of Chetna Kendra etc. The lowest proportion of positive responses among SHG members and non-SHG women was obtained in Jatusana division.

Table 26: Percent of sample reporting participation in activities on commons

By Division	SHG Members	Non-SHG Women	Common Land Users
Ambala	66.1	57.6	57.6
Kurukshetra	86.4	48.3	49.4
Hisar	89.1	87.8	70.1
Bhiwani	78.3	91.7	64.5
Jatusana	12.8	20	54.3
All	68.6	54.9	59.9

Benefit from labour

One of the important benefits, particularly for the poor people, is wages from working on project plantations, etc. More than half the number of Common Land Users and a little over one quarter of Household survey respondents (VBS) received wages from physical works on the project.

Table 27: Percent of sample benefiting from labour for project activities

By Division	Community Members	Common Land Users
Ambala	20.5	57.6
Kurukshetra	29.7	51.8
Hisar	28.6	64.5
Bhiwani	33.6	70.1
Jatusana	19.8	46.6
All	26.8	51.8

The quantum of wages received was also ascertained from Common Land Users (CLU). It is significant that 27 percent of the CLU earned wages of Rs. 10,000 or above for contributing labour for project works. This is presumably for the entire duration of the project to date in the village.

Table 28: Quantum of wages received by common land users

Income Range	Percent
No Income	41.3
Less than Rs. 2000	8.1
Rs. 2000-4999	14.8
Rs. 5000-7999	7.4
Rs. 8000-9999	1.3
Rs. 10,000 and above	27.1

Other project effects perceived

CLU were affected by a reduction in grazing land, reported by 68.8 percent. The reduction was on a lesser scale in Hisar and Bhiwani. This presumably affected feeding of cattle through grazing, as the planted common area was closed for grazing. However, this negative effect was offset by an increase in grass and fodder production in the planted area. Two thirds of the CLU reported that common land is still available for being leased in by them for agriculture. This indicates that prime agricultural land of Village Panchayats was retained for cultivation, yielding stable income to the Panchayats.

Table 29: Percent of CLU reporting other effects

Division	Grazing land reduced	Fodder increased	Common Land still available for cultivation
Ambala	93.9	99	47.5
Kurukshetra	97.6	98.8	37.3
Hisar	33.9	54	85.5
Bhiwani	33.3	90.6	62.4
Jatusana	100	100	87.9
All	68.8	87	66.6

No CLU members reported being able to earn income by sale of grass from woodlots. Only 7 of them (1.3%) were able to earn money from fuelwood sale.

Sample households in the current survey were asked whether they obtained any income from sale of trees, presumably from trees on their farmlands.

Table 30: Percent of community having income from sale of trees

Division	Percent
Ambala	50.8
Kurukshetra	6.2
Hisar	46
Bhiwani	33.4
Jatusana	13.8
All	30

At the aggregate level 30 percent obtained income from this route. This was most significant in Ambala (51 percent), Hisar (46%) and Bhiwani (33.4%).

Beneficial tree package on farm

In the assessment of the current survey sample, the most beneficial tree package under HCFP was a mixed package of tree species in the opinion of 42 percent of the respondents. For the future, the preference of this package has come down to 32.6 percent. The next most preferred package was Kitchen garden (26.3%), with the preference going up to 47.7 percent for the future. Poplar constituted the preference of 7.5 percent of the respondents, the proportion increasing to 10.1 percent as the preferred future package.

Table 31: Preference of current survey sample (VBS) for HCFP Farm Forestry Packages (Percent of responses)

Farm Forestry Package	Current	Future
Mixed	41.9	32.6
Sand Dune Fixation	5	7.6
Poplar	7.5	10.1
Kitchen Garden	26.3	47.7
Shisham	0.3	0.3
Amla	3.1	1.7
No Response	15.9	0

(Note: There was some confusion in administering this question, the tree package mix and the species mix being taken together.)

Problems solved by VRMCs

A good community based institution must be able to solve some of the immediate problems of the community. Responses by households in the current survey shows that one third of the households at the aggregate level are of the opinion that VRMCs have succeeded in solving grazing problem. In Ambala the percentage is more than 80. Probably in locations where permission for grazing in woodlots after the initial closure period of 3 years, grass may be available for grazing more than before.

Table 32: Percent of VBS households stating that VRMC has solved problems

Division	Grazing Problem	Fodder Problem	Land Problem	Water Problem	Village Disputes
Ambala	80.1	57.8	61.4	11.7	16.3
Kurukshetra	10.8	17.6	0.4	0	6.2
Hisar	24.9	29.9	43	54.8	42.7
Bhiwani	31.3	74.8	60.4	41.7	25.9
Jatusana	24	36.2	15.8	10.2	16.5
All	32.5	43.5	36.4	25.4	22.4

Fodder problem is perceived to have been solved by 43.5 percent of the households, the highest proportion being in Bhiwani, followed by Ambala. Problems with respect to Panchayat land, presumably removal of encroachments, are perceived to have been solved by the VRMCs in Ambala, Bhiwani and Hisar. Solution to water problem was perceived as a contribution of VRMCs by a significant proportion of households in Hisar and Bhiwani. Settling of village disputes through the VRMC has been reported by a significant proportion of households in Hisar and Bhiwani.

Beneficial commons tree package

VRMC members were asked which of the tree packages on the commons has benefited the community most. 83.7 percent of the respondents opted for village woodlots, 10.6 percent for tree groves and the rest did not give any response. Some of the respondents gave their species choice also (though this was not asked for), the choice being eucalyptus in the North and teak, jatropa etc in the South.

The other stakeholder groups were asked whether they benefited from VRMC activities on the commons. The response is given in Table 33.

Table 33: Percent stating being benefited from activities on commons

Division	Non-SHG Women		SHG		CLU	
	Currently	In Future	Currently	In Future	Currently	In Future
Ambala	57.6	45.5	66.1	49.2	91.9	76.8
Kurukshetra	76.7	88.4	86.4	81.8	90	94.8
Hisar	87.8	100	89.1	100	80.6	100
Bhiwani	91.7	91.7	78.3	92.8	94	99.1
Jatusana	20	100	12.8	100	45.7	100
All	54.9	84	68.6	84.5	78.4	94.7

The table shows that forestry work on common land is perceived to be beneficial to all user groups, though there is some variation across divisions. In Jatusana division, the women groups appear to be less enthused about the current level of benefit. In all divisions the likelihood of such future activities benefiting the stakeholder groups appears to be positively assessed. This means that the project and the VRMCs have created a favourable climate for community forestry interventions. This holds promise for sustainable forestry activities with active participation of village communities.

The Common land user group was asked to name the most beneficial activities of VRMCs. 60 percent did not give any response, mainly those in Jatusana and Bhiwani. 18.6 percent named wage labour as the most beneficial activity, the proportion being as high as 61.6 percent in Ambala. Wage labour was important in Kurukshetra and Hisar also. Availability of grass, fodder or fuelwood are important benefits in Ambala and Kurukshetra. Fodder, grass and fuelwood together were mentioned as beneficial outcomes by 65 percent of the respondents in Kurukshetra. Johad rehabilitation was mentioned as an important activity in Hisar.

Table 34: Most beneficial VRMC activities as assessed by CLU

Division	Chetna Kendra	Fodder	Grass	Fuel-wood	Johad	Wage Labour	No response
Ambala	1.0	0	33.3	0	0	61.6	4.1
Kurukshetra	0	48.2	2.4	14.5	0	16.9	18
Hisar	3.2	0	0	0	11.3	20.2	65.3
Bhiwani	6						94
Jatusana							100
Total	2.2	7.4	0.4	8.3	2.6	18.6	60.5

Use of smokeless chulha

Smokeless chulhas provided under the project in selected villages reduce environmental pollution and drudgery in cooking and reduce use of fuelwood.

Table 35: Percent of respondents using smokeless chulha

Division	SHG	Women Group	Community (VBS)
Ambala	40.7	57.5	26.9
Kurukshetra	36.4	10	7
Hisar	1.8	19.5	9.5
Bhiwani	14.5	29.2	3.4
Jatusana	46.2	0	12.4
All	24.4	11.8	11.1

SHG as a stakeholder group has the maximum percent of respondents using chulha (24.4%). Among women groups and current survey households, the percentage using chulhas is a little over 11 percent. Ambala appears to be moving towards energy efficiency as a good proportion of all stakeholders used smokeless chulhas. It is to be noted that improved chulhas have been introduced by the project in only 16 of the sampled 40 villages, normally with 50 households provided chulhas in each village.

IV VILLAGE CASE STORIES

Benefit for women in Ghursal

The women of Ghursal village (Hisar II) feel that the greatest benefit of village woodlot plantation has been that now they are able to attend nature's call in relative privacy. The poor people of this village cannot afford sanitary toilets within their homesteads.

Village forest in Dobhi village (Hisar)

The people of this village actively participated in plantation and protection activities of their 114.8 ha woodlot. Under HCFP a village pond was excavated and water was drained into the pond from the irrigation canal. The villagers consider the availability of water in the pond as the greatest boon from the project. One weakness noticed was that though an SHG exists in the village, its members were not aware of any link with HCFP.

Conflict in the VRMC of Nirwan

Serious differences have arisen between the President and Secretary of this VRMC regarding the utilization of survival incentive on Farm Forestry released by HCFP. The farmers who were eligible for the incentive authorized the VRMC to utilize the amount for a common cause in the village. The President, on the basis of consensus, spent the money on common work. The cause of the dispute was the change of leadership in the Panchayat. The Secretary belonged to the new Sarpanch's faction, and he has accused the President of misusing the fund. The President then asked the concerned farmers to take back the incentive if they so desired. He, along with the Forest Guard, delivered the money at the doorstep of some of the farmers. The stung President has stopped attending the VRMC meetings as he feels that he has been wrongly implicated. It is in the interest of the village and the community that this dispute does not get out of hand.

Wages from nursery

Smt Manju Devi of Nirwan village feels that she is getting much higher wages now than before as she gets assured work from the HCFP cluster nursery. On private work she had to work almost 12 hours a day and work was not continuous. But she has to go back to the old situation as the nursery is about to be closed down. The lady also benefited from the literacy programme organized by the project and she can read and sign her name.

Resentment in Badopal village (Fatehabad)

The villagers say that the project authorities had given them big promises in lieu of setting apart 10 ha of Panchayat land for woodlot plantation. These included a Van Chetna Kendra and Rs. 30,000 as Resource Management Fund. HCFP planted on 10 ha, but 5 ha plantation was lost because of water logging. Due to this neither Chetna Kendra or Resource Fund was provided. Villagers ask why they need to be held responsible for the loss from natural causes beyond their control. The VRMC says that it has written to the project authorities several times that in water logged areas only ridge plantation should be done, but this was not accepted. The VRMC

members are not able to face the villagers.

Progress through vermi-composting

Santaro Devi of Saraswati SHG in Dhana Ladanpur village has started a vermi-composting unit. The ADO-Agriculture visited the unit and praised the efforts of the lady in environmental conservation and gifted her a spray machine costing Rs. 1800. The ADO asked the lady to use the manure in her own field. He visited her field regularly to check the growth of the crop. In the first year itself, the wheat yield on this one-acre sandy soil, without using chemical fertilizer, was 17 quintals. She sold the wheat at Rs. 1100 per quintal to a trader who arrived at her farm gate. The lady is all praise for HCFP staff and the ADO for encouraging her in the venture.

Women fight encroachment of common land

The Barbad SHG in Dhana Ladanpur has united the women of the village to fight against encroachment on Panchayat land. They have petitioned the District Collector to intervene in the matter. They want the common land to be used for the benefit of the whole community rather than for individual profit. The women also campaigned for repairing the village road. The group corpus has reached one lakh Rupees. They feel that HCFP is behind their increased level of awareness and organizational capabilities.

Resource protection and management in Singhani (Bhiwani)

Apart from promoting new village woodlots, the VRMC of Singhani village have started protecting old plantations and trees. Recently one of the Panchayat members cut down trees from an old Panchayat plantation. The villagers objected to this and appealed to the VRMC to intervene. The VRMC convened an emergency meeting and asked the Panchayat member to be present in the meeting to explain his conduct. He threatened to get the VRMC dissolved and refused to attend the meeting. The VRMC then took the Panchayat into confidence and filed an FIR and also informed the Forest Department. The case is pending and the VRMC is of the opinion that the offender is using political patronage to save himself.

The study team also observed the enthusiasm of the villagers for kitchen gardening and in adopting the vegetable seeds distributed by the project. It was also observed that even the shelter-less households who are now living in tents had planted shady trees on the space available around the tents.

Woodlot on encroached land in Kari Dharni village (Bhiwani)

The VRMC was successful to vacate the encroachment on 5 acres of Panchayat land and plant trees on it. The two former encroachers have been given the responsibility of maintaining the two tree groves, which task they have taken up willingly. The Shanti SHG of this village contributed to the Tsunami relief fund.

Inactive VRMC members

A lady member of the VRMC in Asalwas Merheta asks: "What is this thing I am

member of? What benefit do I have from it? I have attended just one meeting in the last 3 years.” The Link Worker had gone to her house to invite her for the meeting. The VRMC members feel that this may be due to the fact that mainly office bearers are provided training by the project.

Caught up in village politics (Village Baraf, Hisar)

There are two powerful factions in the village. The Panchayat dissolved the VRMC and appointed in its place another VRMC with members from the ruling faction. No representative of HCFP was invited for the change. The present Sarpanch is from the Scheduled Caste Community. The earlier Sarpanch was a Jat. The earlier Vice President of the VRMC has now been appointed as the female Link Worker. There was a tense situation in the village at the time of the village benefit study. The old VRMC members say that they are ready to lay down office if a Gram Sabha is called and decides that the VRMC needs to be changed. They are not ready to accept the arbitrary decision of the Panchayat which is only the executive arm of the Gram Panchayat and not a decision making body. Such incidents call for a re-look at the legal status and processes of constitution and change of VRMCs and their roles vis-à-vis Panchayat and Gram Sabha.

What have we gained?

This is the question that the Pragati SHG loves to ask. The HCFP may have wished to help us. But the agency they have engaged to help as are causing more harm than good. Our loan application was sanctioned by the Bank Manager. But the Link Worker Somvati persuaded the manager to cancel our loan by giving wrong feedback. She warned the manager not to lend to the group without consulting her, as the group was formed by her. The members ask: “has the project engaged such facilitators to harm us”?

A model HCFP village

There is a 60 ha HCFP village woodlot on the common land of Garwa village of Bhiwani division. There is also a 12-acre sand dune plantation (modified) on Panchayat land. The VRMC has allowed farmers to do inter-culture of agricultural crops in this plot on annual lease basis, thereby building up the corpus of the VRMC. Within three years the VRMC has earned Rs. 48,000 from this activity. This is in addition to the income earned by farmers. The VRMC believes that it can become financially sustainable in a short period of time for the purpose of village natural resource management. There are two successfully functioning SHGs in the village (one each of both sexes). Each has built up a corpus of over a lakh Rupees through saving, inter-lending and taking up income generating ventures. The women group sold fruit plants for kitchen gardens at the rate of Rs. 5 per seedling. The survival percentage of the plants is reported to be very high. The VRMC, SHGs and Panchayat jointly take up common activities like celebrating January 14 every year as Village Sanitation Day.

V GENERAL CONCLUSIONS AND RECOMMENDATIONS

In order to understand the effectiveness of project interventions to achieve the intended results, a Village Benefit Study was carried out in year 2004-05 in a sample of 35 villages. The same exercise was repeated in the year 2005-06 in a sample of another 40 villages.

The study had two main components. The first was the comparison of information on selected benchmark indicators with the current situation, using the baseline survey and a repeat survey in the current year. The items of enquiry were the same in both the surveys. The variables used were socio-economic attributes like social categories, land ownership categories, gender, silvicultural aspects like tree ownership, cooking fuel, sufficiency in tree products, willingness to plant trees, livestock ownership, etc. The second component constituted the perception of different stakeholder groups on the performance of the project, indicated by opinions about the VRMC, household income generated through plantation work, rating of tree packages delivered by HCFP, preferences for tree packages to be adopted in the future, advice received on silviculture, level of interaction with Forest Guard and project promoted institutions etc. There were five different stakeholder groups, namely VRMC members, SHG members, women not associated with SHGs, Common Land Users and a sample of Village households. The main findings of the study are the following:

1. The project strategy in promoting community forestry through involving people through microplanning, promoting village institutions, training and awareness generation activities, is bearing fruit. If the pace continues, the project goal of sustainable community forestry will become a reality by end of project. This trend is indicated by two facts. Firstly, there has been a six-fold increase in the number of trees per household. Villages in the Hisar Circle, which had a lower tree ownership index at benchmark level, had a higher increase. The increase also cuts across all economic and social categories, *with even the landless persons being able to plant trees in the compound of their homesteads. Further, the average number of trees per ha has increased from about 20 at baseline to about 61 currently. The increase in tree density per ha of marginal and small farms has been more dramatic than for larger sized farms.*

Secondly, though eucalyptus and poplar continue to be the most preferred trees species in Ambala and Jand in Hisar Circles, a number of other species have been planted in good numbers. *These include Amla, Ailanthus, Sheesham etc.* Fruit trees, though not the preferred species of foresters, are in high demand for farm forestry, indicating the need for establishing linkages with the Horticulture Department.

2. *One of the major benefits of tree planting has been the increased availability of fuelwood.* Though cow dung continues to be the major cooking fuel, use of fuelwood from private as well as common land has increased substantially, most probably due to availability of biomass from HCFP supported plantations. The wood from common land may be a by-product of pruning and thinning of the tree crops.

3. The need for purchase of fuelwood has decreased marginally at the overall level, but increased in Ambala and Jatusana circles and for the landless.
4. Excepting the landless group, all economic categories have experienced increases in availability of firewood from private land. The landless group has in fact experienced a drastic decline, probably due to the reluctance of landowning persons to allow them to take out firewood from their land. But this is compensated by an increase in the availability of fuelwood from common land.
5. In the matter of fuelwood, the proportion of households reporting full insufficiency has declined by nearly 14 percentage points from the benchmark level. The proportion reporting one-fourth sufficiency has increased by a corresponding volume. The proportion of people reporting sufficiency to the extent of 50 percent of their needs has also increased. However, those reporting full sufficiency are fewer now than at the benchmark level. Among the landless, nearly 86 percent is fully insufficient in fuelwood. *Thus the landless would stand to benefit proportionally more from more intensive afforestation of common lands. This is a further justification in promoting community forestry as a poor friendly activity.*
6. Sufficiency in fodder and fruits has declined for all economic groups. This may however be due to population increase and changes in demand pattern.
7. There is not much change in the number of buffaloes, bulls and cows owned, but the number of goats and sheep has almost doubled.
8. *The results of community organization and awareness building activities are also reflected in the increased willingness to plant trees on private land, indicating the scope for farm forestry as an important strategy for environmental improvement in Haryana. The most dramatic increase has been the demand for fruit trees, followed by timber and fuelwood.*
9. The project has laid considerable emphasis on training and capacity building of VRMC and SHG office bearers and members. *This is reflected also in the finding that the majority of both VRMC and SHG members have received training, there being not much gender variations in this regard.*
10. The findings show that there is a need for better interaction of the VRMCs with other stakeholder groups like SHGs, women in general and the common land users.
11. More than half the number of VRMCs has had interaction with the Forest Guard more than 12 times during the past year.
12. In the opinion of about 41 percent of members of the village community, VRMC activities constituted an agenda of Gram Sabha meetings. *The fact that the majority is not aware of this happening may imply that efforts are needed to make the functioning of the VRMCs more transparent and people centric.* It might also be due to the fact that attendance in Gram Sabha meetings needs more attention, to enable the Panchayats to become more transparent.

13. 60 percent of VRMC members and 80 percent of SHG members attend the meetings of their respective organizations. Male members' attendance rate in VRMC meetings was substantially more than that of female members.

14. 86 percent of Common Land Users, 65 percent of community members and 82 percent of VRMC members themselves feel that VRMC has performed as a problem solving function at village level. On the other hand, amongst women the proportion of positive response is less (42-56 percent). This indicates the need for an improved gender focus for VRMCs.

15. 87 percent of common land users, 47 percent of the SHG members and 28 percent of non-SHG women were of the opinion that the VRMC is supporting them; presumably meeting their needs for biomass as well as for other socio-economic needs.

16. More than 50 percent of common land users and a little over one fourth of community members have benefited from wages from plantation work. This benefit is directly proportional to the area of common land allotted for woodlots, meaning that the poor people in the communities, which take up tree plantation on commons, stand to benefit from this alternative land use. This message could be used as a motivating factor for future community forestry projects.

17. The benefit of wages has beneficial impacts on the livelihoods. However, this is a temporary benefit as most works have been completed. The livelihood improvement focus of the project appears to be currently restricted to the income generating activities promoted through SHGs. In the designing of future community forestry projects there is a need to give a closer attention to livelihood needs of the disadvantaged. The lessons from the SHG assessment study that has recently been completed may also feed into policies and programmes.

18. Common land plantations and Chetna Kendra have emerged as the project activities implemented through the agency of the VRMCs, which have been assessed as the most beneficial by different stakeholder groups (SHG women, non-SHG women and common land users).

19. Though the common land users initially faced difficulties due to restrictions on grazing on common land plantations, this negative effect was offset by an increase in grass and fodder production in the planted area. In future community forestry projects in Haryana, it would be appropriate to examine the feasibility of developing traditional pasturelands along with woodlot plantations.

20. As prime agricultural land belonging to Panchayats is still retained for agriculture, there has been no adverse impact on leasing of such lands by cultivators, including the land poor. This also continues to be the major source of income for Panchayats.

21. Income from sale of grass, fodder or firewood from the common land plantations was negligible, though the economic value of biomass available for self-use must be quite substantial.

22. Common land plantations (VWL) and Kitchen Gardens constituted the most preferred tree package under HCFP. As a preferred package for the future, kitchen garden, sand dune fixation and poplar have shown increased proportion of people preferring them for the future, though mixed planting of trees on the commons constituted the major preference.

23. Nearly 84 percent of VRMC members felt that village woodlots constituted the most beneficial HCFP package and about 11 percent preferred tree groves.

24. Majority of the respondents from stakeholder groups, particularly the Common Land Users, reported that they have received current benefits from HCFP work on the commons. The proportion expecting future benefits is even higher. This proves the relevance of project interventions.

25. Wages, fuelwood, fodder and grass constituted the most beneficial activities in the opinion of common land users.

26. The findings also show the efficacy of supplying smokeless chulhas, which are being used for cooking by most of the households who have opted for them.

27. Significant percentage of community members are of the opinion that the VRMC and through it the HCFP have successfully tackled grazing problem (33%), fodder problem (43%), land problem (presumably encroachment on common land – 36%), water problem (25% - mainly in Hisar where Johads have been rehabilitated) and settling of village disputes (22%). These are important measures of success and sustainability.

The general conclusions of the study are the following:

- HCFP activities have gained high visibility in the project villages; villagers are beginning to see the benefits of afforestation through community mobilization;
- The VRMCs have gained general acceptance and respect;
- Tree planting is becoming a desired element of village life;
- The HCFP plantation models are acceptable;
- Farm forestry is catching up in popularity;
- Village Woodlots and Tree Groves are enriching Common Property Resources;
- Still people are not fully self-sufficient in tree products like timber, firewood and fodder, particularly in the context of pressure of population.

The general concerns that still remain in the context of a suitable exit strategy (as evident from the current as well as previous studies) are:

- The VRMCs' insufficient interaction with stakeholder groups;
- Need for more transparency and better interaction with the village community;

- Need for a strategy to promote the emergence of VRMCs as an autonomous institution able to respond to village needs, plan and implement development projects and execute projects in convergence with the existing development machinery;
- Conflicts arising in the context of changing power structure in the village;
- Need for a re-look at the powers and functions of the VRMCs in the context of devolution of development responsibility and powers to Village Panchayats;
- Need for refresher training in the context of the exit strategy;
- Vesting some additional responsibilities to villages prior to project exit;
- Need for intensification of a massive Information, Education and Communication drive in project and adjacent villages to sensitize the entire village community about the gains and lessons of the project and their responsibility for maintenance of plantations and assets created under the project. A professional agency may be assigned this task.

It is also recommended that another Village Benefit Study be carried out in the current year in a more coordinated manner, with refined and focused tools and well-trained research staff.

Appendix 1

VILLAGES SAMPLED FOR 2005-2006 VILLAGE BENEFIT STUDY

	District	Block	Village	Batch #	SHG	Chulha
1	Panchkula	Raipur Rani	Hangola	1		
2			Pyarewala	3		✓
3		Barwala	Dhandardu	2	✓	
4			Jaloli	4	✓	✓
5	Ambala	Naraingarh	Nagla Rajputan	1	✓	
6		Barara	Thakurpura	2	✓	
7			Binjalpur	3	✓	✓
8		Shahzadpur	Sherpur	4		
9	Yamunanagar	Bilaspur	Battuwala	1		✓
10		Chhachhrauli	Jatanwala	2		
11			Malikpur Bangar	3	✓	✓
12		Sadhaura	Pammuwala	4		
13	Kurukshetra	Ladwa	Bir Kheiri	1		
14		Shahbad	Dangali	2	✓	
15		Babain	Bir Kalwa	3		
16		Thanesar	Barana	4		✓
17	Hisar	Hisar II	Burak	2	✓	
18			Dhobi	4	✓	
19		Adampur	Ghursal	3		
20	Fatehabad	Bhattu Kalan	Dhingsara	1	✓	✓
21		Fatehabad	Badopal	3	✓	✓
22	Sirsa	Nathusari Chopta	Nirwan	1	✓	✓
23		Ellenabad	Podka	2		✓
24			Chilkani	4		
25	Bhiwani	Bhiwani	Dhana Ladanpur	1	✓	✓
26			Asalwas Merheta	3	✓	
27		Loharu	Singhani	2		✓
28			Paju	4	✓	✓
29		Siwani	Garwa	1	✓	
30			Siwatch	2		
31		Badhra	Kari Dharni	3	✓	
32		Tosham	Hasan	4	✓	
33	Rewari	Jatusana	Parkhotampur	1	✓	✓
34			Masit	3		
35		Nahar	Lookhi	2		✓
36			Lula Ahir	1		
37		Khol	Siha	4		
38	Mahendragarh	Kanina	Kheri	2	✓	
39			Bharaf	3	✓	✓
40		Mahendragarh	Mandola	4		