NATURAL RESOURCES SYSTEMS PROGRAMME

PROJECT REPORT[1]

DFID Project Number

R8084

Report Title

Process documentation.

Annex C of the Final Technical Report of project R8084.

Report Authors

Purushothaman, S. and Purohit, S.

Organisation

Best Practices Foundation

Date

2005

NRSP Production System

Peri-Urban Interface

[1] This document is an output from projects funded by the UK Department for International Development (DFID) for the benefit of developing countries. The views expressed are not necessarily those of DFID.

Annex C

Process Documentation

Sangeetha Purushothaman and Simone Purohit, Best Practices Foundation

Table of contents

Section 1

Summary

This document captures the process of implementation of action plans by a team of institutions in the peri urban interface as a result of a series of DFID funded interventions, which was based on several phases spanning research, planning, implementation and monitoring. The interventions span a period of three to four years from November 2001 to March 2005. This report provides an overview of the process of intervention, strategies used and the impact of these strategies. It is a lengthy report, reflecting the degree of activity and the complexity of the process of implementation of the plans of action.

Chapter 1: Introduction

1.1. Objectives

The logical framework (Section 10 of the FTR) sets out the following at goal, purpose and output levels:

Goal

Natural resource management strategies for peri urban areas which benefit the poor developed and promoted

Purpose

Strategies for natural resources management to benefit the poor tested, modified and demonstrated through implementation of plans of action in pilot projects in the Mugad cluster, Kotur, Gabbur and Channapur villages.

Outputs

1. Increased capacity of the communities to achieve sustainable changes in the management of peri-urban interface natural resources that are likely to enhance livelihood strategies of the poor.
2. Village stakeholders, researchers, and target institutions gain new insights from the process of implementing action plans in peri-urban areas into:
   2.1. Factors which facilitate cooperation between different stakeholders;
   2.2. Which solutions to identified issues are both effective and sustainable;
   2.3. What are the most appropriate ways of measuring change by all stakeholders
3. Acceptance of processes that have led to effective NR management strategies which benefit the PU poor, what interventions work, how changes can be measured and what constitutes an enabling environment, amongst interest groups in non-project localities.

1.2. Strategies

The strategies used by the team emerged from the participatory action planning project (R7959), which took into account the objectives of both the primary beneficiaries and the research team:

- Community mobilization (Annexes D and G)
- Soil and water conservation (Annex M)
- Livestock improvement and management (Annex D)
- Increased tree cover (Annex K)
- Improving livelihoods (Annexes E, F and H)
- Involvement of TIs (Annex I)

1.3. Broad Assumptions and Conditions

It was assumed that these strategies could be implemented based on the following assumptions. For one that the NRM strategies would be implemented and the degree

of success of these strategies would be based on the assumption that there are no natural calamities such as drought. The second major assumption was that top government personnel would remain in their positions and there would be no major transfers of personnel within NGOs.

In reality Hubli Dharwad faced three years of consistent drought (Annex B, Figure B1) and repeated transfers of government personnel and personnel from the institutions engaged in the project. Therefore, the success of the interventions needs to be seen within this overall context.

1.4. The Scope of the Annex

The report is divided into three sections, the first being a detailed background of the project, its methodology and processes, followed by a section on the strategies and outcomes of each strategy and finally the third section deals with the impact as per the log frame outputs. Section 3 also describes the withdrawal strategy of the project and provides the broad conclusions that emerge from the process documentation and other research findings.

The report has drawn on the following data sources:

- Interviews with community participants, with the team, government and other target institutions
- The survey data from two surveys have also been used where relevant
- Sections of data from the participatory monitoring and evaluation
- Wealth ranking exercises data

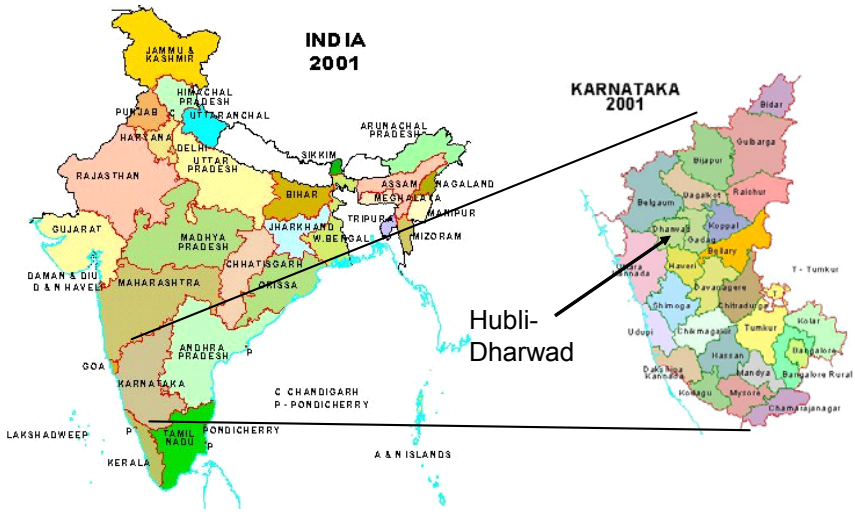
Chapter 2 Background and Context

2.1 Hubli-Dharwad

Also see Annex B. The Hubli- Dharwad city region is located in Dharwad district which comprises five surrounding taluks: Dharwad, Hubli, Kalghatgi, Kundgol and Navalgund, which together contain 372 villages. In 1991, Hubli-Dharwad had a population of 1,428,174 inhabitants, while that of the city-region was 648,29*8*. The population of the city according to the 2001 census was about 786,018. Hubli-Dharwad is characterized by a low population density, relative to other Indian cities (3,395.3 inhabitants per square km). Hubli-Dharwad is located in a predominantly rural region where agriculture is the principal economic activity due to the productive nature of the soils.

The study focuses on the Hubli- Dharwad twin city region (Map 1.1), located in Karnataka state, southwest India. The two cities are separated by what used to be a large rural area in between, which now is a peri-urban area, covering a distance of some 20km. The peri urban interface is also the area surrounding Hubli and Dharwad cities where the project villages are located.

Hubli Dharwad is located 427km northwest of the Karnataka state capital, Bangalore, and approximately 600km southeast of Mumbai (Bombay). The two cities, after being brought together under the Hubli- Dharwad Municipal Corporation (HDMC) in 1962, became the third largest urban agglomeration in Karnataka State (after Bangalore and Mysore). Hubli tends to be more industrial and commercial in nature while Dharwad city used to be a centre of district government institutions and is currently an educational centre.



Map 1.1. Location of study site

2.1.1 The Peri-urban Interface

The Peri-Urban Interface (PUI) ought not to be seen as a geographical location to be identified in terms of a fixed distance from any given city. It is better conceptualized as a dynamic process defined by constant and changing interaction between the rural and the urban. It is characterized first and foremost by change, resulting in opportunities and threats to the existing ways of life of peri-urban communities. The peri-urban interface thus conceptualized can be characterized by a series of flows of labour, capital, and natural resources to the city, and urban pollutants from the city into the PUI.

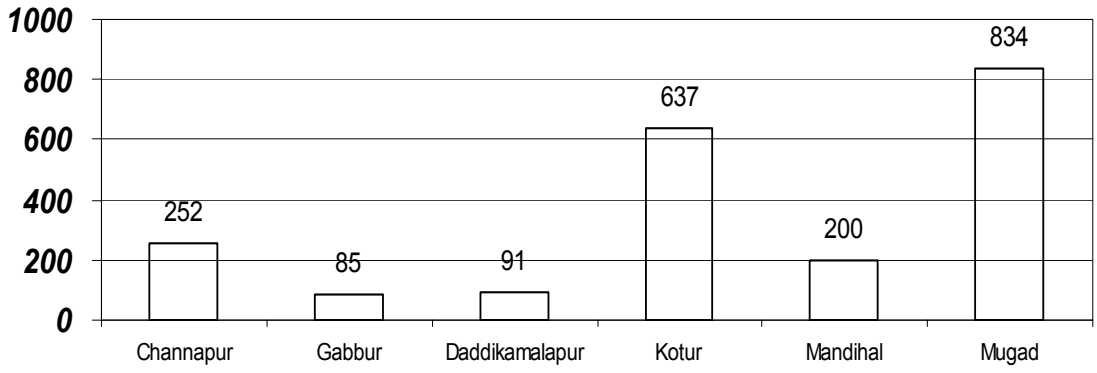
2.2 Partners in the Project

One unique aspect of this project is the multi-institutional representation from both the public sector and from civil society. Also in accordance with the research action nature of this project, the team also represents an organizational mix of researchers and practitioners. The organizations involved were:
School of Agricultural and Forest Sciences and the Centre for Arid Zone Studies, University of Wales, Bangor
Development Planning Unit, University College London
International Development Dept., University of Birmingham (2001-2002 only)
University of Agricultural Sciences, Dharwad
Best Practices Foundation, Bangalore
India Development Service, Dharwad
BAIF Development Research Foundation, Dharwad

2.3 Socio Economic Background of the Six Villages

The study covered six final villages selected (Map 2). The baseline information providing socio-economic characteristics of a total of 2098 households is provided in this section (but see the caveat in Annex B, section 1).

Figure 2.1: Number of households in Each Village

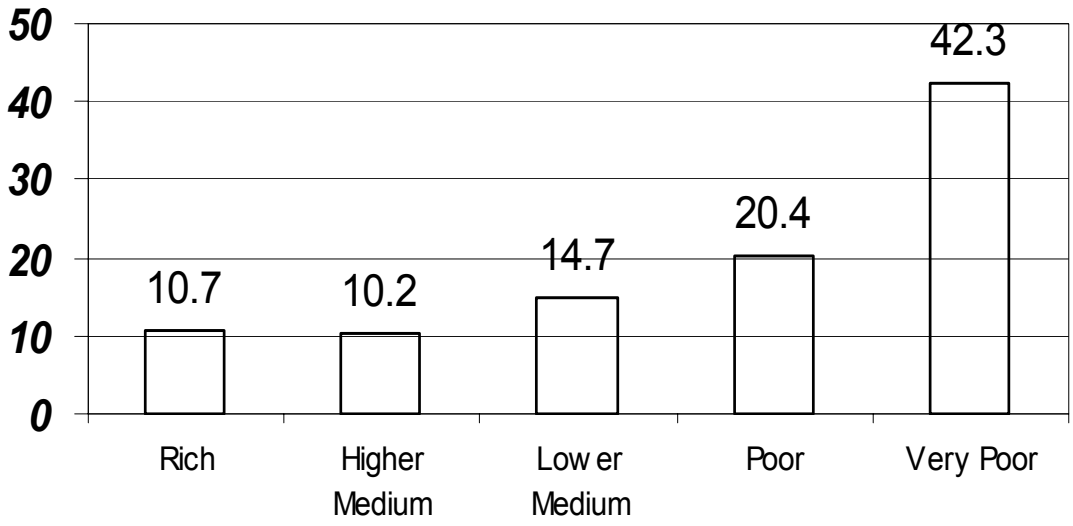


The largest villages were Mugad and Kotur with 834 and 637 households respectively, while the smallest village was Gabbur with 85 households. Both the BAIF villages (Channapur and Gabbur) were relatively small. Table A2.1 and Figure 2.1 provide the number of households in each village. Of the 2,098 households, a total of 192 households (9.1 percent) were female headed.

2.3.1 Economic Characteristics

Through participatory wealth ranking exercises the poor and very poor were found to constitute a very high proportion of the total population (close to 63 percent). This data was compared to traditional estimates used to estimate poverty such as land holding and incomes. (Table A2.2 and Figure 2.2)

Figure 2.2: Households in Each Wealth Category (%)

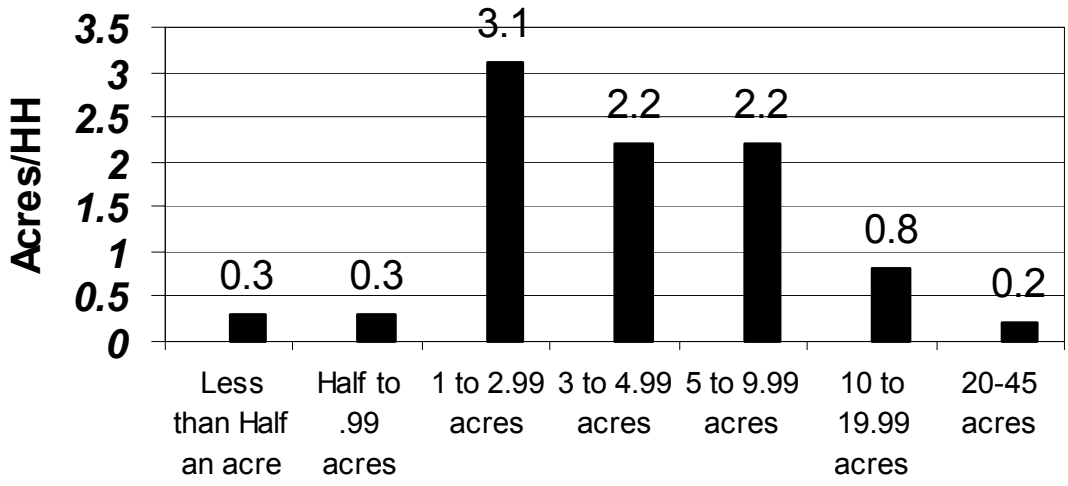


Land Holdings:

Standard economic criteria used by government such as income and land were measured and the results are shown below (Tables A2.3 and A2.4). About half the population have land holdings between 2 and 10 acres. (Figure 2.3)

- Only 11 percent have land holdings of more than 10 acres.
- While only 6 percent have less than an acre of land, close to a third have small landholdings ranging between 1 and 3 acres.
- This data does not include the landless.

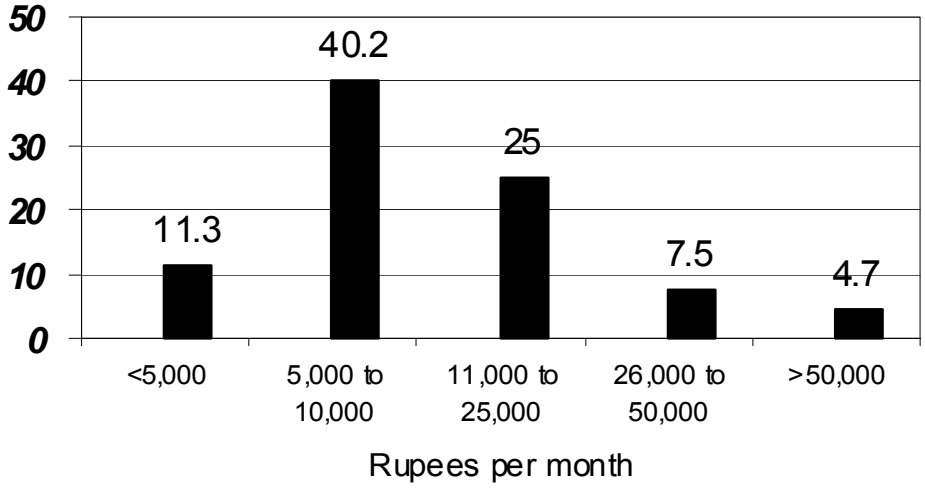
Figure 2.3: Households in Each Land Holding Size Category



Income Categories:

- More than half the population earn less than 10,000 rupees per year.
- Only 5 percent of the population earn above 50,000 rupees a year.
- About a fourth of the population is making between 11,000-25,000 rupees a year. (Figure 2.4 and Table A 2.5)

Figure 2.4: Households by Income Categories (%)



2.3.2 Housing

The data gathered included whether or not people owned their own house, the quality of construction of the house (namely if it was poor, average or pucca). Data on the

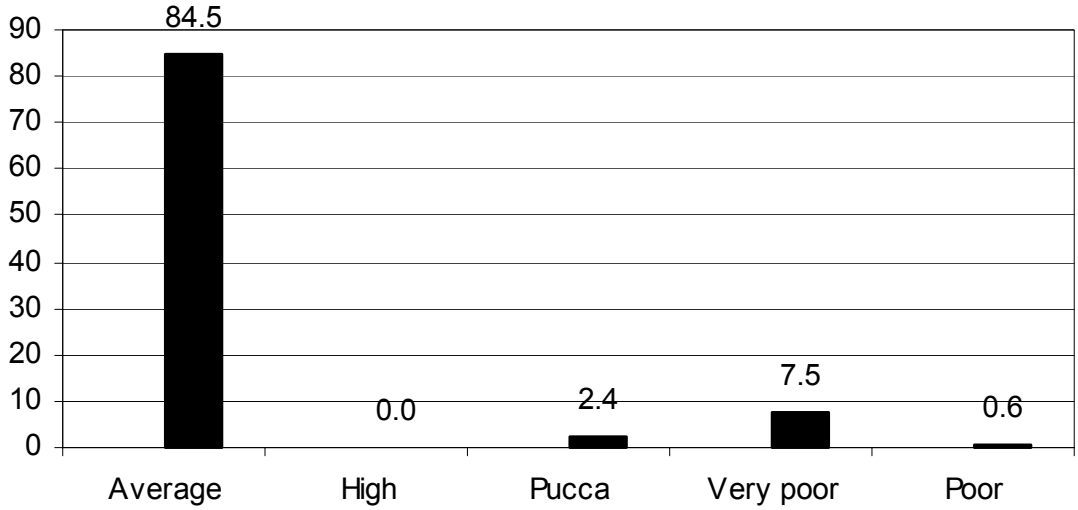
size of the houses was gathered in square feet. Of the total, only 155 households (7.4 percent) did not own their own homes. (Table A2.6)

Quality of House:

Looking at data on the quality of houses (Figure 2.5) it can be seen that:

- About 88 percent of households have homes of average quality while 8 percent have very poor quality of homes.
- About 3 percent of households have been characterized as having pucca homes.

Figure 2.5:Households Categorized by Quality of House (%)

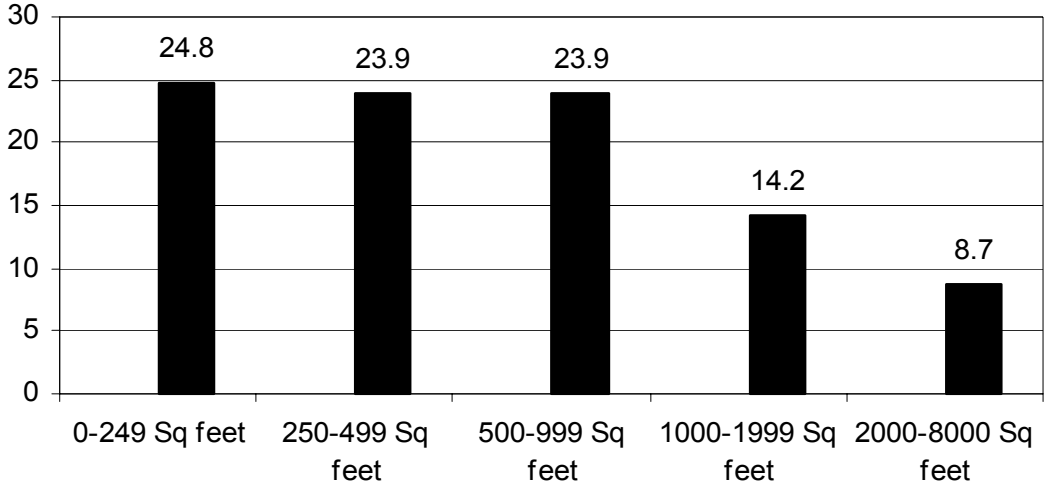


Size of Dwelling:

Figure 2.6 and Table A2.7 provide information on number of households as categorized by dwelling size.

- Half the households live in dwellings, which are smaller than 500 square feet.
- Another quarter live in houses whose sizes range between 500 to 1000 square feet.
- Only a small number have really large dwelling spaces (9 percent).

Figure 2.6:Households Categorized by Dwelling Size (%)



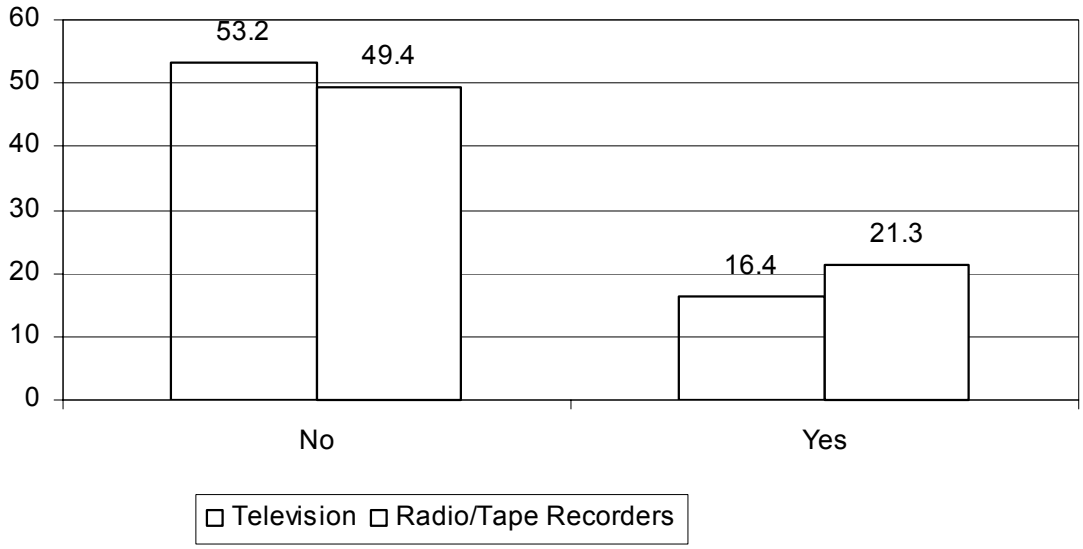
Toilets:

Close to 1,573 households reported not having a toilet. Only 509 households reported having a toilet. This is despite the existence of schemes such as Nirmal Karnataka Yojana (Annex B, Appendix 1).

Other Household Assets:

Of those households that responded to this question, close to half (53.2 percent) did not own a television, while only 16.4 percent claimed that they did (Tables A2.8 and A2.9).

Figure 2.7: Percentage of households having Televisions, Radios and Tape Recorders



About half of the households (49.3 percent) again claimed not to own a transistor radio or tape recorder although a higher percentage (21.3) reported owning the same, compared to television owners. (Figure 2.7)

2.4 Land and Agriculture

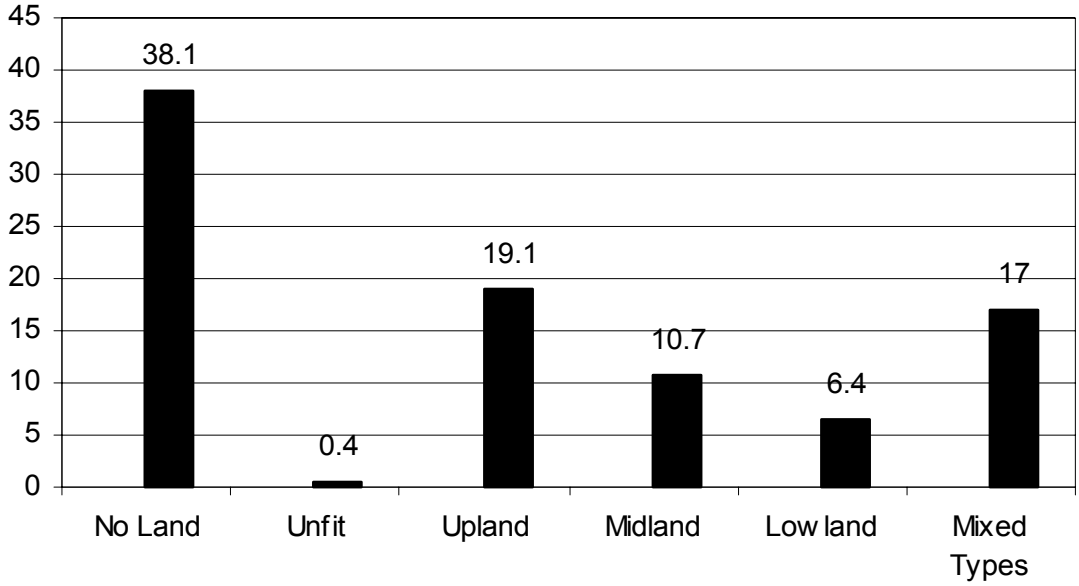
Land has been categorized into the following types:

- No Land
- Unfit
- Upland
- Midland
- Lowland
- Mixed Types

Households were asked to categorize the type of land they had. It was found that of those who responded (Table A 2.10 and Figure 2.8)

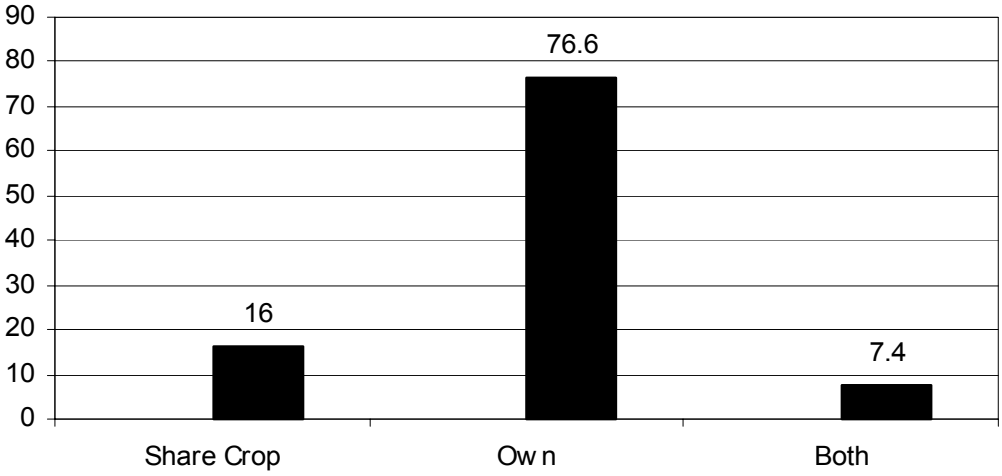
- Close to 41 percent have no land.
- 53.5 percent claimed to own some form of land
- 21 percent have upland (rain fed only)
- 19 percent have mixed types of land
- 0.5 percent of people have unfit land
- Approximately 20 percent have ether midlands or lowlands, potentially irrigable, but a rare occurrence in recent years.

Figure 2.8:Households Categorized by Type of Land (%)



Of these (Table A2.11 and Figure 2.9) the majority (76.6 percent) cultivate their own crops, while the rest either are involved in share cropping (16 percent) or do both (7.4 percent).

Figure 2.9: Households Categorized by Ownership of Cultivatd Land

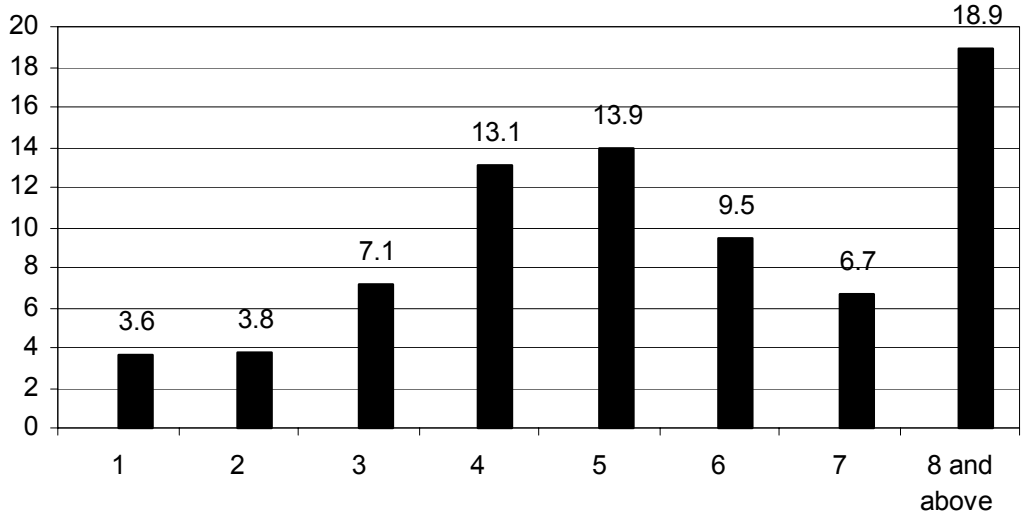


Of those cultivating 70.5 percent of households said they did not hire labour, while 20.9 percent or 619 households said they did hire labour. Since the onset of successive droughts, agricultural labourers frequently reported the difficulty of finding work, so the above figures may not represent the long term reality.

2.5 Family Size

Data on family was computed leaving out Kotur village since that data was not collected (See Annex E and FIS1 database on CD). Of the remaining 1,462 households, it was found that 27 percent of households has 4-5 members in their families. About eighteen percent of the families were large with more than eight members. Only about 7 percent had very small families of 1-2 members. (See Table A2.11 and Figure 2.10)

Figure 2.10: Households By Family Size (% in each category)



2.6 Occupational Data

Occupational data was collected for each individual in the family totalling 8386 individuals. Table A2.12 provide the breakdown of this population by occupation.

- The largest occupation (32 percent) is agriculture, which include 1,505 people (18 percent) in agricultural labour and 1,259 (15 percent) in agriculture.
- A large number of people (1,806 or 21.5 percent) were either classified as students or too young to work.
- Peri urban occupations have been grouped together and include dhobi (laundry), drivers, pipeline workers, people working in hotels, firewood selling, government employees, people in private services, those involved in brick making and milk vendors. This amounts to about 5.7 percent of all primary occupations.
- Of the rest livestock rearing and stone cutting appear to be important occupations.

Data on secondary occupations is represented in Table A2.13.

- About 91 percent did not have a second occupation.

Of the remaining 727 individuals:
- Close to 64 percent were still engaged in agricultural labour or in agriculture.
- About 56 people (7.7 percent) were engaged in leaf plate making.

- The other two important sets of occupations include livestock rearing (6.2 percent) and peri urban occupations (5.5 percent).

2.7 Agricultural Inputs

2.7.1 Livestock

- Two fifths of the households (42 percent) have no carts or bullocks
- A third of the households (35 percent) are completely self reliant
- About 23 percent have partial access to carts and bullocks.

Most households without any carts and bullocks were either poor or very poor or from the lower middle classes. Most households without carts and bullocks also own between 1 and 3 acres, which implies they are small or marginal farmers. (Table A2.14)

2.7.2 Fertilizer and Pesticides

- A majority of households reported having access to fertilizers and pesticides and also having the borrowing capacity to get these inputs.
- A much smaller proportion of households (a fifth) have no access whatsoever
- Very few also reported being self reliant (2 percent)

Fertilizers and pesticides as an agricultural input are more accessible than draft livestock. (Table A2.15)

2.7.3 Implements

- 38 percent of the people have no access to inputs for implements.
- 33 percent of the population are reported to be self reliant, that is, they have no need for inputs
- About one third of the population have only partial access to borrow, while a very small proportion of them are unable to borrow. (Table A2.16)

Chapter 3 Research Methodology

3.1. Objectives

3.1.1 Main Objective of the Research: To understand NRM and livelihood strategies that worked and did not work and why

In order to do this, it was necessary to understand the process used in the NRM and livelihood strategies by the team. The impact of these strategies also needed to be measured. To study the impact, several methodologies were required. First base line data was collected through a family information survey and a second survey was conducted at the end of the project. Second, indicators to measure progress and impact were also needed where both the team and the community generated participatory indicators. Participatory indicators helped provide people's perspectives on what was important for people to get out of each of the strategies. Process documentation was needed to understand the progress used and it also serves to generate feedback on the impact that could be used to modify the strategies. Two research methodologies were used to monitor change. The first was a smaller sample where one group from each village would monitor an activity, which was important to their village. The second included monitoring done by the team using the participatory indicators that the community had identified.

3.2. Selection of Villages

Six villages were finally selected, two near Hubli and the remaining four around Dharwad city. All the villages are located within 15 km from either city. The villages were chosen in the action-planning project preceding this project where the action plans were created (R7959). Implementation of the action plans took place in this project.

In the planning meeting it was decided that the UAS would work in Kotur, which it began soon after the meeting. While initially it was thought that the work at the grassroots in Kotur would provide researchers with an alternative perspective, later it was found that because of the lack of mechanisms that NGOs would typically put in place it was mainly the elites that were interacting in the planning process. Thus to include the poor it was decided that an NGO had to play that role. Therefore in February 2002 it was decided that the UAS would play the role of a research partner and the village level work would be done by IDS. UAS would be the main research for all the villages.

One village, Kelgeri was dropped because they found it too difficult to continue work there. For one it was too big. Second IDS found it hard to organize people due to the constant influx from cities created a pattern of patron client type of relationships where the concept of self-help was not valued. People were conditioned to believe that the government or other institutions should do everything for them. Third, the problems of Kelgeri regarding natural resources were around silting and pollution of the lake because sewage flows into the lake. The lake however belongs to the UAS, transferred from the local government when Kelgeri's governance systems shifted from the Panchayati Raj Institutions (rural governance institutional mechanisms) to

HDMC. Thus any decisions on the lake could not be taken without UAS's consent and HDMC would have to facilitate changes here. Thus Kelgeri issues will have to be tackled by HDMC and UAS where the community had little or no say. So finally when the action plan was written up Kelgeri was dropped. In its place IDS selected Daddikamalapur and Mandihal villages, geographically considered to be part of the Mugad cluster of villages.

So in the end villages the villages each institution would work in included:
- IDS in Mugad, Daddikamalapur and Mandihal villages and also in Kotur
- BAIF would work in Channapur and Gabbur
- UAS would act as the research partner in all the villages.

3.3. Baseline Data

BAIF as part of its process begins its work in villages with a base line survey, which it conducted in Channapur and Gabbur. UAS then took this survey and modified it and administered this modified survey in the other four villages. Most households from all the six project villages were surveyed covering a total of 2,098 households in 2001-2. (See Appendix 1: Format of the Family Information Survey1). The information gathered included socio-economic data, data on natural resources and livelihoods. A smaller survey with a random sample of 310 families in the six villages was conducted in December 2004. (See Appendix 2: Format of the Family Information Survey 2, and Annex E).

3.4 Wealth Ranking

The wealth ranking exercise took place in December 2002, to address the question of "who are the poor". Thus instead of just looking at income, land and other traditional determinants of poverty used by government it was decided to use a more participatory and innovative process. This process entailed the following steps:
- A pilot of the wealth ranking exercise helped determine five wealth categories, which included the rich, higher medium, lower medium, poor and the very poor.
- Communities were asked to rank all the families according to these categories and provide the reason as to why a particular family was characterized as being ranked in that category.
- People used both tangible wealth determinants such as income and land and intangibles such as the type of land, family size, and number of dependents. Other peri urban features were also considered such as the constant inflow of relatives who wanted to avail of urban opportunities, which created a burden on the family and the availability of factory work for the landless.

Two rounds of wealth ranking were planned one at the beginning and the second at the end of the project. The purpose of the second round of wealth categorising would be to determine how many of the poor or the very poor had moved up. The earlier categories were too large to show any slight change in movement. Therefore it was decided that the second round of wealth ranking would not be conducted.

Wealth characterization was thus carried out by PUI team in Daddikamalapur, Mandihal, Mugad, Kotur, Gabbur and Channapur with groups of villagers in order to determine their perceptions of what characteristics define poverty. The extent of poverty in the villages was estimated by asking village representatives to sort

households into one of the five categories. The method used five different sized stones with the assumption that the biggest stone would indicate rich families where as the smallest stone would indicate the very poor families. In between the other three stones of different sizes would indicate higher medium, lower medium and poor families respectively. The village representatives (men and women) from each street are the smaller villages were invited to categorize all the families into different categories according to their knowledge about wealth condition of the families. In the bigger villages, the village was divided into five areas and five groups had representatives from different streets who were called to do the wealth ranking from their area.

Later the family name and code cards were distributed to village representatives to categorize the families as per their perception. The wealth category and the criteria for ranking each family were noted down. The intention was to determine the characteristics of the poor and very poor in different villages. The same procedure was adopted in all the six PUI villages of Hubli-Dharwad. The time required to complete the process was 3-4 hours in each village with the exception of Mugad and Kotur which were very large in population and required 10-12 hours to complete, albeit across several groups in the same village.

3.5 Process Documentation

Based on the research design a series of research questions were formulated by the team aimed at capturing change as a result of project interventions. The changes to be measured included the following (Appendix 3):

- Changes in livelihoods
- Changes in natural resources
- Changes in human capital
- Changes in target institutions
- Sustainability of the PM&E methods
- Analysis of cooperation among stakeholders

It was decided to conduct one round of intensive process documentation per year was conducted supplemented by on-going interviews that took place right through the process.

The process documentation involved focus group discussions and interviews with all stakeholders including the team, community representatives and target institutions. Reflection sessions were held with the team to analyse what works and does not work.

3.6 Participatory Indicators

Upon refinement and administration of the research questions in Appendix 3, the team found that the methodology was too repetitive, non-participatory and cumbersome for both the team and the community. This methodology included several tables and formats, which is included in Appendix 4. Therefore a new methodology was adopted based on the main research questions through which the team and the community identified participatory indicators for each strategy. The team short-listed the final indicators, which have been listed below

Table 3.2: Final Indicators	
Issue	**Indicators**
I. Indicators of a good Sangha	• Save/MEET regularly • Timely repayment of the loans • Every member should be able to go to the bank and TI's • Participation in decision making
II. De-silting activity for soil and water conservation	• Period of Water storage in tanks is high • Quality of the water increases, reduces the infectious diseases attacking • Increase in Irrigation area/ period • Increase in yield level which due to application of silt • Milk yielding increases • Carry out fishing activity • Increase in the yield of rabi crops –like wheat, green gram, Bengal gram and fruit trees • Drudgery saved in bringing water from elsewhere and the labour charges reduced
III. Livestock	• Increase in the number of households depending upon dairying • Reduced infectious diseases in animals due to vaccination Programme • Increased production of fodder and milk • Increase in per capita consumption of milk at home and in income
IV. Agro-Forestry	• Do not have to buy or hunt for firewood/ wood for agricultural implements • Soil erosion decreases • Soil fertility increases • Spend more time in the fields
V. Vermi-compost	• No need to purchase chemical fertilisers • Less use of pesticides • Crop will be healthier • Increase in fertility of soil/ yield and the water holding capacity
VI. Improved Livelihoods	• Educating Children in schools in the cities • Own money/ loans from banks used for investing in IGA's • Spending more time IG activities • Collecting more information on markets and visiting markets • Demand for training and ideas on IG activities

This emerged out of a series of processes which first looked at indicators identified in each village and then indicators identified by activity (Appendix 5).

Once the indicators were defined, collected and collated the next thing to design was how they were going to be measured. Some members of the team came with some simple and easy measures and methods to measure (Appendix 6).

3.7 Participatory Monitoring and Evaluation

Since the team wanted to be as participatory as possible, it was decided to work intensively on a few indicators with the community, where the community itself would come up with not just the indicators, but also the measures, the methods, frequency and responsibility. This process began in all six villages in 2003 and the indicators were measured again in 2004. (Annex D on Participatory Monitoring and Evaluation)

3.8 Other Studies

A series of short-term studies which fell outside the original remit of the project supplemented this overall research design, and added to the richness of the knowledge gained (see Annexes O, P, Q, S, T, U and V).

Chapter 4: The Process of Intervention

4.1. Overall Process

The process described here emerged from a combination of various organizational processes and from prior projects conducted in the PUI through DFID, namely the participatory action planning process. Each organization's process has been detailed. Finally the process used in the implementation of the action plans by all organizations is discussed.

4.2. Institutional Arrangements and Roles

4.2.1. University of Agricultural Sciences (UAS): UAS is the main research organization and provided key links to district government towards the implementation of plans. They conducted field level demonstrations and provided technical inputs for the plans.

4.2.2. BAIF Development Research Foundation: As the NGO partner, BAIF mobilized people's active participation in Gabbur and Channapur villages in the action planning process and in the implementation process. BAIF organized self-help groups (SHGs) and lent its expertise on watershed development, and agro-forestry in the implementation of the action plans.

4.2.3. India Development Service (IDS): As another NGO partner, IDS also mobilized people's active participation in the action planning process in a cluster of villages. IDS have a long history in these villages where they had organized 16 sanghas. The Mugad village action plan was the first to be created and the first to begin implementation. IDS lent its expertise in income generation, joint forest management and social mobilization particularly with respect to women.

4.2.4. Best Practices Foundation: BPF served as the coordinating institution in the implementation phase, conducted process documentation and helped engender the process by surfacing women's perspectives. It played a lead role in initiating MOVE along with IDS. It also led the participatory monitoring and evaluation process.

4.2.5. British Partners: The University of Wales, Bangor is the lead university with the University College London acting as partner for providing inputs on government linkages. The primary roles of the UK personnel coordinated the project internationally, played the role of research partner and provided capacity building on research tools and involvement of government.

4.2.6. Community-Based Organizations (CBO) or sanghas: Being a participatory process, the action plans were built with the active involvement of people. The CBOs were instrumental in defining the issues, creating and implementing the action plans and grounding these plans concretely in an enabling community-based institutional framework for both planning and implementation.

4.2.7. Key institutions included bodies engaged in planning, provision of services, and provision of resources, formulating local policy and implementing regulations such as

the Dharwad Zilla Panchayat, Taluk and Gram Panchayats. Finally state institutions were also kept informed, such as the Watershed Development Department, the Forestry Department, Rural Development and Panchayati Raj, and the Urban Development Authority.

4.3. Process from Prior Interventions

The process by which village communities created action plans took a trajectory, which built on previous work done in the peri urban interface include a dissemination process on peri urban issues.

- Street plays and materials: As an entry point, street plays were conducted on peri-urban issues discussing environmental and livelihood concerns. Posters and pamphlets supported the message given by the play. Overall for an illiterate and semi literate audience, the street plays were found to be more successful in raising awareness than the written materials.
- Rapport Building and Meetings: A continuity was built into the process by the NGOs which had community organisers living in the villages, meeting them around the clock and working with the poor and women in times suitable to them.
- Planning Workshop: An initial workshop held in April 2001 oriented the main institutions to be involved on the process and on villages to be included.
- Field visits: Field visits by all institutions was an integral part of the entire planning process.
- Village Selection: The villages chosen had strong peri-urban features. Change in land use patterns from agriculture to horticulture, to new industries like brick making, or to residential uses led to the selection of Kotur and Mugad villages. Changes in natural resources like degradation of forests and tanks led to Mugad, Kotur and Channapur being included. Disposal of liquid and solid urban waste polluting soil and water led to Gabbur being selected.
- PRA: PRA exercises were conducted to get an overview of the villages, the conditions, resources, problems and opportunities for change. Group discussions were conducted with various sections of the community including men and women, lower castes/occupation groups to have an in-depth analysis of the problems each faced and to identify community representatives to participate in all future events.
- Diagnostic workshop: At a workshop conducted on June 6-7th, 2001 (part of project R7959), community representatives presented information on their villages and problems faced by them related to natural resources and livelihoods. Community, government and NGO representatives interacted to create solutions to problems and tentatively create working groups to draw up the action plans. This did not work because government dominated the process in all groups except Mugad where there did exist SHGs who had the capacity to interact on an equal basis with government. Consequently these working groups were abandoned.
- Workshop with Key Institutions: The Chief Executive Officer, the head of the local district government (Zilla Panchayat) led a workshop on August 17, 2001 with several government agencies representatives to whom the action plans were presented by the NGOs. Here linkages to existing government programmes to the action plans were discussed.
- Field Visits to Select villages: In a participatory process village representatives designed and presented their own action plans and log frames (the format in which the action plan were presented).

Two Indian NGOs, the India Development Service (IDS), and BAIF, along with UAS were involved at the grass roots level in developing three action plans with five villages and later this expanded to six villages. The NGOs mobilized the community to participate in the planning process.

Meetings and debates did not stop with planning exercises, a stream of rapport building and dialogue continued on an informal basis within the villages as the NGOs had field workers living amongst the communities they were working with.

One of the claims made for participatory approaches to development is that of equity and empowerment in social development. However, increasingly experience shows that even when development agents are aware of potential problems these approaches can still be subject to 'elite capture' where the more powerful and visible members of local communities dominate and co-opt the participatory process. The planning process had encountered similar challenges of the threat of "elite capture", and consequently needed to find ways, not only of strengthening the poor, making them more visible and active and even designing specific interventions for them. In one village Kotur, for instance, the more elite groups dominated the planning process initially and it was not until the NGOs stepped in and organized the poor into groups were these other voices able to shape the planning process.

Over the first year of the planning process close to 25 new sanghas emerged across the six villages, including networks of sanghas of the poor and women in Kotur. The new and existing sanghas have all played a crucial role in the re-planning, negotiation and initial stages of implementation of the final action plans. The planning and implementation processes were each tailored by the NGOs according to their own prior experience and philosophy.

4.4. IDS process

India Development Service (IDS), a non-profit organization is committed to economic and social development. IDS works in rural areas to make poor people aware, self sufficient and self reliant through its projects as it believes that development refers primarily to the development of people not only of goods.

4.4.1 Steps

Conforming to this overall mission IDS with an explicit pro poor approach goes through a series of steps with the communities.

- Community Mobilization: The process begins with mobilization of communities into both self-help groups or sanghas and other kinds of interest groups such as village forest committees (VFCs).
- Exposure visits, training and capacity building on sangha formation and maintenance: IDS conducts exposure visits for the communities to other sanghas, within and outside IDS project villages. It also conducts a series of training on accounts and bookkeeping, sangha maintenance, leadership building, self-help group concepts, formation of by laws, towards building and strengthening of sanghas.

- Savings and credit: IDS initiates weekly savings among self-help group members to increase access to flexible, cheap credit.
- Linkages to banks and government: IDS also helps the sanghas link to banks by creating accounts, building a credit history and helping the sanghas apply for loans.
- Group purchase: Prior to actual enterprise development, as a way to provide people experience in handling cash, negotiations, understanding profit and loss, whole sale and retail, IDS initiates group purchase. Here, sanghas buy essential commodities at whole sale rates and sell them to their members at rates that are slightly below retail retaining the extra profit made for the sangha.
- Income generation: Through bank linkages and savings, credit availability helps in the initiation of IGAs. EDP training and exposure visits help the poor gain the skills needed to begin income generation.
- Improved Agricultural Practices: Awareness is raised towards improving agricultural practices such as production and use of vermi-compost, building bunds, and tree planting.
- Improved Livestock Management: Through the UAS, IDS has helped initiate several livestock related activities such as animal vaccination camps, use of improved breeds, fodder training and so on.
- Formation of the VDS and Withdrawal: as part of the withdrawal strategy, IDS formed village development sanghas (VDS) to take on the role played by the community organizers who stay in the village for the project period only. The VDS also takes on village development activities, consists of representatives of all the sanghas and is akin to a village level federation of sanghas.

4.5. BAIF process

BAIF's mission is to create opportunities of gainful self-employment for the rural families, especially disadvantaged sections, ensuring sustainable livelihood, enriched environment, improved quality of life, and good human values. This is achieved through development research, effective use of local resources, extension of appropriate technologies and up gradation of skills and capabilities with community participation. BAIF is a non-political, secular and professionally managed organization.

BAIF focuses on enhancing gainful self- employment for rural people with the focus on natural resources. They aim at sustainable utilization of the Natural Resources and not their exploitation. They use appropriate technologies (advanced or traditional), in the area of NRM.

BAIF also organizes people into self-help groups, initiates savings and credit within the groups, and conducts exposure visits and trains these groups in sangha management. After this BAIF, because of an explicit focus on natural resources, focuses on enhancing the natural resource assets of the community by enhancing their livestock and improving the productivity of their lands. For the assetless, they introduce RNFSE (Rural Non Farm Sector Enterprises), which utilizes and trains people in trading or other skilled activities. Therefore additional elements include:

- Sustainable development of agriculture sector through promotion of tree based farming systems.

- Upgradation of cattle and other livestock resources and promotion of improved livestock management
- Soil fertility building, wasteland and watershed development, vegetative propagation, and development of sericulture and livestock and so on through identifying and promoting appropriate technologies.
- Micro-enterprise promotion
- Community management systems for natural resource management and common property management
- Human resource development
- Withdrawal: They also create a Mahasangha similar to the Village Development Sangha, which is a federation of sanghas at the village level. The mahasangha is also a part of the BAIF withdrawal strategy.

As part of its overall strategy BAIF cultivates the practice of Shramadhan in which entire village communities and sometimes even other village communities are brought to work together in the different villages.

4.6. UAS process for intervention

UAS has prior experience with agricultural extension activities, which have regular programmes on improved seeds, pest management, fodder, nutrition, and biogas, among other activities. The scientists of UAS extend their technological expertise from lab to field by conducting field level demonstrations (or front line demonstrations, to use the UAS terminology) on integrated pest management, improved seeds and improved cultivation practices. There are also research experiments where farmers are chosen based on certain criteria, namely the type of soil, acres of land, type of crop grown among other criteria.

4.7. BPF process

BPF conducted process documentation to surface changes, steps taken, gaps and so on. It had reflection sessions with staff. It led the PM&E process whereby information gathered was fed back to the community organizers and to the community. BPF has played a role on production of outputs such as the films, books, articles, newsletters and also in providing information through participation in conferences.

BPF has played a role in the creation of the task force on rural urban linkages and with state and national level government to keep them informed and in dissemination of outputs. BPF has also played a role in keeping other organizations and key international agencies informed about the peri urban interface initiatives.

4.8. Process of Implementation through R8084

The action plans developed by the six villages were taken forward towards implementation by the NGOs through the CBOs. The project itself did not have much by the way of development funds. This led to some disillusionment of some community representatives about the action plans. However with the linkages established to government agencies resources were obtained to implement a part of these plans.

To establish linkages a District Steering Committee was created through linkages established between the UAS and the ZP office. This DSC meeting lasted as long as the then CEO Mr. Vastrad was in that position and was dismantled when he was transferred. Another attempt was made towards establishing a rural urban taskforce to upscale the project, which again got dismantled as the person heading it was transferred almost immediately after its formation.

Each NGO implemented the broad strategies in their own respective ways extending their experience into this project. Consequently BAIF helped people create wadis, initiate income generation, and also conducted activities to improve dairy management. IDS started group purchase, created VFCs, started income generation through bank linkages and restored the water resources of the villages.

UAS in turn drew upon its own resources in terms of technical inputs and programmes to dovetail these inputs into the project villages. These included field level demonstrations conducted by scientists. They initiated programmes that provided two bio-gas plants for two families in Dadikamalapur, bakery classes and food processing towards IGAs, nutrition classes and programmes, among other programmes.

The process included:

- Sangha formation which continued even after the participatory planning phase
- DSC meetings that provided an interface between community representatives and local government.
- Natural resource activities such as tank desiltation and repair, soil and water conservation including creation of farm ponds, field and contour bunds, formation of wadis, digging of canals, building and strengthening of tank bunds, animal health camps, training of paravets, frontline demonstrations and soil sampling and analysis.
- Livelihood activities and MOVE, which was a specific activity, designed purely for landless women.
- Tackling of social issues such as alcoholism
- Mahasangha formation for the withdrawal strategy
- Revolving fund related activities

4.8.1. Sangha formation

Forty five sanghas were formed, of which 16 were men's sanghas and the majority, 29, were women's sanghas. (See Appendix 4.1) Most of these sanghas were formed in the first two years. However as late as in September of 2004 five new sanghas were formed.

The community has also been mobilized in other ways namely in their being organized into interest or user groups such as the water users association, the potters association, the fisherman's cooperative society, by IDS prior to the project but who were institutional actors in the project. A children's sangha has also been recently formed in Mugad showing how through example, a range of activities get replicated.

4.8.2. DSC meetings and other Institutional Mechanisms

As existing institutional mechanisms failed to address the issues faced by communities in the periurban interface, new institutional mechanisms were created in order to respond to the action plans and problems prioritised by communities. These mechanisms being outside the existing institutional arrangements represent instances of cooperative governance. Here a select group of relevant institutions come together for a particular purpose. They work towards solving a particular problem and strategies devised are locally specific while institutions involved are also based on the specific problems experienced by the local populations.

District Steering Committee Meetings: One such mechanism that was created at the district level was a district steering committee (DSC) headed by the existing chief executive officer of Dharwad district, Mr. Vastrad. The DSC was a mechanism by which existing programmes and schemes could be converged on the action plans created by peri urban communities in select villages. Meetings were held on a monthly basis with district department heads led by the CEO wherein community representatives presented their problems and action plans and schemes were converged onto those action plans towards their implementation. This mechanism was necessary in the initial stages to spear head the implementation of the community based action plans.

The NR based action plans consisted of water and soil conservation methods such as tank desiltation, bund repairs, agro forestry and improved dairy management practices. Towards implementing these action plans, Departments of Forestry and Horticulture provided seedlings and plants requested by the communities, which were used for agro-forestry initiatives. Second, several government agencies provided funds for tank desiltation and repair activities in several of the villages which had planned for water conservation measures. The Department of Animal Husbandry conducted vaccination camps for animals in all villages despite one of them (Gabbur) not falling under the jurisdiction for the Zilla Parishad. The UAS, a government agricultural university and a project partner, was able to provide livestock rearing programmes, training on animal rearing practices, on fodder management, nutrition programmes, field demonstration of improved technologies in these villages towards improved natural resource management by the communities.

Rural Urban Task force: Additionally after the action plans were well underway in terms of implementation the DSC was dismantled and a new task force was set up to take on urban rural collaboration. This urban rural taskforce represents a second instance of cooperative governance through which government agencies could plan to work on scale in the PUI to deal with problems specific to periurban communities. Some of the issues identified by the task force included

- Creating mechanisms to treat the urban side of a watershed.
- Providing training on the comprehensive development plan (CDP) from the HDUDA to the Zilla Parishad, which is unprecedented thus far in planning practices of the government.
- Improving the linkages to urban markets through the farmers' markets and creating decentralized farmers markets for the peri urban producers to conduct direct selling to urban consumers.

Both these mechanisms were set up outside existing institutional mechanisms for a variety of reasons. For one the DSC was set up to respond to action plans created by communities, which was a bottom up participatory action planning process, which regular government mechanisms could not respond to. The DSC also represented a mechanism, which required that urban and rural agencies worked across their set geographical jurisdictions and required that rural agencies provided resources to areas like Gabbur village that fell under urban jurisdiction. This geographical base for programmes was found to be a major barrier in the PUI that required both urban and rural responses to issues that the communities in the PUI face which is a combination of urban and rural facets.

The second mechanism was set up to forge urban rural linkages and conducted a function that has been assigned as mandatory for the District Planning Committee (DPC) to perform. This was set up as an alternative because as it has been described as an unwieldy body that is more political in nature and therefore cannot easily implement this function of urban rural collaboration.

4.8.3. Natural Resource Activities

Tank Restoration and De-silting: From the planning phase (R7959) one issue that has been raised and prioritised in most of the villages is that of water. In most of the tanks the main problem was the fact that they had not been de-silted for years. Some of the tanks also had broken bunds, through which water flowed away and in Mugad the tank was also covered with weeds. Increased water accessibility and repair of tanks would benefit almost all groups in the village and help improve the livelihoods of not only the farmers, but also the artisans and the fishermen. Given that the area has had drought for the past two years this was the correct time to start the de-silting process, as many tanks were dry. Therefore tank restoration, repair and de-silting took place in four villages including Mugad, Mandihal, Daddikamalapur and Kotur initiated by IDS with technical inputs from UAS. One important element of the process that will be discussed in depth later on is the degree of involvement and contribution to the process on the part of the community.

Soil and water conservation: BAIF with its vast experience in measures related to soil and water conservation decided to work with the Channapur community especially where there was a relatively greater availability of land compared to Gabbur. Here to complement the creation of 35 orchards (called ‘wadi’ by BAIF, a Gujarati term), the necessity for watershed development initiatives was addressed. This was done through building several farm ponds here and through bunding and digging trenches alongside the fields and orchards. In the IDS villages, bunding and contour bunding in the fields, bunding along the tanks and canals, construction of new canals and culverts all constituted the soil and water conservation activities.

Agro-forestry: In Channapur saplings given by the Departments of Horticulture and Forestry, along with saplings given by another BAIF project were used for the wadis. Objectives of a wadi are self-sufficiency in fodder, fuel wood, biomass and ultimately increased income. This is part of BAIF’s tree based farming systems approach. Tree based farming, developed by more than a thousand small and marginal farmers associated with BAIF Development Research Foundation in earlier projects, is a good example of making the system versatile.

Livestock activities: These included animal health camps being held by the Department of Animal Husbandry and UAS. Training on poultry management and sale of poultry took place in five of the villages. There was training on milch animal management and on fodder and improved feed management. There was also training of paravets towards sustainable animal health care in the village communities.

Frontline demonstrations: These are technical inputs to disseminate the most recent research on seed and crop varieties, pest management techniques, and sowing techniques towards improving agricultural productivity.

Soil sampling and analysis: Soil samples were analysed for nutrient content and technical inputs were provided on the appropriate mix of fertilizers that optimised the existing nutrient content. This in turn increased soil quality and agricultural productivity.

4.8.4. Livelihood Activities

Sangha: IDS and BAIF both mobilized almost fifty SHGs and VFCs across the six villages. Both initiated savings and credit activities with their sanghas and have helped link their sanghas with banks. These together with economic development programme (EDP) training have helped sangha members initiate new IGAs or improve existing IGAS.

Organizational Specific Activities: IDS started group purchase with all its sanghas to familiarize them with the concepts of profit, sales, whole sale and retail. BAIF's approach has been primarily to improve the productivity of natural resources to increase people's incomes. Therefore their approach has been to been enhance natural resource based livelihoods.

Mahasangha and Village Development Sanghas: The mahasangha (the term BAIF used) is a village level federation of sanghas which has two aims:

- To conduct village development activities
- To take on the role played by the NGO in the village vis-à-vis sangha management and community development.

The Mahasanghas and VDSs (the term IDS used) were provided with initial capital for the revolving funds (RF) by the project that they on lent to the sanghas specifically for IGAs. Both used different models where BAIF helped the Mahasangha initiate a model which retained the RF while IDS had their VDSs simply route the RF to the sanghas and they in turn retained very little.

Special Initiatives for the landless: Both NGOs and the process documentation identified the need for special initiatives for the landless and for women. Thus each organization initiated special initiatives for the landless. IDS, BPF and business management experts started a new initiative called Market Oriented value Enhancement (MOVE) to train 30 landless women from three sanghas to understand the market and to initiate IGAs based on this understanding. BAIF provided a matching grant of 50 percent towards landless families starting or improving existing IGAs. The UAS contributed by providing technical knowledge to help communities build livestock assets such as poultry and goats.

Chapter 5 Community Mobilization

5.1. Why sanghas?

Also see Annex D, Section 4.6; Annex F and Annex G for durther information about self help groups. To implement any programme there has to be some level of community organisation. The approach is not one of working with individuals but one of working with groups in which individuals are actively involved. For the people too it is easier to understand and come to terms with problems and solutions when they are in a group and when there is collective thinking. This thinking motivates them to realise the need to act and that in fact collectively they can act. So from both points of view, the organization and the community, it is important to organise groups.

In a group, unity and affinity are important values inculcated among members. The strength in unity and collectivity is very important for the success of any development programme.

The poor need more time and persuasion because they are more fragmented and unaware of the benefits of working together. Among the poor, it is the women who are more exploited and affected even more because of poverty and illiteracy (94% female illiteracy in Channapur, according to the 2001 census). They are the poorest among the poor.

5.2. Sangha Formation

In the NGO model, Community organization forms the backbone of the integrated rural development process. Building a solid base through community organization is essential before any other activity can be undertaken. This is done through intensive training, exposure visits and other inputs on self help group concepts such as leadership, decision-making, group dynamics, and minute and account keeping. It is only after this foundation is laid, that group financial management can be sustained.

5.2.1. The Membership Base

Keeping with their vision, IDS and BAIF mobilize only the poor, mainly for people below the poverty line including small and marginal farmers, landless labourers, and artisans, with special emphasis on women and scheduled castes. The richer classes have the knowledge, and already know the strength of the group and importance of collectivity so they can organise themselves. They start with women but also help farmers and youth. They start with women because women listen to them and are eager to know about things that can benefit them. The youth and the men are more arrogant and pretend that they know. Unless there is some demonstration it is not easy to organise the youth. The women show them the way. But organising women is not easy. They are illiterate and are dependent on men. However, once women understand the concept it is easy to keep them together. This goes against traditional thinking that women do not bond as a group. Also as women are the caregivers once they are organised they help not only themselves but also the whole community. Though a community organiser can work with ten groups at a time, they begin with one group and then go on to form more groups.

Each sangha consists of ten to fifteen members and form the base for all activities. They are forums for empowerment of the weaker sections and women. Although their basic activities are thrift, credit and income generation, they are also involved in improving their villages in a variety of ways. It takes about three months before the groups start meeting regularly. In these three months the COs get to know who are compatible and who are interested in spending time on sangha activities. It is important that the members trust each other, that it is easy for them to meet each other and that if they take up any activity they should be able to do it together.

Therefore sangha formation requires both earning the trust of the community but also building people's trust in each other. This building of trust and relationships, the core for future sustenance of the sangha, cannot be established over night but requires the time spent for these relationships to be built. This is also one reason that IDS and BAIF have their staff live with the community. Trust is also built through demonstration of the organisations work over time. Exposure trips also serve to build this trust as they help demonstrate this work in other villages.

In Channapur there are six sanghas, most started by BGSS, an NGO that worked in the village before BAIF started work there. There are three women's sanghas and three men's sanghas. These sanghas do savings and credit, go on exposure visits, have started IGAs, work towards the development of the village and are also involved in land-based activities such as agro-forestry. The men's sanghas meet once in two weeks and save Rs 20 per meeting while the women's sanghas and save Rs 10 per meeting and meet once a week.

Akkamahadevi sangha is a new sangha started in 2004 in Channapur. According to them, *we were inspired by the other sanghas in the village. We thought of saving money so first we formed the sangha. Then Bulla supported us and helped us lot*[1]. Bulla explained to them activities of the sangha and importance of the saving. Now the sangha meets every Wednesday at 8 pm and each member saves 10 rupees every week. They have deposited the money in the Vijaya Bank. After four months of forming the sangha they started to give loans to sangha members.

In Kotur there are 11 sanghas. Of these eight are women's sanghas and three are men's sanghas. The sanghas are continuing with their sangha activities of savings and credit. Some of the sanghas are also doing group purchase. Some of the members have also started IG activities such as poultry rearing, vegetable and agarbatti marketing.

In Mandihal there are seven sanghas. All the sanghas are functioning well. Some of the sangha members have gone on an exposure visits to Kotur to see the agarbatti group. Some sangha members are ready to make Jowar rottis (Indian Bread made of Sorghum) but because of unavailability of firewood they decided not to take up that business. Members of Mahalxmi sangha had planned to buy some agricultural land and work on it but due to drought they dropped the idea. According to the Kalikadevi sangha members *our sangha was formed on 7th January 2002.* We *started depositing Rs. five each time. One woman was ready to deposit rupees ten, but as it has been*

[1] Interview with Akkamahadevi sangha, Channapur 2004

drought years and people cannot afford to deposit so much, and we had to think about each and every one in the group. We have got enough exposure to the banks and the procedures involved in depositing money thereat. We were very scared of our men and also to talk to them before forming the sangha. Now we have gained enough courage to face them too.[2] Attendance for the meetings is made compulsory else a fine of one rupee is collected if anyone is absent for the meetings. If anyone is busy on the meeting day for a certain work, she should inform the sangha beforehand, so that she doesn't have to pay the fine. The same amount is charged to those who are unable to repay the loan in time. Therefore, women ensure that they repay in time. In the initial meetings the members discussed the advantages of being a member of a sangha, like increase in their knowledge, etc.

In Mugad there are a number of old sanghas (already operating before projects R7959 and R8084 commenced, due to previous activity by IDS) and sanghas started in this project. In this project 12 sanghas were started. Of these eight sanghas, four are women's sanghas and the remaining four are men sanghas. These sanghas too have been doing their savings and credit. They also do group purchase. They have also being doing IG activities either with loans taken from the sangha or with loans taken from the bank.

The Honnambika Raita Karmikara sangha started because the men were inspired by the women's sangha. They want to learn more about the various programmes in the government department so that they know how to access them.

In one sangha, Kirti sangha, three members migrated to another village to find labour work. The sangha was facing problems when this happened and now the remaining members want to withdraw the savings and break the sangha.

Balamma's Story…

Long ago there was a teacher who formed three sanghas. Balamma saw this and asked the teacher to make her a sangha member but the teacher refused saying that since she was already a Panchayat member she could not join because being a Gram Panchayat member gave the impression that she was rich and the sangha was only for the poor. Balamma told the teacher that she was not rich and that the people had elected her to the panchayat because she could speak well. But the teacher still refused her a membership.

Balamma put together a group of 10-15 women and formed her own sangha. The sangha members met every week and started saving five rupees. They had been maintaining a card, which had a record of their savings. But they had no passbook so they approached a community officer (CO) and told him about their sangha and asked for his help. The CO saw their work and suggested that they join the IDS sangha. Through them they got 15 books. They collected 960 rupees and gradually they started taking up activities like chicken rearing. Dr. Mulla, UAS, seeing Balamma's cattle and buffalos and her interest in them gave her cattle feed on a sample bases. Balamma fed the cattle very well.

[2] Interview with Kalikadevi sangha, Mandihal 2004

As a sangha member and a Gram Panchayat member Balamma has solved many problems like gutters and roads. There was a bore well which had dried up and she immediately approached the MLA and told him about the problem. She found a bore drilling truck along with a person who could test and tell where water was. He performed tests and said that there was water beside the bore well some distance away. The same night Balamma shifted the bore well made sure that the bore well had water.

At the sangha level there are many problem which the women face which are discussed. For example if there is an alcoholic husband, she goes and speaks to the concerned man and tries to bring him to the sangha and make him aware of the problems and find possible solution. Some time this works out but some time it doesn't.

The sangha women previously used to do group purchases, but had stopped this practice for a few months. They used to take rations from the sangha which was bought with the sangha's money. But they never paid any money and even for late payments the interest was not collected. Balamma objected to this. She said they could pay 50 percent when they take the ration and pay the balance the next week. But the women did not agree so finally she stopped this activity. They got a loan from the bank with which four people including her purchased goat and sheep, two people including her purchased hybrid chicken and four women bought cows and one buffalo. Everyone made a profit from these activities. They have repaid some of the loans. Balamma has sold two chickens at one hundred and sixty rupees each. She grows a few vegetables in her field which she also sells. Earlier she had sown paddy which was a loss but then she sowed maze from that she got two to three quintals.

About her family

Balamma has 2 sons who live separately. She has divided her land into three parts, from which she has given one part to each of her sons and has kept one part for herself. The first son is working in a crusher and the second son is working as a labourer. Balamma takes care of her own land and earns from her land. She also sells chickens and milk from the buffalos locally. Ever since she got the buffalos from her mother, she has been selling and buying for a profit.

Balamma has four daughters, one of her daughters is physically handicapped and she gets 125 rupees from the government monthly, with which she manages. She has two big buffalos and five cows. She needs lots of fodder for them so in a year she purchased fodder worth 25,000 rupees. She has used the Sangha loans for purchasing goats and chickens. She purchased a goat and gave it to another person to maintain with the understanding that if the goat gives birth to two kids, the mother and one kid would be hers and the other will be his. But if it gave birth to only one kid they would sell it and share the money equally.

The changes in the village has a result of the projects

She has been living in her village for last fifty-seven years. Earlier the women were kept inside the kitchen, even if any guests came to their home they were not allowed out, but now all the women have changed and they go out independently, they speak

out, they take decisions, and they also go to other places for exposure visits and for trainings. They even go to bank. The banks have developed more trust in the women's sanghas because of their prompt payments. If men go to bank they have to pledge their belongings in the form of lands or some other security. It is far most relaxed for the women due to their prompt repayment of loans. Now the bank approaches them to give loans.

Activities in VDS

Balamma is a VDS member. In the VDS one of the activities they have taken up is gutters in every lane. They discussed this and divided the work among them to maintain these gutters. They had done shramadhan, through which they dug a channel. They also discussed urea molasses and cattle feed in the VDS and distributed the same to the members through the sangha. They also discussed the problem of broken water pipes immediately repaired them.

After few days they went to the VDS, and collected ten rupees from every sangha member and bought mattresses for the VDS. Discussion about shramadhan also took place in the VDS. Through shramadhan, they dug a one kilometre channel to make the water flow into the tank. VDS contributed 25%, and IDS contributed 75%.

Federation

At the federation level they discuss and do what is needed for the village, for the school, hospitals, filtering of water etc. The Zilla Panchayat also solves the problem faced in these villages. Balamma takes the people who have issues to the Taluk Panchayat and Zilla Panchayat because she has been there. She took some people from the village to the Taluk Panchayat and there she spoke to the Executive Engineer. She had to get one hundred people's signature from the village and give one copy to the Taluk Panchayat, one copy to the Zilla Panchayat and one copy to the federation.

Benefits by the peri-urban

The benefits of peri-urban are that hospitals, the Taluk Panchayat and Zilla Panchayat offices, the court and the police station are all nearby. The market in the peri-urban is useful for selling their goods. The dust from the quarries creates a health problem so it is better to work in the city than in the quarry. In the city the family bondage is good and even in the village it's the same but Balamma prefers living in the village.

5.3. Savings and Credit

Also see Annex F. One factor that can keep the group together is economic. So they start saving, which helps them in many ways. Saving together helps them understand the importance of saving and the purpose of saving. They get easy access to credit, as money is now available to them. Thrift and credit activities help the poor access money to meet their immediate needs and also decrease their dependence on moneylenders for loans at high interest rates. One consequence of saving has been the elimination of past debts. Earlier they worked with rich farmers from whom they borrowed.

Most sanghas start saving two to five rupees per week and later some of them save up to ten rupees per week. The time it takes to go from saving two rupees to saving ten rupees depends on the income of the members.

Most sanghas use this money to give loans to their members, undertake income-generating activities and to bear the costs of the members going to government offices and banks for sangha work. The groups keep their records and manage their own money. They learn how to manage a bank account. All members, on rotation, must go to the bank to make deposits and withdrawals.

It is not enough just to save. These savings have to be circulated. The sangha gives internal loans to its members from the savings to help them in times of difficulty. If the family is facing a crisis and the woman takes a loan from the sangha to help tide over the crisis and her status in the family improves. Earlier she was helpless but now she can do something by taking a loan. It thus helps build her self-confidence. Saving and internal lending also helps women learn to handle money, calculate interest rates and so on.

According to the sanghas members from Nehru and Maruthi sanghas said, *There are ups and downs in the loan repayment, like delays here and there, but we make up for them. There has been a defaulter, like that of an alcohol seller. We shall ask the middleman who helped him get loan from the sangha. He came to give us back only the interest, but we need the principal amount also and not just the interest. We shall spare him only after he returns the entire amount. He only promises to do so but hasn't done anything to deposit the loan amount back. Then we shall have to catch hold of the guarantor and make him do so. How would the sangha run if everyone starts doing so?*[3]

In the BAIF villages a barefoot auditor audited the accounts for all the sanghas. According to Nitturkar, *He is not from our area. They are some local youths who are working with BAIF as guide and audit the sanghas. They are working as independent accountants. They charge Rs.100/year for each sangha to audit and keep the accounts. There were no major sangha disturbances except one. In Channapur there was some amount to be deposited that was collected but had not been put into the account. There we intervened and set it right. All amounts are now deposited.*[4]

In Gabbur all the sanghas continue to do savings, credit, IGAS and so on. All families in are represented in one or the other of the sanghas. A barefoot auditor audited the accounts of six sanghas in Gabbur too. As per the BAIF annual report, the sanghas have saved Rs. 2,24,596 and have a common fund of Rs. 1,36,901 totalling Rs. 3,61,498. The sanghas are lending this amount to their members for emergency needs and to start income generating activities at a nominal interest of Rs.2 per month.

In Kotur, B.B. Fatima sangha got a loan of Rs. 5,000/- from Vijaya Bank, Kotur for Agarbatti making. The bank manager and A. A. Attar who is supplying raw materials for the agarbathi making to the SHG visited the SHG and gave suggestions regarding

[3] Interview with Nehru and Maruti sanghas, Channapur 2003
[4] Interview with Niturkar, Project Officer, BAIF 2004

their IG activity. The SHG members have purchased raw materials to the extent of Rs.10, 850/- for the production and sale of agarbathi.

In Mandihal members from one sangha got two loans from the bank. They once got Rs. 20,000 and for the second time they got Rs. 10,000. Members of the Kalika Mahila sangha took bank loans of Rs. 5,000 and Rs. 12,000 from MG bank. One member was given Rs. 4000 to buy a cow and fodder. Another member was given Rs. 2,000 to purchase a calf. She also spent some money on fodder. Rs. 3,000 was distributed among the members according to their needs. The rest of the amount was distributed among the members for religious activities. All members are repaying back the loans. When asked why they were not doing dairy activity the sanghas members said because of the scarcity of rain and fodder they did not want to keep cattle.

5.4. Utilization of loans from the sanghas

All the sangha members in all the villages have taken loans for either consumption or production purposes. Many women have taken loans for consumption purposes like medical expenses, to pay children's school fees, religious occasions, and social functions or to purchase grocery for their houses and so on. Many have taken loans to repay other loans taken either from moneylenders or the bank. But an equal number of loans has been taken for production or income generating activities.

Dhanabai from Durgadevi sangha has taken Rs. 2000/- loan from sangha and used it for her household needs. Laxmi has also taken Rs. 2000/- loan and purchased cottonseeds from Dharwad market. Jamunabai took Rs.1000/- as a loan and paid her children's school fees. Members of Durgadevi sangha bought soap and matchboxes at a wholesale rate from Dharwad market and distributed among the members at a little lower price. Anything remaining was sold in the village. The profit is deposited in sangha's account.

In Gabbur loans were given for productive purposes like purchase of seeds/fertilisers, bullocks, agricultural implements, dairy animals, petty business, artisans and so on apart from necessities like purchase of food grains, medical emergencies, house construction/repairs, school fees and repayment of old loans from moneylenders. Most of the members have repaid the loans they had taken from moneylenders and are out of their clutches. Apart from these loans the sangha members have also taken loans for both their personal needs and for work. The loans they have taken include for school fees, medicines, to buy cattle, fodder and other agriculture inputs.

5.5. Bank Linkages

Every self-help group has a bank account where they deposit their savings. Initially they keep the savings with the sangha. As the savings increase a bank account becomes essential. The first step is to open a bank account and deposit the money. They get to learn bank dealings and interact with officials. They learn about official interest rates, the interest rates they are charging in the sangha and about future possibilities of getting bank loans. Bank accounts are also essential to get access to government programmes.

5.6. Group Purchase

In sanghas mobilised by IDS, after sanghas have saved at least Rs.1, 000/- and have lent money for a while, they then take up ration purchase as a group. They learn how to purchase items at wholesale prices from the cities that they sell to their members with a small mark-up. This way, the sangha earns some profit and members, too, are able to buy items such as soap and tea powder at a lower cost. Each sangha keeps a record of these transactions. Perhaps the most important aspect of this activity is the courage the members develop to visit the market, negotiate prices and calculate how much to charge and to carry out the business. This activity helps members understand profitability of doing business and builds their confidence to take risks in economic activities. It has the additional benefit of decreasing their consumption costs.

Group purchase helps women save money and this plants the seed towards beginning small income generating activities. Group purchase is taken up as a first step towards Rural Enterprise Development Programme (REDP) activities. Simple things like buying soap and selling show them how businesses are run, how much profit they can make, how much profit middlemen make and how much can be saved. Through this they understand money, the market, market dynamics, and how to do business together.

5.7. Activities through the sanghas

Through the sanghas the members receive loans to start some income generating activity. The sanghas have initiated village development activities too.

According members of the Gabbur Mahasangha, *Through the SHGs, we have developed vermicompost pits, and have bought animals and fodder for them*[5]. In Daddikamalapur as dairy is the main activity, the communities have identified animal health care as their next immediate issue of the village to be dealt with. They plan to have a veterinary hospital constructed in their village. According to the sanghas members *a veterinary hospital is to be built in our village, which is the next issue for discussion in the sangha meetings. We actually want the hospital in the village, as it would help improve the cattle stock.* [6]

Mandihal received water late at nights and very little water was released. This lead to fights among people for water. According to the sanghas members *we had a huge water problem that we used to fight with each other for water at night, and many cases have been registered in the court. One person has also lost a tola (10grams) of gold during such a fight for a chance to get water. Therefore all the members of all the sanghas in the village wrote a request letter to the Gram Panchayat for the water problem to be resolved, through our sangha. Then onwards, we do not have water problem at all. The GP had a meeting in Dharwad, after about four or five months of our request we had got water though pipelines connected to a bore well. Thereafter, we have not faced any water problem as yet.*[7]

[5] Interview with members of the mahasangha, Gabbur 2003
[6] Interview with members of the mahasangha, Gabbur 2003
[7] Interview with Kamalavva Kallappa, Kalikadevi sangha, Mandihal 2003

Streetlight was another problem in the village that was dealt by the sanghas. Street dogs have bitten many people and few others met with accidents in the dark streets. The Karnataka Electricity Board (KEB) officials kept postponing the light repairs and bulb replacements. The sanghas wrote a letter to the KEB and they responded within two days. The IDS community organiser helped the sanghas write a letter to the KEB.

We wish that through our sangha activities everyone possess cattle and utilise the milk and milk products. And all the sangha members can share any work in the fields, or at least arrange for labour through our sanghas. And lives could be easier if the members benefit from the increased yield.[8]

In Kotur the sanghas have done different activities. Members of Sri Renuka Devi sangha bought groceries like soap, soap powder, oil and sugar in bulk and distributed it among members. They also sold some of it and made some profit for sangha. They wanted to develop this activity. Two members have taken loans for goats. Now the number of goats has increased. Rajeshwari Sangha members are engaged in the manufacturing and selling of agarabatti.

In Mandihal one member from Akkamadevi sangha bought a buffalo. Some of the sangha members want to take up making rotis (Indian bread) as an IG activity. In the same village another sangha, Sri Devi sangha has purchased two goats and Durgadevi sangha of Daddikamalapur has purchased two buffalos and in Krishna sangha two members have taken loan for the purchase of bullock cart and for dairy work.

Two sanghas have got loans from MG bank in Mugad for Rs 20,000 each. One member from Akkamahadevi SHG purchased Buffalo with a sangha loan. Other members have also purchased cattle, poultry, goats, tailoring machines, started a petty shop, bangle vending and one member even bought a smithy kiln stone.

Various other activities have taken place in Mugad such as:

- The SJSY (Swarna Jayanti Swarojgar Yojana) core committee visited two sanghas, the Laxmi sangha and the Subhanallah sangha, and evaluated them for the loan.
- Shri. Padmavati SHG has organized a programme on occasion of their Sangha anniversary on 13-2-04 and invited guest from ZP, Dharwad and MG Bank, Mugad.
- The Subhanallah Sangha, Laxmi Sangha and Durgadevi Sangha have received two, one and one Janata Plots respectively.
- The sanghas have also visited government agencies such as Zilla Panchayat, Taluk Panchayat, Forest Department, Thahsildar office, Village Panchayat and Banks to avail benefits like ration cards, drinking water facility and street lights, de-silting of tanks SGSY and ASHRAYA schemes

Two members of Chakreshwari SHG of Mugad village have purchased two buffaloes where as Durgadevi SHG have purchased one buffalo, three goats, and one sheep. One member from the Kalmeshwar SHG has taken loan for photography and another for screen-printing activity.

[8] Interview with Kamalavva Kallappa, Kalikadevi sangha, Mandihal 2003

Three sanghas namely the Subhanallah sangha, Durgadevi sangha and Laxmi sangha are involved in MOVE. According to the sangha members, *we are purchasing some groceries at a wholesale rate and distributing among the members and selling to the other people in a reasonable price. Some are taking loans to start small businesses like vegetable selling, cattle etc. We came to know about the market by attending the meeting on participatory market appraisal. To understand the market better, the sangha women have visited the Thursday market of Dharwad, Murkwad market, Unkal market (shandy days). By that we gained the knowledge of the market size, quality, and techniques of the market*[9].

The Durgadevi sangha from Mugad got Rs. 26,000 and another sangha got Rs. 20,000 from the bank. According to them, *we got 5000 rupees and 20000 rupees loan. Three people brought buffalos and three people built roofs for their houses and one member purchased betel nut for her husband and open pan shop also*.[10]

5.8. Training and Exposure visits

All the sanghas have been given training in various aspects from sangha concepts to bookkeeping and accounts maintenance and in other productive activities like natural resource management and livelihoods. The project arranged exposure visits to different places for various activities. According to the sanghas from Daddikamalapur *we were initially taken to Channapur, a village near Hubli as well as Arvatgi, Kittur, Kotur and UAS. We learnt about Rabbit rearing for meat and housing loans lent through the sangha account to the members in Arvatgi. There were also people who had bought buffaloes with the help of the sangha loans. In Channapur, we met members who were sowing cottonseeds and plantation of neelgiri (eucalyptus) tree saplings. In UAS, we all saw how fodder for animals was prepared and also a feed chopper. We also saw cows, buffaloes and chicken. We have all started small-scale business. We also bought green fodder through our sanghas, after we all went around for exposure visits.*[11]

Before sangha members are taken for an exposure visit, it is discussed in the sangha as to who would be taken on an exposure visit. Once it is decided then those member are taken on the exposure visit. Exposure visits help the sangha members understand the functioning of sanghas elsewhere and the IG activities they are involved in.

Sanghas from Mandihal visited Mugad Koppa where they were shown medicinal plants. According to the sangha women, *we had been to Tiptur three months after we formed a sangha. There we learnt about medicinal plants, tree plantation and functioning and uses of check dam and water conservation with the involvement of the community. The farmers in Tiptur had done vermi culture and were producing vermi-compost. They had planted trees all around the pits, like coconut and forest trees*[12].

Other than local visits, the sanghas visited villages in other districts. According to the sangha members *we all were taken to Eksamba, a place near Belgaum, in January 2003. We visited an institute for the handicapped children started by the sangha*

[9] Interview with sangha members, Mugad 2004
[10] Interview with Durgadevi sangha members, Daddikamalapur 2004
[11] Interview with Dugadavi and Tulajabhavani sanghas 2003
[12] Interview with Kamalavva Kallappa, Kalikadevi sangha, Mandihal 2003

members there for their children. We saw sewing machines in about 5 rooms, one to two in each room. We got to see all the activities going on there, like stitching, finishing and packing etc. We stayed there over night, and visited sugar cane fields in Kittur and in Chikkodi we saw a paper mill and also a sugar factory in which we saw sugar lying like sand that was weighed and packed. [13]

From the exposure visit to Eksamba the sangha members said that they had seen and learnt how a sangha had flourished and was developing, by providing education and tailoring training to the handicapped children and marketing of the final products as well as profiting from the business.

In Channapur the sangha members had gone on for exposure visits to Mansur where they saw the watershed project and UAS, Dharwad where they saw medicinal plants. According to the sangha members who had visited *we (five members) had been on an exposure visit to Mansur village for one day. There we saw agriculture ponds, bunds, banana garden and coconut garden. There we came to know how to maintain and manage a plantation. Mansur villagers told us about the importance of the farm ponds and bunds. They told us to build bunds in our field to stop soil erosion. They also told us about the benefits of the sangha and how to deal with officials. Five members were taken to UAS for two days for a training programme on the cultivation and marketing of medicinal plants for two days and on the third day we were taken to Koppal. Boarding and lodging was provided by UAS. In UAS, we learnt how to use Aloe Vera, Kamakasturi, Tulasi and Battalhoovu. We now know that we can use Aloe Vera for patches on the face and for other skin disorders. The juice of Tulasi is used for fever and cough and cold. Tulsi and aloe Vera can also be used to get beautiful and healthy hair and also as face masks. The people at UAS told us that if we grow these plants in our kitchen gardens or in our fields they would buy them from us. In Koppal we learnt about the cultivation of the following medicinal plants Makandi roots, Sapedh musali and Palm tree.*[14]

Durgadevi sangha from Mugad too had different training and exposure visits. After going on exposure visits they have decided to take up IGAs. They underwent training in mushroom cultivation but they were not successful in cultivating mushrooms because they started the activity in the wrong season.

The sangha members say that now they understand government schemes and they are able to go to gram panchayat meetings and ask for the various programmes. *We spoke in a GP meeting. GP assured us streetlights, water and also to construct the roads. Streetlights were put up, water is available now and they are going to construct community hall. Now GP looks at the sangha with respect and they have asked us to continue. The bank is ready providing 2.5 lakhs fund for this sangha with a fifty percent subsidy. We want to do dairy. In RUDSET they got training for marketing and also cattle management*[15].

Tuljabhavani sangha, Daddikamalapur is also doing savings and credit, have been on exposure visits and have started IGAs. They took loans of Rs. 6500 and Rs. 24000 from the bank. The first loan of Rs. 6500 was repaid. The sangha members purchased

[13] Interview with Kamalavva Kallappa, Kalikadevi sangha, Mandihal 2003
[14] Interview with Akkamahadevi sangha, Channapur 2004
[15] Interview with Durgadevi sangha, Daddikamalapur 2004

poultry birds, goat and buffalo, which they plan to sell once they grow. Rani from Tuljabhavani sangha purchased three birds and has put money for a gobar gas chula. One of the members purchased a gas cylinder and they are using it daily. With the help of the gas they can cook the food in time and now are able to send their children in time to school. Besides this they did group purchase and sold it to their members. They made a profit of 600 rupees deposited it in bank. After GP and ZP meeting we got an overhead tank sanctioned, which is under construction. We want to form a committee through which we would like to make available all the basic provisions and vegetables at our village.

Four members of women sanghas had training in tailoring and fashion designing. Out of four members two continued work and are engaged in stitching. Both sangha members are getting orders from villagers and from outsiders. The government school in Mandihal has assured them the school uniforms orders for the students. They used to stitch women's clothes like langas, skirts, chudidhars, petticoats and blouses of different types with different designs. The sangha has invested fifty percent and the project has invested fifty percent. The first time they invested 1200 rupees and bought the cloth. They stitched langas and sold them to sangha members only and did not get any profit. Now they have started stitching but they are not getting orders. They found it difficult to sell their clothes to ready-made clothes to shops. In Hubli and Dharwad the rates of ready-made garments are cheaper than the material these women buy. So, stitching clothes and selling them is not feasible for these women.

5.9. Impact of training and exposure visits

Training and exposure visits made sangha members more aware of activities like income generation and other development initiatives. *Our sangha is a small one, but we have aspirations to grow and achieve something through our sangha. If we too do something for our community, our sangha would gain fame.* [16]

Training in sangha concept and its advantages helped these people to think collectively. The sanghas have realised that with unity they can achieve their goals. They say *there have been no fights about anything in the sangha meetings, as we ask everyone's opinion and come to a consensus. Everyone agrees to it, and if they do not want to solve it, then we just let it go.* [17]

Another important impact of exposure visits is that when the poor performing or weak sanghas interact with better performing sanghas, they learn more efficient ways of performing and maintaining the sangha. For example, in Channapur Moor Muktamma sangha was initially very de-motivated. They did not know the importance and benefits of forming a sangha and the sangha was not active. Earlier the women did not have a clear idea about the concept of a sangha, why a sangha should be formed, its ways of proper functioning and the benefits. Sangha meetings were held monthly and not weekly. They were not well organized with their savings, giving loans, loan repayments, maintaining records and books in the sangha. This was because these women had informal discussions with the women from Stree Shakti SHGs (another government initiated sangha) who told them weekly meetings was not needed and

[16] Interview with Kamalavva Kallappa, Kalikadevi sangha, Mandihal 2003
[17] Interview with Kamalavva Kallappa, Kalikadevi sangha, Mandihal 2003

monthly meetings was sufficient. The women who missed the monthly meetings were fined two rupees. Despite this many women missed meetings, which resulted in improper functioning.

So an exposure visit was arranged to Gabbur where these women met women of Gramadevi sanghaInteracting with Gramadevi sangha members helped these women to understand the concept of SHG and its importance. They understood why weekly meetings were important. They also became aware of how with weekly meetings they could discuss and interact various issues in the sangha. They also learnt about the distribution and recollection of loans. The Gramadevi sangha also shared their experiences in savings and bank transactions, maintenance of various books and records in the sangha.

After the exposure visit the women said they felt better and confident. They have now started weekly meetings where they discuss and interact regularly on various issues. Women don't miss meetings now for two reasons1) they don't want to pay fine every week 2) they are motivated and now they feel that if they miss meetings they would lose information. They have started maintaining proper records, saving regularly and so on. They say they are ready to learn to read and write if the project could arrange for a teacher.

5.10. Future plans of the sangha

After having received training and exposure visits, performances of the sanghas have been better. They have been able to manage resources and have enhanced their livelihoods. Some of the sanghas have also resolved larger issues pertaining to the community or at village level. According to Tuljabhavani sangha, *we have all decided to ask the GP for a building for our meetings. All sangha members had some problem or the other in attending meetings at any particular place. Therefore we want the Gram Sevak to allow the sangha to use the building given to the anganwadi teacher. We are about to sign a letter for the same and give it to the GP. All the sanghas want to meet at that common place that would be convenient for everybody.* [18]

In Channapur, the future plans of the women are that they want to take up dairy activities and one member wants to start a shop.

511. Impact of sangha formation

Sangha formation has had many impacts at the personal as well as at the social level. Training and exposure visits increased their awareness level. Women said that they were more confident to go out of their houses alone and speak to any man in the village or in any government agency. *Before forming a sangha our men did not allow us to go out of the house. But now they themselves are sending us out to attend the sangha meetings and other sangha activities.* [19] For the first time they have been to go to the bank. The sanghas have saved and taken loans for starting income generating activities like dairy, goat rearing, poultry, tailoring, soap making and bangle selling to name a few. This has improved their earning, thus enhancing their livelihoods. The

[18] Interview with Kamalavva Kallappa, Kalikadevi sangha, Mandihal 2003
[19] Interview with Akkamahadevi sangha, Channapur 2004

sangha members have taken loans for various purposes including for their personal needs. *Our family members and we (the members of the sangha) are very happy to get a loan from the money we have saved. Before forming a sangha the men took loans from moneylenders with an interest rate of 10 percent per month. We used to be very tense about how we were going to repay the amount, as the interest was very high. But now we are free from that burden and tension.* [20] Relief from moneylenders is one of the important outcomes of sangha formation where the poor were entangled to the moneylenders.

Another example of being free from moneylenders was seen in Gabbur. The sangha members there are now moving away from taking loans from moneylenders to taking loans from the sangha. They feel less burdened and have a sense of pride that they are helping themselves and others. Paravva has purchased three buffaloes with the help of this loan. Now she is doing her dairy business with full confidence and it is doing quite well. Her family is happy with her improvement. She has the confidence that she can easily repay her loan to the sangha.

5.12. Mahasangha

In the last year of the project the sanghas in each village have been federated into Village Development Sanghas or Mahasanghas to further strengthen the sanghas and to facilitate the withdrawal of the NGOs from the village. In IDS villages these federations are known as Village Development Sanghas (VDS) and in BAIF villages they are known as Mahasanghas. In each village all the sanghas join the federation where they discuss problems of village development and help each other out if any sangha has a problem. Two members in the federation represent each sangha. Chapter 15 on the withdrawal strategy further explains the federation and the revolving fund.

Gurlappa Sangoli' Story…Mandihal

The Raitha Karmikara sangha formed a year and a half back with 17 members. IDS took few farmers on an exposure visit. There they saw how soil and water is conserved by bunds and they learnt that they how they too could do the same. They were convinced that they could conserve soil by constructing bunds and direct water to flow to the tank through the canals. Seeing all this they came back and formed a sangha.

In the Raitha Karmikara Sangha the members meet and each member saves Rs.10/- every week. A fine is collected if there is any delay. Due to the sangha the farmers now have no need to go to the moneylenders for money because they can access money immediately from the sangha. Now they speak in terms of 'us' and not as individuals. They have developed an interest to know things and now they have the confidence to do things. The other discussion in the sangha is about the bunds, fields, and water channels. They slowly began constructing bunds, which help prevent soil erosion. They were given fodder species, which they sowed on the bunds. The sangha members contributed 50 percent and the project contributed 50 percent.

[20] Interview with Akkamahadevi sangha, Channapur 2004

They got seeds for mango and chikkoo and planted it. They bought seeds for brinjal and got a good yield. Seeing this the Horticulture Department gave them tomato seeds and this too resulted in a good yield. But due to market fluctuations they did not get a good price.

Guriappa is also a member of VDS. At the VDS level all the sanghas meet and they discuss exposure visits, where they could go what information or training they could get and what will be the benefits they get through these programmes. Work is divided in the VDS where some people are given the responsibility for the gutter, some are given the responsibility for the road, and women sanghas are given the responsibility for the electricity and so on.

The village is close to the railway track and the sound of the train horn disturbs the school. Also as the village is on the state road there is a lot of dust from the traffic. The school is situated beside the road and the dusts affects the children. Recently all the VDS members together have written an application to the Health Department regarding this problem. The sangha got a 10,000 rupee loan from the VDS revolving fund.

The impact of VDS is that the members through the VDS get an opportunity to go on exposure visits, where they learn new things and try to implement those solutions. For example previously they were using fertilizers that destroyed the quality of the soil and made it dry. Now they have learned that with vermicompost, the soil becomes more fertile and holds moisture which is better for the crops.

Once Guriappa saw vermicompost for sale, and had a discusion with the community officer (CO). The CO asked him why he wanted to buy vermicompost when he had all the ingredients to make it. The CO promised to give him the worms and he could do it himself. So now he is planning to start making compost.

The men's sangha attended the Grama Sabha where they come to know what programmes were available, the benefits that they could get from the panchayat, etc. Then they informed the people of the benefits from the panchayat and facilitated their receiving it. Now they have the confidence to go and speak to the Government officers and the panchayat. The women too have changed They also go and speak to the government officers and in the panchayat, and they express their needs and also demand what they want.

An anti alcohol movement was held twice in this village. First it was before the project intervention when there were only two sanghas. Those sangha women went and spotted the vehicle which supplied alcohol and told them how their husbands were wasting money on alcohol and therefore facing financial and health problems. So they asked them to stop supplying liquour. The man agreed and stopped supplying. This was successful for 8-10 years. But later it started again. The second movement took place very recently, where the women once again stopped the sale of liquour. But it is up to the men to leave this habit. They should understand the problems. The women tried their level best to stop alcoholism.

Benefits and loss by the city

Since the village is near to city it is easy for Guriappa to sell vegetables, greens, and so on immediately. The other gain is that this area had good stone and has been identified as a quarry area. The panchayat has given permission for quarry work, which gives the people an alternate source of income during the off-season times. Also they pay better wages than in agriculture. But it is dangerous work and it is very harmful as the crusher gives out a lot of dust. There is a lot of pollution and the blasting of stones gives off a foul smell. But this is the only alternative available for more money. The dust from the crusher coats the crops and damages them. When the dust falls on the ground even the grass does not grow there. This shows that the dust from the quarry is very dangerous. People in Mandihal have migrated to the city but they have left their fields to others to look after. In the peri-urban a lot of forests have been destroyed. Due to the railway line every day a tractor load of teak trees is transported by the train. From Mandihal a lot of teak trees and natural resources like mud, stones and even people are going to the city. The only solution for this is unity through the sangha.

Benefits by the organizations

Being in the sangha has made these members more confident. They now go anywhere and speak without fear. They also have developed a trust in the NGOs. Previously if some one came they did not ask who they are and why they have come to their village. Now things are changing.

5.13. Role of Sangha in Planning and Implementation

Sanghas played a key role in the action planning process. The sanghas were not only able to bring issues that were important to the village but were also able to return to their communities with the outcomes of the planning process. Though there was an effort to ensure that women were present in the planning process, just having them did not ensure true participation. Therefore it was realised that it was very important to organise them before any planning could be done. In Channapur, though there were sanghas formed by prior NGOs working in the village, they were not very strong. Despite this the women were still able to raise their concerns of alcoholism and women's access to and control over income. This later altered the goals of the project. The sangha has played an important role in building on existing relations and transforming them by creating an alternative space for planning, negotiating and implementing plans in community based development. The formation of SHGs among the poorest, women and more marginalized communities was a necessary first step to plan and to participate in development.

As the community has been involved from the planning stages there is ownership of the plans and of the implementation. The sangha formed the base for all activities that were implemented in the project. Be it from deciding who should go on an exposure visit to how resources should be distributed to contributing towards any activity that is sangha or community based, through cash or kind, for the rehabilitation of the tanks and other natural resources. Implementation through the sanghas brings more legitimacy to the process of implementation in several ways. Decisions made by the sangha instead of by individual families are based on considerations of equity and what is good for the entire community and is rarely based on what is good for one individual family or person. It is easier for mainstream institutions to link to the

community through what are seen as legitimate institutions that directly represent the poor instead of to the alternatives, which include “key informants”, NGOs and “progressive farmers”. Because people are organized into a group who are accountable to each other, there is more accountability towards themselves and the larger community in any larger project undertaken.

5.14 Lessons

Sanghas bring a voice to the poorest. So comparing situations where planning and implementation takes place with sanghas to those without there are several advantages to the former. For instance, the sanghas are able to stand up to elites be it local or external elites more easily than poor individuals can. Second there is a support system for the poor in place where they can voice concerns but also can mobilize their resources and in some instances can even afford to contribute towards initiatives that are important to them. This is because sanghas help create a parallel informal banking system for the poor through mobilizing and regularizing their savings as well as linking them to formal credit systems. Thus the poor are better able to access and control both their own resources as well as other resources through sanghas.

In terms of decision-making and feedback mechanisms, because there is a form of organization in place (at sangha and village level) decisions and information can be widely disseminated and feedback obtained at both levels. With the VDS and Mahasangha, issues in the sanghas that cannot be solved within the sangha can be discussed and solved at the community level. Likewise, the decisions taken in the VDS/Mahasangha can be disseminated easily to the sanghas.

Chapter 6 Soil and Water Conservation

6.1. Introduction

Also see Annex m. From the planning phase (R7959) one issue that has been raised and prioritised in most of the villages is that of water. In most of the tanks the main problem was the fact that they had not been de-silted for years. Some of the tanks also had broken bunds, through which the water flowed and in Mugad the tank was also covered with weeds. Increased water accessibility and repair of tanks would benefit almost all groups in the village and help improve the livelihoods of not only the farmers, but also the artisans and the fishermen. Linked to the issue of water are the issues of soil conservation and tree cover. While natural resource management issues are all interlinked for the purposes of presentation this chapter will deal primarily with soil and water conservation (Annex M).

6.2. Soil and Water Conditions in the Project Villages

6.2.1. Water Resources and Access to Water

From the Family Information Survey (FIS1, on CD), a total of 894 families out of 1330 families who responded (67 percent) get their water from government taps (Table 6.1 in Appendix 61.). Of these, 54 percent said access was easy while 32 percent said access was either difficult or very difficult. A total of 182 families (19 percent) used home taps of which 72.5 percent found access easy while 21.5 percent found access either difficult or very difficult. A total of 35 families (2.6 percent) used open wells of which 11 percent found access easy while 83 percent found access either difficult or very difficult. A total of 103 families (8 percent) used tanks (highly polluted because tanks are used for washing livestock, vehicles and clothes) of which 57 percent found access easy while 35 percent found access either difficult or very difficult.

6.3. Soil Conservation Initiatives in the Project Villages

6.3.1. Soil Sampling

During a meeting on natural resource management the farmers of Gabbur complained about their soil and crop yield. The farmers noticed that there was poor germination and too many weeds among many other problems possibly related to sewage irrigation (Annex B, Plate B27). Before any suggestions could be made the soil would have to be treated. Dr. Basavraj explains, *the issue of the sewage irrigation in Gabbur has created of soil sickness. This has in turn leaded to poor germination of seeds, resulting in low crop yield. Larger trees or bushes like brinjal (egg plant) do not produce fruits at all.*[i] A meeting was held where the farmers were told about soil testing. About 25 soil samples were taken from farmer's fields and given for analysis. *It was in June-July 2002 that UAS has been working in this village with us. They took samples of soil from various farms and did an analysis to find out the contents and lack of any mineral element or nutrients.*[ii]

Once the test was conducted and the results analysed, the farmers were given a report and advised on the quantities of fertilisers they should use. The nutrient test (Nitrogen, Phosphorous and Potash are the main three nutrients) classified the fields as low, medium or high in nutrients. The treatment was also calculated based on the crops grown. If it is low they were told to put 10 percent more that the recommended amount. If it was medium they did not have to change and if it is high they had to use 10 percent less. It was found that in general the farmers were using more fertiliser than was required. Dr. Basavraj says, *they have been advised not to use phosphate fertilisers for the sick soils. The farmers are now very happy as the said problems have vanished and they are also saving upon the fertiliser costs.*[iii]

6.3.2. Impact of Soil sampling

Analysing yields of farmers who used fertilizers according to the recommended amounts staff said*, they got the same yield without using fertilizers as when they used fertilizers. This was a positive thing that happened. The farmers could save money without any effect to their yield in a drought year*.[iv]

According to BAIF staff, *if the people used the recommended doze of fertilizers, they could save Rs. 700 to Rs. 1000. Only one or two people could save that much amount because by the time the report came most of the farmers had already sown their land and had used some of the fertilizers.*[v]

Box 6.1: Managing Soil Fertility: The Results of Soil Testing

Basunath Patil's[vi] land was tested. He was told not use the same fertiliser and that UAS would give him a list of fertilisers he could use. He too was given some seeds. A few days after he has sown the seeds he would be given another fertiliser to use. *I used to use one bag of fertiliser per acre but after the soil testing I was told that the soil fertility is high (because of sewage irrigation) and that I should use only half the amount of fertiliser. So now I have to use one bag of fertiliser for two acres. I have been told to use different kinds of fertiliser. They said if you use more fertiliser it will affect the land and if there is rain it would be all right but if there is no rain then it would be a problem. Using less fertiliser saves money. Ten to fifteen years ago some one had done soil testing but nothing was done after that. It is only after you have come you have taken care and done it and that is why it has happened.*

Ramappa[vii] said *I use DAP (di-ammonium phosphate fertilizer) and vermi-compost. I was told to reduce from one bag of DAP (50kg) to half a bag (25kg.). If I use less fertiliser I will save money. They told me that I would get a good yield and that this was a test. I will know only after I harvest my crop. They said that even if I use less fertiliser I would get the same yield. I had never got my soil tested before. If I get the same yield then I would have saved money and I get my crop.*

However the farmers could not all provide exact information on yields due to the lack of rains. As the farmers in Gabbur put it, *the reports were shown to us and the deficiencies in our soils explained to us, besides the curative aspects. But by then almost 75% lands were already sown with seeds. Some of the farmers followed the suggestions given to them. Potash has been found less in our soils. Initially we were*

asked to apply it in the quantity of one gunny bag per acre. Now we are able to follow the proportions better and apply only the exact required quantities. [viii]

Success Indicators: Dr. Basavraj sums up the success of the soil sampling using the indicator of dissemination of the method by farmers themselves and saving of resources, *the farmers of Gabbur are now so satisfied that they are telling the farmers of Channapur about the soil testing. About 25 farmers of the 70-80 farmers in the village have reported this issue to the neighbouring village. There is a lot of demand for the same. Another related indicator is that the farmers are saving a lot of money on fertilisers without affecting the crop or crop yield. This program has also benefited the department of Soil Science in terms of the work done here now as compared to earlier. The Agricultural Assistant was not to be seen earlier, which was informed to the District Agricultural Officer. Now he is prompt and all the related works are getting done. As a whole this work has influenced the department indirectly.* [ix]

6.3.3. Peri Urban Dimensions

Here the problem and therefore the solution are specific to the peri urban interface. According to Dr. Basavraj*, the PU dimension of all these issues is the sewage and the soil sickness caused due to its irrigation. Fertiliser inputs could be reduced wherever the sewage is used. Like in black soils we can reduce the application of organic manure.* [x]

Another peri-urban dimension is the easy access to fertilizers due to proximity to the city markets. As put by Mr. Bulla, *since the city was nearby they had easy access to fertilizers. This might have increased its use. So this problem arose. Few companies also visit the farmers and advertise their fertilizers. But in Gabbur people by themselves used to buy the fertilizers*. [xi]

The team reflected on the soil sampling and felt that what was right was that

- We have effectively demonstrated in Gabbur how soil sampling is done, especially as the soils are sick due to sewage irrigation, where 15-20 farmers participated.
- This year there was a demand for soil testing in Channapur too and we carried it out there as well and we are due to give them results.
- Farmers are getting their soil tested from the UAS by paying rupees 300/- instead of getting it done in rupees 3/- from the private soil and water testing agencies.
- Kotur tank silt has been collected for analysing the soil contents to check whether it is suitable for application to the soil or not.

What they felt had gone wrong was that

- Soil sampling is a temporary intervention as it would stop in the future, which is supposed to be carried out every five years

6.3.4. Trenches and Bunding

The purpose of bunding is to prevent soil run off and erosion during the rains. Bunding took place as a part of the wadi initiative in BAIF. In IDS bunding took place independently.

BAIF with its vast experience in measures related to soil and water conservation decided to work with the Channapur community especially where there was a relatively greater availability of land compared to Gabbur. Here to complement the creation of 30 orchards, the necessity for watershed development initiatives was addressed. This was done through building six farm ponds here and through bunding and digging trenches alongside the fields and orchards. In Channapur 2,891 m length of bunds in the fields of 20 farmers were dug. These bunds would stop soil erosion, retain moisture in the soil for a longer period and give a better yield. Thus the rainwater remains in the farmer's fields and increases the moisture level for better yields.

In Kotur, UAS and IDS worked with 12 farmers to place contour bunds in their fields. The project had paid 50 percent of the cost and the farmers have contributed 50 percent through shramadhan.

Impact of the bunding: The impact cannot be clearly measured due to the absence of rains. According to Mr. Shindhe, *Last year these NR interventions did not get any results, as there was no rain. So one more year will definitely help us to see whatever the results monitor them and with this result we can do something*.[xii] According to Dr. Hunshal, *the overall picture has been that in the last two years we have not been very successful in managing our resources. There had been no rain. This year people have started work right from January 2004 onwards. Selecting people for soil and water conservation, talking to them organising them, taking them on exposure visits, training them so that they can adopt some conservation structures like bunding, de-silting and channel repairs. These are the most important soil and water conservation structures. These have been carried out on a participatory basis rather than asking them if they want to do this. So things have changed. People have learnt the need of farmers exactly with respect to natural resources*.[xiii] However the most important impact is the awareness generated of the important of bunding to conserve soil and prevent erosion. However, since the onset of rain in 2004 (albeit still below the long term mean), see effects in Annex B, Plates B36, B38 and B40.

6.4. Water Conservation Initiatives in the Project Villages

The initiatives here included tank and canal restoration in the four IDS villages and the building of farm ponds in Channapur through BAIF's initiative.

6.4.1. Farm Ponds

One activity that complemented the wadis was the building of six farm ponds and trenches in Channapur (Annex B, Plates B9, B10). Sangha members were trained through field demonstrations and exposure visits about these techniques. According to the sangha members in Channapur, *It has been 8-9 months that we have built trenches around our farms and that we have applied organic waste and green manure. Since these first few showers, the tank has retained some water and our fields have also some water standing on them. People have farm ponds in their lands and have planted saplings also. We learnt all this when we had been taken for an exposure visit to Tiptur, Surshettykoppa, Manjunathpur and Hunsikatti.*[xiv]

6.4.2. Impact of the Farm Ponds and Trenches

The two major impacts of these initiatives include the increased availability of water, increased moisture content of the soil and increased awareness of soil and water conservation techniques.

More water availability: The primary benefit here is the availability of water. *The water from the first rains was absorbed by the soil in the pond. The water that filled them up to four feet thereafter, would last till the end of March for their use. Some of the ponds are full. It is used for drinking, for both the cattle and us, for irrigating the trees and for bathing. Others who do not have farm ponds in their lands are enthusiastic about it. And some of us with ponds share our water with those in our vicinity who do not have them. And we would share the water even if it isn't sufficient for our own use. It has been decided that we share our water with the adjacent farmers, and we have agreed to it.* [xv]

In all we have six farm ponds in our village, in which already about four feet of water has been collected. Whatever we do we act with a lot of patience, and therefore we have hardly faced any problems. Like when we were loading silt for the fields. A person was absent for the next day due to his personal matter. But we managed it on our own, and it wasn't that big an issue. [xvi]

Whatever we earn from the daily wages is spent for food, but after forming the sangha it has eased our troubles to a great extent. When it rains, the water from the mountain flows down to the adjacent village as a stream. Therefore we have plans to build a check dam with the help of all the sangha members. This would contain all the water flowing from above and give our village cool breeze as well as the soil the moisture. [xvii]

6.4.3. Tank and Canal Restoration

Tank and canal restoration took place primarily in the four IDS villages. In Mugad the then CEO offered to pay for the JCB but to the local politics this never materialized. Funds were obtained from the Food for Work programme. They did obtain a JCB from Mr Vinay Kulkarni, ZP officer. In Mandihal the Hosakeri tank was de-silted under the Food for Work programme by the Minor Irrigation Department. About 600 people worked for two days under this programme. Stone pitching of the bund wall face was done in a second tank (Annex B, Plate B39), which is privately owned. In Daddikamalapur, the forest department sent a bulldozer for two days to de-silt one of the tanks. The people had also repaired the bund, which was broken. In Kotur one tank's bunds were repaired and one tank was de-silted. Canals were built in Mandihal, canals were restored and extended in Kotur and repaired in Daddikamalapur.

Interaction with TIs and leveraging resources: In Mugad, resources were obtained from the Food for Work programme and the ZP office. In Daddikamalapur it was the Forest Department that provided resources in the form of a JCB for desilting and MLA, Ambargatti, provided Rs. 40,000 that was used for desilting. It was planned for communities to apply for resources from CAPART but IDS decided against it because of corrupt practices within CAPART. In Kotur the tanks were de-silted and

canals were repaired through contributions given by IDS and through voluntary labour provided by the community. A number of attempts were made to obtain funds and while not all were successful there was a huge amount of learning that came out of the process for the communities and the organizations.

Size of tanks: In three villages Kotur, Daddikamalapur and Mandihal, the tanks were smaller and consequently the impact was more visible when the rains finally came. Mobilizing the people and completing the work was more easily achieved due to the sheer scale where the amount needed for the JCB could easily be provided by IDS. For Mugad the size of the tank itself required that resources be sought outside the community and the village panchayat. While a larger amount of resources did come in (4,00,000 rupees) compared to the other villages, it was minimal compared to the scale of resources estimated by Minor Irrigation which was 4 crores rupees (£500,000).

However the most important impact has been that the work done was without any project financial contribution whatsoever in Mugad. While only a small proportion (about 5 percent) of Mugad tank was de-silted the impact on the community was large. It was purely due to people's initiatives that even this much money was obtained and the benefit for the community was through their increased capacity to raise funds for any future work to be done on the tanks and also on funds that could not be used because of the politics which divided the community.

Raising awareness: Meetings with UAS and IDS and the community took place in all the villages on the issue of tank restoration and water. This raised awareness of the community on the importance of water, water resources and the need to maintain these resources.

In January 2004, some sanghas in Mugad decided to hold a bullock cart race. They got Mr. Ambargatti to inaugurate the first race. At the same time the people of Mugad wanted him to inaugurate the de-silting of the tank. He did come and inaugurate the tank de-silting and at that time he publicly announced that he would sanction Rs. 200,000. The MLA did sanction funds of about Rs. 165,000 under the Food for Work programme in the Zilla Panchayat. The increased awareness of the community on the importance of the issue of water, did allow the community to overcome some though not all the problems that historically had prevented any work on the tank from happening.

Politics in the Community: This is linked to several factors, which include party politics, politics of user groups, and issues related to equity. Party politics has historically not allowed funds to come into Mugad around the tank issue since no party wanted the other party to get credit for this issue. User politics came into play where clashes emerged between the fishermen and the farmers groups. The fisherman wanted the weeded portion of the tank to be de-silted but as this soil was not as fertile the farmers wanted the other side to be de-silted. This resulted in some struggles over where the JCB operated during desilting. The other conflict of interest emerged around the sanghas who consisted of poor women who were involved through the food for work programme where their active participation in the form of digging also earned them some remuneration, which stopped once the JCB was brought in. A second issue of equity emerged between two farmers groups, one richer than the other

who blocked the feeder canal because the poorer farmers had released the tank water the previous year for their crops, which this farmer had opposed. This is clearly a function of a large heterogeneous community where the number and range of stakeholders is large spanning the potters, fishermen, farmers, and the sanghas.

Community Contribution: In all the villages the most distinct feature about this process compared to other projects was the enormous amount of community contribution, which took place in many forms. In villages like Mandihal, the community contributed up to 50 percent of the total costs in the form of labour, and in Mugad, the community lined up at least 17-18 tractors, which lifted the soil all day to the extent of 296 tractor loads of silt. In Kotur too people contributed in the form of tractors to lift the silt. In the estimate of IDS staff at least five times the amount of expense provided by the project has been borne by the community and the worth of the work done is far greater than the actual amount spent purely due to the enormous amount of community contribution. This amount of contribution is an indictor of the high degree of community ownership over the issue. Secondly it also has implications for the sustainability of the resources over time and the community learning to regain control over management of their natural resources.

Krishnappa's Story…

Before the project the village (Kotur) was like a forest – abandoned. No one would visit, if people came we thought that they would do their work and leave. The project made us more aware. During drought, no grains were available and we would buy low quality flour and make rotis to eat. Now with the project we realized we could do something about our poverty and so we decided to form a sangha.

Earlier if you called people they would not come. Even if the village announcer made an announcement only a small number of people would gather. Now if one person is called four people come. People are more aware of the importance of getting information. We used to take loans where we would have to return the principle and a bag of rice as interest. Now everyone has started saving in the sangha and even if you want to give loans at 3% interest people are not willing to take it. This shows the level of their awareness. They know how to do transactions now. Thirty-five sanghas have formed and everyone is saving money and is self-reliant. Everyone is organized and they can manage independently. People we used to borrow money from are now approaching us for loans.

Water was a major problem because the tanks had all dried up and there was no unity among the people to deal with the problem. The water table had reduced. Sixty to seventy bore wells had dried up. People had to go very far to get water. The village has seven to eight tanks with a large catchment area near the hills. Last year we de-silted the tank and contributed Rs.1000/- plus labour and the project contributed Rs.17000. A canal was dug which connected four major tanks. If one tank gets filled the water flows to the next one. As a result of this, 800-1000 acres of surrounding land had higher water tables and better moisture in the soil (see Annex B, Plate B38). Four hundred farmers have benefited and have got a better harvest this year. The main impact of this was that everyone found out about the project and saw what they could do if they were united for a common cause. They realized that working for the community benefits everyone.

In fourteen guntas of land, I got ten quintals of wheat (equivalent to 7 t/ha). Earlier he could only get three quintals of wheat. Grass was grown on the bunds and used to feed the cattle. Now we have a higher yield and a lot of fodder for cattle because water is being stored longer. Automatically this has made us financially stronger.

Why do we have to walk all the way to Dharwad to find out the distances when we can just read the milestone and know that it is 10 km away?

Previously there was no water so people abandoned their land and began working outside the village as labourers. There was nothing to hold them here. We used to be in the dark. I may know a few things now but there is every chance that I may make a mistake. With discussion in the sangha I realized my limitations and mistakes. The sangha was the first step to know my limitations. My decisions may be profitable to me, but they may be detrimental to the community. With the sangha losses are minimized and the benefits to the community are maximized.

As Vivekananda said, "By changing yourself there is one less rogue in this world."

6.5. Peri Urban Dimensions

Peri urban communities due to urban opportunities and consequent livelihood alternatives have less investment in natural resources. This has two clear implications for the implementation of NRM strategies:

Urban Opportunities: Since their livelihoods are not dependent on the natural resources it is more difficult to mobilize the community to manage their own resources basically because the economic gains are relatively less for them.

Labour Costs: The scarcity and cost of labour being higher in the PUI also results in a lower level of willingness to contribute voluntary labour in these communities. The way in which the farm ponds had to be built is a clear illustration of this issue. Labour within Channapur was not available for constructing the farm ponds. Consequently BAIF actually paid for the labour costs. For BAIF staff, *the labour cost us about rupees 3400/-, as the labour was hired from the other villages to dig the ponds. The pond work was carried out in the months of January-March. There was a lack of labour in the village as they all headed off for work in their own lands when the rains began.*[xviii] The farmers did appreciate the hard work of the other labourers as the lands were very hard before the rains. The daily wages for working in the brick kilns, as coolies etc., in the cities is higher than the work here in the farms, therefore they prefer to work in the cities, rather than here.

However despite these constraints, what is an important research finding is that NRM strategies can in fact be implemented in the PUI although with some modifications in approach from purely rural settings.

Chapter 7 Agro-Horti-Forestry

7.1. Introduction

Also see Annex K. One of the strategies for better natural resource management is that of increasing tree cover. There have been many activities that have focused towards this. While nearly all the project villages have got saplings from the Horticulture Department and the Forestry Department to grow on their lands, in Channapur there has been an intensive focus on creating wadis (orchards) where agriculture, horticulture and forestry are combined. Another new concept introduced in Channapur was that of hasiru habba where saplings are planted on common grounds for the entire community.

7.2. Tree Planting

In Mugad, and Kotur tree planting through agro-forestry has taken place. Farmers have taken both horticulture and forestry plants and planted them in their fields. The following table 7.1 shows how many farmers in each village got how many saplings

Table 7.1: Saplings given in the Mugad cluster villages

Village	*Sapling*	*Number of farmers*	*Number of saplings*
Mugad	Teak	10	800
Kotur	Mango	10	220
	Teak	2	800
	Acacia	2	400

Some of the saplings such as Mango, Sapota and forestry plants were supplied by UAS at the cost of Rs 10 per sapling. As in Channapur the farmers faced a water problem due to drought and therefore found it difficult to water their plants. The survival rate of the saplings in Kotur was 50 percent. The Horticulture Department has given one sangha member, Ramappa, in Kotur 1,000 Jasmine flower saplings. Ramappa's land has red soil and is not very suitable for growing vegetables. So they decided to go in for flower plantations. He planted it in half an acre of land. He has a bore-well that supplies water throughout the year. Five people are working on it now. Out of the 1000 plants 250 withered. Currently he gets up to half a kg of flowers (worth Rs 250 / kg). In Mandihal sangha members have asked the Horticulture department to give them Jasmine flower saplings. They had also asked for brinjal seeds, which they got but they did not get the jasmine. They have grown the brinjal and have even sold them in Dharwad market.

7.3. Wadis

7.3.1. Objectives:

The objectives of wadi are for the farmers to become self-sufficient in fodder, fuel wood, biomass and ultimately to increase incomes. This also results in some benefit to the environment.

7.3.2. Selection and Training:

BAIF staff explained the process they went through while starting the wadis. According to Bulla, *before we started off with the wadi, we created awareness among the farmers. Towards motivation, we took them for exposure visits to successful wadi programmes. We even took them to Lakkihalli in Tiptur. After coming back we supported those who are interested, which included those farmers who went for exposure visits and also those who did not. Those who went to those places came back and explained to others what they have seen. Inspired by this, others also opted for the wadi system. Before they actually started they were taken for a second more practical exposure visit in order to understand all the preparations that are required before starting activities concerning wadis.*

Nitturkar explains further, *First exposure was for motivation, the second was as a part of the training. Then the work on wadis started. To provide motivation we wanted to link it with the existing EU project*[xix] *because we didn't have sufficient funds. This wadi activity requires at least four to five thousand rupees per farmer. The other EU project had funds for 25 extra participants. We asked if they could recruit some participants from Channapur. They agreed to provide inputs on the condition that this was done before March 31. But before March 31 we were able to only get 15 participants. Then some other people wanted to start wadis after that deadline. We said, since the deadline is over, we can include you but without inputs. Thus 10 people started wadis without inputs.* The fields of these farmers were visited and demonstrations conducted on how to lay the plot and how to mark the pits. They were given information about the size of the pits and other technical inputs. The farmers started the digging of pits as per the layout. About 1,200 pits were dug for the horticulture plants and filled with biomass, tank silt, FYM, neem cake and rock phosphate. Before the saplings could be planted it was decided that the trench cum bunds would be completed. It was also decided that the live hedge fencing would be done first.

The inputs given for the wadi from the EU project were money for pit digging (25 percent of the total cost), building bunds across the fields and for fertilizers for the pits. Saplings were supplied to all the people from this (R8084) project.

Various activities in the wadis continued in the second year in Channapur. In the first year there were 25 farmers who had taken up this activity and in the second year five more farmers decided to take up this activity. Therefore in Channapur there are a total of thirty farmers who had transformed their lands or part of their lands in to wadis.

According to Nitturkar, *the reason we have got only five new farmers this past year to take up wadi activities is because most of their land is given on lease to others. Small farmers having one acre or two acres of land have given their lands on lease for a period of two or three years to others. As the owner the member cannot do any thing in the land as he has given it on lease and as a leaseholder that member also cannot do any thing in the field, as he is not the owner. Five or six new farmers and four*

existing wadi owners have asked to extend the wadis to one more acre. So including this extension ten to twelve people would have extended or started new wadis.[21]

Chenappa Hulikoppe's Story…

When we first started a sangha we began by saving Rs.10. Then, three years ago we were made aware about wadis. We were taken to Surashettykoppa on an exposure visit. Initially we felt threatened because we didn't know if they would take our lands. After interacting with them we understood that they would not take our lands and we wouldn't have to pay any money. The only thing we had to do was work hard for our own well being. They told us we could cultivate better horticulture plants. After this exposure visit we dug pits and filled them with silt and during the rainy season we planted horticulture and forestry plants.

We discussed digging trenches, mulching, bunding and centre bunding in the field. Due to ring trenches and basins around the trees, water was retained and there was lot of moisture in our fields and the fertile soil was not washed away because of bunds. As a result our crops were good. In the first year of planting trees I sold green gram in spite of the fact that it was a drought year and in the second year I sold hybrid jowar also despite drought. In others fields all the crops had dried up. This year I grew green chillies and horse gram and I got a yield of 50 kg of chilies and 50 kg of horse gram from one acre of land. Now I have sown black gram and I am expecting a good harvest this year too. In total, I get about Rs.2500 to Rs.3000 every year and every year I grow different crops.

We use manure for the bunds and the plants are healthier by 25 percent when compared to plants on other lands. On another one acre piece of land I sowed horse gram around my cotton plant as a trap crop. Most of the insects got caught so I did not have to use pesticides at all. Earlier I used to spend Rs.1000 to Rs.1200 on pesticides. I am doing IPM for the past two years and last year was the first year I sprayed pesticides because I had doubts. The insects attack only the trap crops and this year the yield was more compared to the last year without spraying any pesticides. Last year I got three quintals and this year I have already reaped three to three and half quintals so I can expect about 70 kg more this year. Other farmers who have not used pesticides tell me that my yield is good without using pesticides and I have saved Rs.3000. I got Rs. 8500/- for my yield. My income has increased despite the decline in the price of crops. Harvest was good last year and I made Rs.2400 profit the first time and Rs.2500 the second time I sold my crop. This year, the first time I sold my crops and earned Rs.2300/- and the second time I earned Rs.1400.

Due to this project we got wadis. Earlier we grew only grains but now we have trees and horticulture. The trees shed leaves and we will use it as manure for the trees and sell the wood to houses. After cutting down the trees we will replant with saplings. Next year we will get some fruits. We will eat the fruits and we will sell the remaining in Hubli market. It is easy to access the market and therefore we go regularly.

[21] *Interview with Nitturkar, PO, BAIF*

Peri- Urban Effect

Everyone does not get work here because it is unavailable. So some of them go to Hubli and are negatively affected by the city. Others stay on the land. In Hubli we get good wages and since not many people in my family go the city the land here is not neglected

7.3.3. Difficulties Experienced:

In the wadi process there were some difficulties despite the success. Nitturkar explains the problems; *it was a bit difficult for us to manage with two sets of people, people with inputs and those without inputs.* Bulla continues, *Time was a constraint for us. Within a short period we had to select the participants and give the final list. After the EU project granted inputs for 15 participants, at the last moment one participant withdrew, as he couldn't complete the work before March 31, which was the deadline. Then I had to find another person who can complete the work before 31 as the participants had to add up to 15. Then I had some problems. But I selected the last person who managed to complete the work before March 31. In the initial discussion itself we had told them that those who complete the work before March 31 would be given some inputs by the EU project. If someone wants to start wadis after March 31 then he will not get any inputs. Inputs like grafts and other things that were of real need by farmers we will supply. They accepted these terms. Later when it became two groups, we had reasons to justify ourselves with each group. Even then, some people did resent the group that was getting inputs.*

Rain was a major constraint here. When they got forestry seedlings I asked participants to keep the seedlings completely wet and then plant them. If by chance you receive rain they will survive. Anyway we have the trenches. Even if there is a little rain, the plants will survive. Few listened to me and did so. Those who have planted in the trenches, their plants survived. Those who waited for the rain to plant the saplings, kept them under the shade, without much care. They had to water the seedlings, till it rained and in these cases only, some seedlings died. They planted the remaining saplings after it rained.

Nitturkar continues, *Trenches are one of the rainwater harvesting techniques followed by us. The idea here is to stop the water and maintain moisture in the soil. Horticulture plants are watered, while forestry saplings are not watered as they are planted in the trench and do not need as much water. So whenever we get small amount of rain then water will stand there and help the plant to grow.*

7.3.4. Distribution of Seedlings:

About 10000 forestry seedlings are distributed to the farmers. The forestry seedlings given are

1. Acacia mangium-3000
2. Acacia auriculoformis-3000
3. Eucalyptus-3000
4. Casuarina-1500.

In Channapur saplings given by the Government Departments and those supplied from another BAIF project were used for the wadis.

All the farmers have planted horticulture grafts, forestry seedlings, and dug trench cum bunds, ring trench biomass and other after care activities. Given below is table 7.2 which provides the information on the number of plants grown in the second year.

Table 7.2:Number of plants grown in the wadis in 2003-2004			
Horticulture Grafts		**Forestry Seedlings**	
Species	*Number*	*Species*	*Number*
Mango	375	Leucaena	1630
Chikko (Sapota)	300	Sesbania	1638
		Drumstick	331
		Erythrina	265
		Cassia	2500
		Teak	2000
		Casurina	1500
		Silver Oak (Grevillea)	100
		Tamarind	68

Along with the planting a lot of other activities were also taken up. These included ring trench with biomass, after care activities, bunding and farm ponds.

The Ring Trench and Biomass Technique**:** A new technique was devised and tried out in the wadis called the Ring Trench and Biomass (RTB). Ring trenches which are one foot in width and one foot in depth, are dug at a one-foot radius from the base of the plant. In these trenches biomass is filled and then covered with soil. These ring trenches help in two ways. One, they help retain the moisture in the soil for the roots and two they provide nutrition for the plants. As the plants getter bigger every year a new ring trench is dug. The maximum distance that a trench is dug is the circumference of the foliage. Despite the drought, the growth of the plants is tremendous, as a consequence of the RTB. This has motivated even non-wadi participants to adopt this technique.[22] Nitturkar explains, *the spread of the tree's canopy is equal to the distance that the roots go down into the grounds. It is at the depths that the roots take in water and nutrients. So it is essential that there should be moisture. Sucking roots are in this region. At a distance of one foot from the base of plant, a ring of one-foot depth and one foot width is dug around the tree. This is filled with both dry and wet biomass along with manure and vermi-compost. Water is poured over it and it is covered with soil. The biomass retains the water and will not allow the water to evaporate. Also as it starts decomposing it provides nutrients to the tree. Moisture around the tree is also retained. At present water is available to the plants and the decomposed manure will be useful to the plant after few months. So this process satisfies three needs of the plants, which are 1) the supply of water to the plants 2) the supply of natural manure to the plants and 3) moisture retention for a longer period. This protects the plants from heat stress. This is done before the monsoons. Some water from the outer layer will dry out but then this dried out layer acts as a barrier from more moisture drying out. Every year a new trench will have to be dug slightly further and deeper till it is the same circumference as the canopy of the tree.*[23]

[22] From BAIF reports
[23] Interview with Nitturkar, PO, BAIF

Watering: The concept of pot irrigation was introduced to the farmers. Here an earthen pot with a small hole at the bottom is placed at the base of the tree and water is filled in the pot. Water slowly drips down and provides moisture for the plant. This way the farmer has to only ensure that the pot is filled once a week and the plants do not have to be watered everyday. About 587 pots were given to the farmers who had started the wadi this year and also to farmers whose pots have broken. Though the drought had dried up the tanks the farmers ensured that they filled these pots regularly. [24] According to Nitturkar, *The pots are filled with water once a week. There is a hole at the bottom of the pot that is plugged with a cloth. The water slowly drips through this hole. The water drips for three to four days. Though it stops dripping after four days there is enough moisture in the soil to last a few more days. The pot holds about 10-12 litres of water. Thus the farmer does not have to water his plants everyday*.[25]

After care activities**:** Other activities for the care of plants include mulching and shading the plants, which the farmers have been doing. They have also done weeding and pruning of forestry plants. [26] *The saplings also have to be shaded to protect it from the sun. Last year the farmers had shaded the saplings but this year they have not done so because the summer has not been so hot*.[27]

Bunding**:** Trench cum bunds 2'x 1.5'feet in size are dug across the slope in the fields. Apart from wadi plots the adjacent land of the participant was also covered. Totally bunds of length running 2,891 meters and of volume of 782 cubic meters are dug in about 19 hectares of land. Apart from manual work excavators were also used for bunding due to labour shortage and to complete the work early. [28] Nitturkar explains the importance of bunds*, a trench is dug and the soil excavated makes the bund. Usually the bunds are made across the slopes. The trench is at the higher end and the bund is at the lower end of the slope. It is one type of decentralized water conservation*. The importance of bunds cum trenches it.

- Bunds and trenches reduce the speed of the flowing water across the fields.
- Water gets stored in the trenches and the excess water flows out.
- This reduces the soil erosion.
- Fertile soil remains in the same piece of land and is not washed away.
- It maintains moisture in the fields.
- Growing different fodder varieties and trees strengthens the bunds. This can cater to their fodder requirements and the horticulture trees can give some additional income.
- Moreover the septas (little check dams within the trench) built at every 10 feet interval in the trenches avoids formation of a gully in the trench. Thus the land remains intact.

[24] From BAIF reports
[25] Interview with Nitturkar, PO, BAIF
[26] From BAIF reports
[27] Interview with Nitturkar, PO, BAIF
[28] From BAIF reports

Farm ponds: The Farm Pond is a Water Harvesting structure dug at a place where there is lot of flow of water. Each farm pond has an inlet and an outlet for the water to flow in and out.
Its importance is: [29]

- To collect the run off water, store it and make it percolate in the ground.
- The stored water in the farm pond serves for protective irrigation mainly for horticulture plants, kitchen gardens and for growing vegetables.
- It recharges the ground water, thus increasing the water table.
- It increases the moisture level in the surrounding lands. The crops grow better.
- Due to farm ponds gully formation has reduced.
- Soil erosion has reduced.
- The crops are better and lush green. They remain healthy without withering for a longer period. This is found by comparing with the other farms that have no farm ponds.
- The farmers can have an additional income by growing vegetables on the sides of the farm pond.

In 2004, 11 farm ponds were dug. Some of them were dug manually but others had had to be dug using a JCB because after three years of drought the soil had become very hard. Rains in March had filled up these farm ponds. This has helped the farmers water their plants.[30] According to Nitturkar, *farm ponds were dug this year with a 50-50 contribution from farmers and the project. This summer people had a lot of difficulty watering their plants as there was no water. I was even willing to get water tankers to water the plants, but the farmers told me to wait a few days as they thought it was going to rain in the next few days. It did in fact rain and the farm ponds filled with water. This monsoon they will fill to the brim, but filling of farm ponds is not important. What is more important is that water should be available when it is needed. Though there was a shortage of water this summer people still tried to ensure that their plants were watered. Instead of watering it once a week they watered it once in two weeks. I really appreciate the peoples' thinking, though I was ready to spend the money for the tanker the people said as the weather was cloudy 'we shall wait for two days why simply spend money unnecessarily'. If they had not said so, on that day only I would bring the tankers.*[31]

According to Shivappa: *To lead our life we have to do some income generating work. So I started to do horticulture. I do this work because it will profit me in the future. Mango, tamarind, some forest trees are growing in my wadi. From these tree we get fruits, wood, medicine etc. Now I may not get instant profit but in future after four or five years I will get the profit.* [32] There are some steps, which are followed by the farmers to do wadi:

- Measurement of the land
- Placing bunds and trenches
- Planting forest trees surrounding the land
- Planting mango and other fruit trees
- Doing RTB to fruits plants
- Pot irrigation

[29] Interview with Nitturkar, PO, BAIF
[30] From BAIF reports
[31] *Interview with Nitturkar, PO, BAIF*
[32] Interview with farmers in Channapur

According to this procedure the members have done the wadis.

Govinda Gowda's Story…

I joined the Maruthi Seva Sangha two and a half years ago. Before joining the sangha I was doing dry land agriculture, but after joining we started wadis. I dug pits and planted horticulture and forestry seedlings. I helped build bunds and made a farm pond.

At present there is no profit but in future I will get some benefits. In the future I will harvest mango, sappota and guava. I have planted many more trees and if I get a good profit from them I will dig a bore well to get more water. In comparison to the other crops, the crops in wadi are green because the land has moisture from bunding and horticulture pits.

Compared to other lands, there is a difference because of wadi. The crop is good and the yield is also high. If there is good rain I may get a good profit. Previously we thought that we would lose lot of land due to bunding and planting. Now we know we had thought wrong and the yield is higher than before. I grow vegetables like tomato, beans, and pumpkin in wadi. I feed the pumpkins to my buffalos, I sold the tomatoes in Hubli and got Rs.1200 and I used the other vegetables for home consumption. I grew groundnut and jowar around the wadi. I got two quintals of groundnut and one quintal of jowar from half an acre of land. In total, I got Rs.4000 when I sold the groundnut and jowar. Now I am earning a profit.

I have taken a loan of Rs.1000 from the sangha for my son's school fees and I repaired my old bullock cart for Rs.3500. The bullock cart is helpful to transport agricultural products from the field to my home and to water horticulture plants. It is also a mode of transport for me to travel from the village to the field.

7.3.5. Impact of the Wadis

Indicators of success according to Nitturkar are, *for horticulture plants we take more care so if 75 to 80 percent of plant in horticulture survive and are healthy we term it successful. For forestry saplings if above 50 percent survive and are healthy then it is successful. The main indicator is for the success of a wadi is that it should yield and increase income. That will happen only after four or five years*. Thus the short-term indicators here were survival of plants while the longer term indicators would extend beyond the life of the project.

BAIF did a survey to count the number of surviving trees from the first year. Given the continuous drought that the area has been facing the survival rate is quite high. The following table 7.3 is one indirect indicator to show that the farmers have bought into the process and realise the value of these trees.

7.3:Survival of plants[33]				
Sr. No.	*Variety*	*No of plants planted*	*No. of plants surviving*	*% of survival*
1	Sapota	440	273	62%
2	Mango	707	503	71%
3	Cashew nut	17	8	47%
4	Tamarind	33	23	70%
	Coconut	10	8	80%
	Total	1,207	815	68%

BAIF reported the following, totally 9,860 forestry seedlings of five species were planted during last year and 5,148 have survived (52%). The survival in horticulture forestry is satisfactory considering the poor type of land, non-availability of water and severe drought during last year.

Nitturkar says, *we have not yet calculated the survival rate of the saplings as yet. Cashew nuts had the lowest survival rate because farmers are not interested. We just forcibly gave them because cashew is very suitable for that area. But the people do not know about cashew nuts. This year only mango and sapota are here. They know very well about mango and sapota and cashew is a foreign plant for them. This time also I just want to put some cashew, as it is very suitable. It comes up on very marginal type of land. It cannot tolerate very high temperatures, about 45- 50 degrees. This does not affect the tree but the flowers do not bear fruits and like that. That means all flowers cannot develop into Flowers that is the problem created by high temperature. Wherever the temperature doesn't cross 40 degrees, the tree will grow properly and bear fruits*.[34]

Box 7.1: Commitment to the Wadi

Members from Nehru sangha and Maruti sangha, Channapur said, We have shaped a wadi**,** in which we have planted as hedge plants forest trees, Eucalyptus and certain fodder plants and in the centre of the wadis, fruit trees like mangoes, chickoos, cashews and tamarind are planted. The last two years have been drought years this year was a loss. To sustain ourselves we have been working in Hubli on daily wages. We are definitely going to gain from the wadi and farm ponds and we are working towards it.

Maula Saheb Sheik Sannadi suffered quite a lot in trying to contribute to the wadi. He said, *I am the only one who is working at home. Only if I work on my 2 acres of land as well in Hubli as a daily wageworker I can feed my family. But when I was asked to work for the wadi for a longer period and I did, it became very difficult for me as I was not being paid here and when I went back for daily wages I was denied work. We plan to work in others fields for a couple of days and here work in the wadi for a couple of days. We couldn't neglect either. If we work hard then we'll be happy.* This showed that the motivation levels were high enough for people to try to find a

[33] *From BAIF annual report*

[34] Interview with Nitturkar, PO, BAIF. Around Hubli-Dharwad, summer temperatures rarely exceed 38°C, as the altitude is 700m.

compromise between earning their daily wages and sustaining the wadis and prioritised the cash incomes and the wadis equally.

The wadis result in some soil and water conservation and the recharging of the groundwater, then that is also an indicator. There is also an increase in the number of livestock.

All fruit plants are growing properly. Members have used pot irrigation for their fruit plants. This system was very useful for growth of the plant.[35] *The farmers say that there is a lot difference between the wadis and other ordinary fields. In the wadi the soil retains moisture for a long time because of trenches and bunds. The crop grown in wadi will be good, qualitative and quantitative. This year they had two bags of grains even though there was drought*. Members say they will feel very happy when they see the full-grown fruit plants in their wadis. They treat the plants as their own children and are happy to cultivate them. They do not allow the first flowers to develop into fruits otherwise the trees will not grow properly. Vegetative growth is more important than the reproductive growth in the beginning. After the tree is fully-grown, reproductive growth is more important. This year more trees survived than the last year.[36] (Annex B, Plates B7, B8, B9.

Box 7.2: Dedicated to the Wadi

Pakirgouda Patil has 50 mango plants of which four plants died due to the drought. He used to bring water in a barrel cart to water his plants. He feels that using vermi-compost has helped his plants.[37]
Ninganagouda B Patil planted 35 plants out of which four were tamarind, two were sapota and the remaining were mango plants. Five plants died and BAIF said they would replace the plants. He applied vermi-compost twice this year and twice last year adding to a total of four quintals of vermi-compost, which was used for the plants. He brought water from village tank to water his plants.[38]
Bharamagouda Patil planted 50 mango saplings, three tamarind saplings and one cashew plant, out of which three plants died. He brought water in a barrel cart from the tank to water his saplings. He felt that the growth of the plants was good and that he spends a lot of time in the field after starting agro forestry activities.[39]
Govindagouda Patil planted 50 fruit plants and out of which 5-6 plants died and BAIF said they would replace them. He bought two quintals of vermi-compost at the rate of Rs 230/quintal for the plants. The growth of the plants was good and field looks green despite the draught.[40]
Hanumanthappa Y Hulamani planted 30 fruit plants and 3-4 plants died which BAIF has promised to replace. He brought water from the tank once in eight days to water his plants. *Before starting agro forestry I went to the only field for 6 months in a year during the cropping season but now I spend most of the time in the field doing activities like watering, weeding and so on. The plants are growing well*.[41]

[35] Interview with farmers in Channapur
[36] Interview with farmers in Channapur
[37] From UAS reports
[38] From UAS reports
[39] From UAS reports
[40] From UAS reports
[41] From UAS reports

7.4. Hasiru Habba

The Hasiru Habba literally translates as Green Festival. It is a one-time event in the year involving the entire community in tree planting.

7.4.1. Objectives

The concept of Hasiru Habba (green festival) is aimed towards mass plantation of trees on farmers' lands and on community lands and to inculcate it in rural culture. This concept was explained to the villagers, who agreed to celebrate it in the month of July. That day about 4500 forest saplings of 8 to 20 species were planted on the village graveyard.

According to BAIF staff, *from our side it was more of a spiritual and conceptual motivation. We tried to spiritualise the process rather than monitorise it. Spiritual intervention was also done in the alcoholism intervention. But here monitory loss was the essential push back that made people thinks about it. Then to make it more effective Swamiji helped. Swamiji has helped for both, the Hasiru Habba and for alcoholism. That was one of the most effective strategies. During Hasiru Habba a big mob is always a problem. It is difficult to monitor each and every person planting. Last year it was a premature effort. We were only three or four months old and people were not too motivated with the idea of the Hasiru Habba. The concept was not really internalised by them. We were overenthusiastic. Land preparation was lacking. It was work done at the eleventh hour. Everything happened fast. Site selection was also delayed for many reasons. We couldn't give proper training on plantation. Really we were doubtful about the participation by the people also*.

As the men's sanghas put it, *We did not know what a Hasiru Habba was. We were told that we should have a big festival when we are going to plant the trees. We were told to invite our relatives, friends, neighbours and every one. Like how we celebrate other festivals, we should also celebrate the Hasiru Habba. We had seen the Hasiru Habba in Surashettikoppa. They also showed it to us in Tiptur. In the beginning we were not interested in planting trees. We thought we should put a bore well and only then plant trees. They told us that without putting the bore wells, we should increase the water table and look after the trees*.

We have to do shramadana in our village. If we plant trees, we get good rains. More trees result in more rain. If we save the forest, it protects our area. We Indians have a great love for planting trees. We got our Swamiji to give his blessings. He planted the first sapling, after which we all planted as per his instructions.

A tree is like a mother's shadow. Mother gives us food. We asked the mother tree to give us shade under which we are sitting and having our meeting. We would not be able to sit and talk under the sun. We have planted trees on our land, but we wanted to do it here because a lot of people pass by this place. They too can sit under the shade and take rest for five minutes. They will also feel rested and happy. If we keep walking in the sun, we have a lot of problems, but even if you rest in the shade for five minutes, we can continue walking in the sun.

The sangha chose the graveyard as the spot to plant the trees. We want the graveyard to be like a temple. Everybody is scared of graveyards and we want to remove that fear. It is a temple because this is where we come and bury people. And we offer prayers for them here. That is why the graveyard is like a temple. If you build a temple here everyone will come and sit here.

The only time all the sangha members have met was when there was the 'Hasiru Habba'. Thereafter we met again when we de-weeded the area. Through such activities, all the members have gained courage to come and work together.

7.5. Peri Urban Dimensions

The Peri-urban aspect of the wadi according to BAIF staff is that *it is the most appropriate intervention for peri urban small farmers. The general trend around the city is that horticulture plantation is increasing. Agriculture is being converted into horticulture. This is a coping mechanism to deal with the shortage of labour. Even in the project villages, people are more willing to go to the city to earn money than to work on the farms. Horticulture reduces the necessity of labour in the farm. When they are getting something from horticulture, they will stay back in their own farm. In agricultural crops, after harvesting, people say, "We don't feel like going to the field, even if we go we stay for a short length of time. But now we are spending more time in our wadis than we did when we used to grow agricultural crops. So even if we sit at home we keep thinking of the wadi because of increased investment." They go to cities for working and do not care for agriculture.* In agriculture intensive labour is needed which requires that people compromise on the monies they can earn from jobs in the city, which is not the case in horticulture and the wadi system. In the wadi, with less labour and therefore even with holding their city jobs they can earn the same amount they earned from agriculture.

7.6. Conclusions and Lessons Learnt

Overall the DSC meetings helped create the link to the Horticulture Department and the Forest Department who agreed to provide saplings to the peri urban villages in this project. The horticulture department was willing to give mango, sapota, coconut and cashew nut saplings free of cost to the project villages.

Before the saplings were brought from the department the NGOs asked the respective people to first dig pits in their land for the saplings. This ensured that they were committed to growing the saplings. This along with strong motivational methods ensured a commitment and ownership of people in the wadi and tree planting process.

Some problems that were faced included timeliness of obtaining the saplings, quality of saplings from the government, rains and methods evolved to deal with drought such as the RTB and pot irrigation. The most important contribution was in the awareness raised were earlier people were not particularly interested in tree planting and this was changed especially through the Hasiru Habba. The next most significant impact was the fact that the land was made far more productive using less labour intensive methods which are particularly important and suited to the PUI. This brings people's interest back to the land and also allows them to continue to avail of work in the cities both.

Chapter 8: Livestock Activities

8.1. Introduction

Also see Annex D, Section 4.3. Livestock is an important component and particularly in the peri-urban it is an important income generating activity. With different interventions the team tried to study the opportunities and constraints in this area and promote different methods of livestock management. With serious drought that resulted in reduction of income opportunities from agriculture, livestock was an option for the communities in the peri urban as an income generating activity. According to Dr. Mulla, *My main job is to take care of livestock as a natural resource. Livestock and fodder is a natural resource.* Livestock mainly includes cattle (cows and bullocks), buffaloes, sheep, goat and poultry.

8.2. Baseline Data

A participatory natural resource mapping for livestock was done and data was collected category wise for sheep, goat, poultry, cows, buffaloes and bullocks. With this the total livestock wealth was identified. It was observed that due to drought the livestock population was declining in the peri urban. Scarcity of fodder and lack of medication of the livestock was identified as one of the main constraints for livestock rearing. After the initial survey with the people, the team met livestock owners individually and in groups. They met to prioritise livestock problem and to understand and find possible solutions to the major constraints for livestock rearing.

8.4. Problems of Livestock in the PUI

As the Hubli- Dharwad area was seriously affected by drought during the years 2001-2003, livestock was badly hit. There was scarcity of water and fodder for livestock. This resulted in a drastic decline in the livestock population in the peri urban. Some of the problems that discouraged livestock in the peri urban were as follows.

Lack of Space: Animals are usually kept in sheds in the owner's house. Due to the gradual increase in the family size, people found it difficult to spare space in their houses for their animals. Instead the spaces occupied by the animals are usually broken down to form another room.

Lack of Awareness in Livestock Management: Another problem identified in the peri urban is that the communities engaged in livestock activity lacked the awareness of scientific livestock management. They were not aware of the vaccination programmes that reduce calf mortality (the usual rate of mortality is about 80-85 %). According to Dr. J.A.Mulla this ideally should not go beyond 20 percent. Moreover the animals were not bread properly and they became unproductive.

Lack of health care for the livestock: Another area of concern for livestock was the lack of health care and veterinary services in all the villages except Mugad and Kotur, where there are Veterinary Livestock Inspectors (VLIs). The VLIs are government appointed officials, who are trained in artificial insemination to breed animals. Besides this, he also has the responsibility to vaccinate the animals and give them first

aid treatment. The communities are dependent on the VLI for any livestock health problems. But the communities say that there was no service available from the VLIs. Another problem in the health care of animals is that only certain medicines are available in the District hospital. These medicines are supposed to be passed on to the VLIs, but the VLIs say that they do not get enough medicinal supplies. According to Dr. Mulla, *the other reason the animals not being vaccinated is the development of lumps in some animals after vaccination. These lumps sometimes cause irritation to the working animals resulting in them becoming useless. Secondly if the farmers want to sell them and if the buyer finds these small lumps, then the sale value of the animal falls.*[xx] Another reason of the livestock owners do not vaccinate their animals is because they fell that they have managed so far without doing so and do not feel the need to vaccinate their animals. They have also been used to getting free vaccinations from the government and did not want to pay for the vaccinations.

8.4.1. Other problems faced:

A few of the problems faced by livestock owners are:

No fodder for animals: Due to drought fodder availability has reduced. The forests are now planted with eucalyptus, which reduces the grazing area. Moreover availability of common land has also reduced. Change from traditional crops to cash crops also has added to the shortage of fodder. The communities also lacked awareness about different varieties of fodder that could be grown in their farms.
Non-availability of labourers: Due to urban opportunities there has been a reduction in the number of labourers available in the villages. Moreover grazing of animals is considered a taboo and a job with no respect.
No improved variety: The traditional and local breed of animals are not productive. Buying and maintaining improved varieties of livestock is expensive for the poor.
No veterinary hospital: Lack of veterinary services in the peri urban is another constraint for livestock. There are few veterinary hospitals in and around the villages and very few qualified doctors who can attend to the animals. This has resulted in increased livestock mortality.
Survival of poultry birds: The improved varieties of poultry need certain conditions to survive. Sometimes the birds are unable to withstand the summer heat and perish.
Disease problems for livestock: The improved varieties of livestock also need special care unlike the local breeds. Climatic conditions, clean environment, regular medical assistance are some of the factors that affect their survival. Moreover they are less resistant to diseases.
Water shortage for livestock: Drought and negligence of natural resources and water bodies has resulted in a shortage of water in the peri urban. Tanks have dried and livestock owners find it difficult to manage water for the livestock.
Existence of only local animals: The existing livestock are of local breed and are low yielding resulting in less profit.
Marketing of livestock products: The people who sell milk are unaware of the market and therefore are unable to maximise profits.
No remunerative price for cow milk: In Hubli-Dharwad buffalo's milk is preferred to cow's milk, which gets a lower price.

8.5. Solutions for maintaining improved variety of animals, training of paravets

UAS and BAIF facilitated trainings and exposure visits in the area of livestock management, introducing new varieties of fodder and its management, for improved breeds of animals and its health care. New varieties of fodder were introduced and the farmers were given seeds of *Gliricidia sepium* and Napier grass (*Pennisetum purpureum*) among others. The farmers sowed them on their bunds. Improved breeds of goats and poultry were introduced which proved to be more remunerative. To combat disease problems in the livestock, villagers requested the project to train two people from each village as veterinary workers. Accordingly the livestock owners identified two people who had some basic knowledge about animal health and who were willing to provide services round the clock. Training was given to treat the animals for foot and mouth disease, HS (haemorrhagic septicaemia) BQ (black quarter) and other diseases. The communities also felt that the two trained people should be paid for their services.

8.6. Animal Health Camps and Vaccination Programme

Vaccination programmes for cattle were conducted in all the six project villages. In June 2003, the cattle were vaccinated for foot and mouth disease. In 2004 it was conducted on 3rd, 10th, 17th and 24th of June in the villages of Mandihal, Daddikamalapur, Mugad and Kotur respectively. The response was not encouraging in Mandihal and Mugad. In Gabbur and Channapur, in collaboration with the animal health department, health check up camps and infertility camps for cattle were conducted. In Gabbur it was for the first time an animal health camp was conducted where general treatment, infertility treatment, vaccination and training on dairy animal management was conducted. The experts from veterinary department gave detailed information on various aspects of dairy cattle management like feeding of animals, rearing of calves, important diseases of animals, ways to prevent them, and management of sick animals and breeding. An interactive session was held in which farmers asked questions about livestock management and experts replied.

Dr. Hunshal explains the linkage between the operation of government programmes and the needs of the villagers. According to him *the Veterinary Department have certain programs for livestock, in which vaccination programs is one of them.*[xxi].

In an interview with a farmer Sangappa Vanakki he said *we did vaccinate animals this year after IDS told us its benefits and importance. All these years we never did it. For any problem we tried traditional solutions like feeding kotumbri [coriander]. Now vaccination is a preventative measure from foot and mouth disease. Post vaccination my bullocks are well off.*

Constraints for Vaccination Camps: Organizing vaccination camps were a challenge. Considering the animal population a very small percentage got vaccinated in the camp. Over the years the turnout has increased with increased awareness. As the rate of mortality of the livestock population reduced, the communities realised benefits of

vaccination. To encourage vaccination all the sanghas were offered an incentive of Re.1 to get their animals vaccinated.

Another reason for poor turn out was that livestock owners did not trust the VLIs animals had died in the past after being vaccinated. To encourage vaccination the camps should be held at a convenient time, at many locations and people informed well in advance.

8.7.Fodder Initiatives (new varieties of fodder and fodder management)

Scarcity of fodder was a big constraint for livestock rearing in the peri urban. Drought and lack of land were the main reasons for fodder shortage. This lack of fodder resulted in people selling their cattle.

In another training event at UAS, the farmers were introduced to different varieties of fodder like Stylo (*Stylosanthes hamata*), guinea grass (*Panicum maximum*, signal grass (*Bracharia decumbens*), Napier trihybrid, Gliricidia, Suburban and other varieties. They were trained on how to harvest and maintain the fodder. Scientists suggested that it be first sown on irrigated land and then transferred to the bunds but the farmers did not follow this advice. Despite this the farmers felt that they had a good amount of fodder. Earlier they had to travel far to get fodder but now they had easy access to fodder.

People were encouraged to grow varieties of fodder grass. Different varieties of fodder seeds such as Stylo (Annex B, Plate B14)and Gliricidia were grown on bunds. The people were also trained on fodder management. In Channapur 50 farmers were given Stylo and Gliricidia seeds to sow on the bunds. The sowing was done at the beginning of the monsoon season. The Stylo seeds germinated well and animals have been grazing on the bunds. But the Gliricidia seedlings could not withstand the drought. These fodder seeds were also distributed in the other project villages.

The additional benefit of these new varieties of fodder is that they also strengthen the bunds[xxii]. Nagappa who had sown two to three kg of stylo seeds on his bunds. He said that *it has also helped me to strengthen the bunds around my fields. But with the failure of rains everything dried up. I once again plan to sow it*[xxiii].

According to Hoovakka Patil[xxiv] *I collect two to three head loads of fodder at regular intervals. The fodder in my fields has grown to the height of two feet. I will continue to grow fodder in future too.* Another woman Yallavva Naikar said *Last year the seeds did not germinate due to insufficient rain. This year I have sown the seeds on the bund and they have germinated* [xxv]

According to Dr. Mulla[xxvi]*,* without fodder we cannot talk about livestock. It is the backbone of the livestock. *It takes about 60 to 70 days for the fodder to grow. Then it can be cut and preserved for throughout the year. Also they can grow fodder in some common property under the JFM programme so that each person will get a share of fodder.* Dr Mulla continues, *we have a method of making pickles with green grass. This is called silage, which is an alternative for greens. And for this we are trying to create some awareness*[xxvii].

As not all land is cultivated all the time, this land could be used to grow fodder grass for 60 to 70 days, cut at one stretch and convert it to silage. This can be stored and used through the year.

It was found that nearly 40 percent of dry fodder was going waste. The people were cutting the fodder into two halves. But the animal ate only the tender part leaving behind the stem portion, which the people used as a fuel. Whereas ideally the fodder should be cut into small bits so that the animal does not choose between the stem and tender part. Chaffing reduces the wastage. But dry fodder is only bulk and it doesn't have nutrients. It is a crop residue from the field and is dry and has zero nutritive value. But farmers feed this as they are left with no option. Animals get nutrients only from grains and the other feeds. Unless and until the farmers supplement and support the animals with the grains, bran, oil seed cakes, the animals will not yield good milk. Dr Mulla[xxviii] says *we are going to create awareness on balanced nutrition, feeding of mineral mixtures and other details on feeds. They have no clue about this concept. The people in the villages do not know what is mineral mixture. We are planning to buy some mineral mixture and distribute it to them to see the impact*.

To mitigate the fodder problem, exposure visits were arranged for the farmers to UAS and Surshettykoppa to understand the fodder management better. As a result of this exposure visit one farmer at Gabbur planted of NB21 and guinea grass in half a gunta of land. The seeds were given to him at the exposure visit. Encouraged increase in milk yield he now intends to expand it to 1 gunta in next season. Dr Mulla[xxix] says *we showed them the different varieties of fodder that can survive even without irrigation and also how this fodder can be utilized during the drought seasons. For example Guinea grass and Hybrid Napier are the varieties that grow on their own with one shower. They are non-leguminous grasses and perennial.*

In the year 2003, the project distributed 100-200 seeds packets to each of the 40 farmers who asked for it. The farmers then planted them in their fields, but due to lack of rains for the initial germination, the crop perished. The project distributed the seeds to the farmers the following year with an additional variety called Stylozanthus. This legume is rich in its protein content. Farmers are encouraged to grow varieties of fodder on their bunds so that it not only gives them biomass but also binds the soil. The animals can graze on this or the fodder may be cut and fed. These fodder grasses do not hamper the growth of the crops. This grass is very hardy and does not need maintenance. Dr Mulla wanted to conduct a training program on enrichment of dry fodder. It is a process where salt solution is sprinkled on dry fodder at the ratio of 1:100. The salt is dissolved in 15 litres of water. The Assistant Director from the Animal Husbandry Department, Mr. Vishal Kasralikar, promised to provide one plastic sprinklers or a jerry can free of cost. Another suggestion from Dr Mulla is that if one percent of salt is put in the fodder, the animal's salt requirement can be met.

One sangha in Gabbur purchased a fodder cutter machine. This was made available to them at 50 percent subsidy from the government. The cost of the machine was Rs. 4500. The sangha paid Rs.2250 and the project assisted with Rs 2000 for the electric connections. All sangha members use the machine. Now they plan get a motor fixed and charge a minimal price, which would include nominal rates of electricity used for a set time to each user.

Impact of the training on fodder initiatives: The training in enrichment of dry fodder had a positive impact on the ground. Dr Mulla claims to have heard the farmers benefiting by this intervention. He says *Wherever I have given a training like this the farmers have told me that they saved hay and now they do not have to purchase from the market. The excess fodder is sold and new bundles of hay are stacked every year. This is my success indicator*[xxx].

Hussain's Story…

Siddarud sangha started three year ago and sangha savings increased from ten to twenty rupees. The people were about to start the sangha when many people told them not to as the NGO would take their money and go away. In spite of this they decided to go ahead and formed a sangha. Hussain has taken two loans for buffalos (8000 rupees the first time and 6500 rupees the second time). Hussain has now purchased four buffalos and two calves with the loans. He said now that he owns buffalos he is independent and does not need to work as a labourer. He gets fifteen litres of milk per day that he sells at 10 to 12 rupees per litre in Hubli. Earlier he had only two buffalos that milk for six months and for the next six months they would go dry. During the dry period he bought milk from other people so that he could continues to give milk to his clients. Earlier he sold milk to six houses and now he sells milk to eight houses. He has one house that buys five litres of milk everyday as the family is large.

When Hussain had two buffaloes, he earned five to six hundred rupees a week. Now with four more buffaloes and earns eight to nine hundred rupees a week. When he has saved three to four thousand rupees he plans to buy another buffalo. Earlier people used to work and eat and did not save, as they never had the money. They had not seen notes of high denominations such as a 100 rupee note. Now even small children recognise 100 rupee notes.

Sangha members went on an exposure visit to Tiptur and Sirsi two years ago and saw that their buffaloes yielded more milk when compared to his because of the fodder. They decided to improve the fodder and they mixed ragi in it and fed it to the buffaloes for 3 months. Initially he had two to four quintals of fodder and sold it out 250 rupees per quintal.

Living near the city is an advantage for this village as it is only an hour's walk away. They are able to commute to the city in a short period of time and spend the remaining time collecting fodder. Hussain said that if they were 20 to 30 km away from the city and was landless with no livestock, they would not be able to take up daily activities in their village and would have to go to Hubli to try and get some work.

Hussain said that they did not know the seasons for particular diseases that attack their livestock and many times most of the animal's die. But now they have learnt when the livestock should be vaccinated and the death rate and other problems have reduced. Every Monday a veterinary doctor comes to the village.

8.8.Improved Varieties of Animals and Training of Para Vets

The farmers cannot afford to purchase better breed of animals, as they are costly.

Instead of that Dr Mulla says *we have to introduce artificial insemination using superior sperm*s. One of the main constraints of having better breeds or crossbred animals is that they demand more attention. In all the villages, this is the major problem the livestock owners face. There are no veterinarians residing in or near the village. No immediate help is available at times of emergencies.

A solution identified was to train two paravets from each village who would then in turn look after the animals. While choosing these paravets care was taken to ensure that they had some basic knowledge about animal health and who were ready to visit any house and any time. They were trained at UAS campus for ten to fifteen days. These paravets are expected to take the responsibility of artificial insemination, treating sick animals and so on.

8.9.Poultry

Sangha members interested in raising poultry birds given Girirrani chickens. The project paid fifty percent of the price and the sangha member paid the other fifty percent and transportation costs. Dr. Mulla said, *we have a very good response from the people who have taken the improved backyard poultry as an income generating activity.* Country eggs are scarce in the market and thus fetch better rate. The country fowl has very low productivity. They produce around 60-80 eggs a year, while the improved backyard birds produce about 160-180 eggs.

The improved breeds are Giri Rani, Giri Raja, from Karnataka and Vana Raja and Gram Priya, from Andhra Pradesh. The improved commercial birds are scavengers by nature and peck at anything they get. They do not need much maintenance. These varieties of birds have a better growth rate and sell for a higher price. One problem that was found with these birds is that they cannot protect themselves from predators. These birds are large and slow, don't squawk or fly they are easy prey to cats, dogs, eagles or mongooses. Later people decided to build houses for these birds. A vaccination camp was also held for the chickens in the month of September. According to Dr Hunshal[xxxi], *by and large they have been successful in managing poultry birds. We started seeing that it is really working. Initially the cats and dogs used to come and catch the birds. Now they are part of the village. The other animals and the people have got used of having these birds around.*

Dr Mulla says that these birds are better for their meat than to produce eggs. Not everyone is ready to take up this activity due to the social taboo against rearing birds. (Table A8.1)

<u>Experiences of the members who have taken poultry as an income generating activity:</u>

Backyard poultry gained momentum as it had low investment, high returns and negligible labour required. Most of the chickens were sold for a good price. Two members sold the chickens for Rs 50 each with an initial investment of Rs 25 per chicken and rearing it for two months.

According to Dr Mulla *In Daddikamalapur, one member has purchased one hen and that hen raised eight chicks. Out of eight, two were retained and now one hen started laying eggs*. [xxxii]. In Mandihal, three members have been given 5 chickens each by

UAS. One of the members Ballava sold 2 hens for rupees Rs. 280 and one hen was eaten by her family and two hens died. Girajavva was given 8 chickens of which only three survived. She sold two for rupees 140 and 160 and her family ate the third. In Mugad, many people are engaged in poultry but in very small numbers.

Haseena Kasimsab Amblikoppa from the Madina sangha Mugad bought six Girirani birds the first time and 24 the second time. Of these, three birds were sold when they were four months old for Rs 100 each and the family ate three. Two of the birds laid eggs and the family ate these eggs too. About 12 birds died due to heat and disease. They feel they could make up for this loss by selling the other birds. They do not want to sell the birds right now because they are laying eggs. The eggs of these birds fetch higher prices (Rs3.5/egg) as compared to local birds (Rs 2.5/egg).

Not every IGA is suitable for every family. For example, Shahida Mannanaik, Madina sangha Mugad, bought four chickens. A cat killed three of them and she sold the fourth bird for Rs70 in Dharwad when it was three months old because she was scared that the cat would kill the last one too. She felt she would not be able to continue this activity as she has a small house and does not have any place to keep the birds. Also the birds need more care than local birds.

Mahaboobi Ismailsab Haragi, Madina sangha, Mugad bought four poultry birds for Rs 100. Of these four birds, a cat killed one and the other three were sold for Rs 140 per bird in Dharwad when they were eight months old. With the money she made from the birds she bought plates, vessels and a box for her house. Though chicken activity is a profitable activity and she had a daughter to look after the chicks, she does not want to take up this activity in summer as the birds will die in summer.

Maruthi Hanumanthappa Pujar from Mugad does not want to continue the activity. He bought chickens twice. The first time he bought ten birds and the second time he bought five birds. The cat killed three birds. The rest of the birds were sold for Rs 750. He used the money to buy household things. Though he did make a profit from the sale he does not feel he wants to continue because these birds need more care than the local birds. Also he has no one at home who can look after the birds.

Sanjeev Siddappa Pujar, Maruthi sangha, Mugad bought ten birds the first time and 18 birds the second time. Of this the cat ate three birds. The rest of the birds were sold in Dharwad for Rs 950. He used the money for his household needs. Though the birds grew well the first time, the second time they did not grow so well. Also he feels that the birds need a separate place as they dirty the house, unlike local birds.

Krishnappa, Kotur started with five chickens. They grew well. He sold three of them for Rs 250 each in Dharwad. The family ate one chicken and a dog killed one. Right now he has ten chickens. He has plans to rear about a 100 chickens now.

Anasuya Basappa Sullad, member of Murmuktamba sangha bought five chickens for Rs 125. Two chickens fell prey to the dogs and two were sold in Hubli market for Rs.150 and Rs.140 respectively, when they were eight months old. One chicken was very weak and died. She made a profit of Rs.165. Now she has built a house to protect them. She was happy and wants to continue. Paravva Patil, Basaveshwara sangha got five chickens. A dog caught two chickens. She sold three chickens for the price of Rs.

150 per chicken. She made a profit of Rs.325 and is very happy [xxxiii].

Paravva Tippannavar, Murmuktamba sangha bought five chickens. Of the five chickens, a stray animal killed one, and she sold the other four chickens when they were four months old in Hubli market for Rs.55 each. This was not a good price as they were sold when they were young. Even then she made a profit of Rs.100 that she used to buy roof tiles for her house.

According to Nitturkar, *the Girirani birds were not successful [in Channapur] because they could not fly. Though the growth rate is double in this variety and it is profitable, but the owner has to put in a lot more effort. The indigenous birds roam freely and do not require much maintenance. In Gabbur and Channapur villages no one has asked for these birds again this year*[xxxiv]. But however, after an exposure visit to Kotur and Mugad, where they met women who reared these chickens successfully the Channapur women were motivated to take up this activity. They constructed small chicken houses with support from the project for the roofs and window frames. Now more women are interested in taking up this activity.

8.10.Cattle Feed Trial:

One experiment was conducted where some sangha members were given special cattle feed to improve the quality and quantity of milk. The family had to have two buffaloes for the experiment. One buffalo would be given the feed while the other buffalo would be the control. This was done for three months after which the animal was examined and the milk yields and quality was analysed. The results showed that the both the quality and quantity of milk changed. The quantity increased and the quality improved. The sangha members have not continued to use this feed as they found it expensive to buy. They said they would continue it only if the project continued to give them the feed.

According to Dilshad Begum, Mugad, *Dr. Mulla introduced the cattle feed to me. A total of about 7 bags of 50kg each were given to me. The buffalo improved health wise. They put on weight and the milk yield increased by 1 litre. Even after the buffalo was pregnant it gave milk for 3-4 months, which buffaloes normally don't do. The quality of the milk was good. The milk was thick and the tea made with this tea tasted better. Now I have stopped the feed and the milk quantity has reduced* [xxxv]. Dr. Mulla suggested that she should continue with the feed and Dilshad Begum said that she would try to buy the cattle feed if it was economical.

According to Nilavva *Dr. Mulla told us about the cattle feed and gave us some 4 bags of 50 kg each. Initially the buffaloes did not eat. Then I put some salt and made it tasty for them. Then they ate. The milk yield increased by 1 litre. The buffalo also improved health wise. The milk quality was also good. It was thick. It tasted like goats milk. Now we have stopped the feed. The milk yield is reduced. We need it. If the project gives it to me once again I will feed it.* [xxxvi]

8.11. Improved Breeds

Improved varieties of breeds were introduced for cows, goats and chicken. Shankravva Munavalli bought a crossbred cow for Rs 3,000 that has now given birth

to a calf. It gives five litres of milk everyday and she sells it for Rs 10 per litre. The calf is worth about Rs 1,500. Though she spends Rs 500 a month on feeds and fodder she thinks it is a profitable activity.

Kalavva P Badiger from the Kalikadevi sangha bought a cow for Rs 2,000 with a sangha loan. The cow has been giving one litre of milk a day, which she has been consuming. Earlier she used to drink black tea, as they did not have milk at home. Also the cow dung is used as manure. The cow had given birth to a male calf, which she said she would use it for agriculture work in future. She has now decided to buy another cow. She buys feed for the cow and uses the waste grains and bran as fodder. She pays one person who is an animal grazer, Rs 30/month to graze her cow.

In Mugad the cattle owners sold their milk to Goulis (milkmen) who in turn sold the milk in Dharwad. Though the village has a Milk Producers Co Operative society, the villagers don't find it effective and operational. They find dealing with the goulis better compared to any other milk accumulating agencies. According to the sangha members from Mugad, *There is a milk dairy in Mugad. Milk producers cooperative society is also there but union is not good because lack of cooperation and understanding between the members. Payment by KMF is not good, the process of payment takes more time. Members sell to the milkmen (gouli) from different villages. Here the payment is good and some time members will get credit of rupees 1000 to 2000 from that* goulis. [xxxvii].

8.12. Goat Rearing

According to Dr. Mulla *I suggested not to have a big herd of 15-20 sheep or goats. Male goat or sheep that is 3 months old can be bought from the market after being weaned from the mother.* The young ones automatically get weaned after three months, and then the shepherds take them to the market for selling. They are sold for Rs. 600-700. He also said that *I have asked them to purchase male lambs, give them de-worming dose and multi-vitamin supplements, feed them the grains they have at home, and rear them for another three months, or till they are six months old. At this age they put on a body weight of 20-25 Kg. And if it sold in the market, they can encash it for 1200-1500 rupees. Here too, they can double their money.*

In Kotur and Daddikamalapur sangha members have bought goats. One sangha members got a male goat but it fell ill and was given B complex and de-worming medicines. Goat rearing activity has many benefits compared to the other livestock activities. They need less space, they don't fall prey to stray animals and are not costly to buy. Moreover the women can take it with them when they go to work in the fields. According to Haseena Amblikoppa of Madina sangha, Mugad *I bought a goat through the sangha loan. The goat has now given birth to a kid. I am happy with the goat as it needs less care and it feeds on all kinds of green fodder. Also, I can take the goat to graze with me when I go to the fields.* Mehrunbi Attar, Madina sangha, Mugad also bought a goat from a SHG loan. She said *the goat delivered two kids and the kids can be sold for about Rs 3,000.*[xxxviii] According to Dr Mulla goats need much less care and investment compared to cows or buffalo. Also they do not take up much space. In Mugad and Mandihal too sangha members are rearing goats. Two members bought one goat each with a loan of rupees 2,000 from the bank. The goat has now given birth to two kids. Few others in the project villages are also involved in goat rearing

activity. The milk of the goats is used for consumption.

Parvati Kate Bata and Muthamma Devi…

We started our sangha (in Gabbur) over three years ago and started saving and depositing money in the bank as well as taking loans from the bank. I took a loan twice, the first time I took a loan of Rs.1300 to buy a cow and the second time I took Rs.3000 for repairing my house. I can take a loan of Rs.5000 to Rs.6000 from the sangha. In case of an emergency, we get instant money through the sangha, otherwise I would have had to go from house to house asking for money. The cow that I purchased was not a good breed. So I returned it and purchased a new cow. Since it is new it has not yielded any milk yet.

In our sangha we own twenty-two goats in total and each one of us has two goats. It has been six months since we bought the goats and most of the goats were pregnant. My goat miscarried, but other members' goats delivered two to three kids. One of the goats I had was an adult and the other was a kid. It takes one year for a kid to become a goat and give birth. I received training about how to take care of the goat, on proper feeding of the goat especially during pregnancy, and treating sick goats. We followed all the instructions that were given to us during the training. From our 22 goats there are already six to seven kids. The goats should give birth every six months so the number of goats will increase and we can sell the extra goats in case of an emergency. Since we don't have land I sell the goat's manure to people who need it and earn a profit. We sell goats in Hubli at the cattle market. Earlier I purchased five chickens and now for the second time I again purchased five chickens three months ago. The first time I bought chickens, I sold four chickens for Rs.55 each and a dog killed one. Now we have built houses for the chickens about which we received training in Mugad. We have not received any income for poultry yet but if we sell the chickens we will get Rs.75 to Rs.100. If they lay eggs we will get a regular income. We go to Hubli once in a week to access the market and sell cattle but we don't go there to work. Nobody from my house goes to Hubli to work.

Dr Mulla arranged for a better breed buck from Kurikeri village to promote a better breed in the project villages. It was looked after in the UAS campus for a while and then given to Rustumsaab, in Kotur. Rustumsab rears goats and said he would like to take this buck. However, the buck could not cope in the new environment and fell ill. *Dr Mulla told me that if I can take care of the buck, it would be useful. But I was reluctant as the buck was small. At UAS it used to be kept in a small area, but here it had to walk quite a distance. I used to take it grazing with the other goats. The food was the same here and at UAS. Even though the male goat grazed well it went pale and thin. But I cannot neglect the other goats just because of this one.*[42] The buck was brought back to UAS where it was nurtured back to health.

8.13. Target Institutions (Animal Husbandry Department)

Animal Husbandry is the agency in the government that organizes, maintains the welfare of the livestock and initiates activities related to the health care of animals and livestock management. The department has expressed a few constraints working in rural, urban and in the peri urban. Lack of co-ordination between relevant agencies is one of the factors identified as a constraint in livestock promotion and development in

[42] Interview with Rustumsab, Kotur 2004

the peri urban. Officials, in their interviews, expressed a need for the urban and rural agencies to collaborate to combat this constraint. Dr. Rakesh Bangle, Assistant Director, Animal Husbandry Department, from Dharwad, in his interview said *We would like the HDMC to coordinate with our department. Majority of the institutions in the urban area fall under the HDMC and some of them are still under their control. The HDMC should be given some knowledge regarding the department as to how it works, and what it does. For example fixing times for opening and closing the veterinary hospital. This schedule should be made known to the people. The HDMC should also understand the actual functioning of our department, the drawbacks, and possible solutions. For example, the veterinary hospital falls in the urban area and the livestock are in the rural area. HDMC has to ensure the right amount of stock of medicines for the animals. As of now, the ZP is supplying it. It is possible in the future that there might be a shortage of medicine for urban areas. Since the peri urban villages fall in the periphery of the city and are slowly getting enveloped by the urban, the ZP may not be willing to supply medicines to these areas and may say that as it is in the urban area, only HDMC people should buy the medicines from the hospitals. This is a serious problem, as it is happening in schemes. Schemes are very much particular about rural areas because they are under ZP. So one day the problem might be the same. HDMC is having so many institutions in its area, are not supposed to get any medicine from the ZP. HDMC people only should give the medicines. At least they should know that this is an issue*[xxxix].

Dr. Rakesh Bangle continues *Regarding milk, it is so funny, so far we don't know what milk is coming. Collection of milk, testing for any toxic materials in the milk, is all HDMC people's work. So far we never had any discussions between our department and the HDMC regarding milk. So one fine day we will read something in the paper that this brand of milk contains so much of toxic materials or it is synthetic milk. And that paper will be sent to HDMC people and we don't know what they will do whether they will seize the milk and what happened to the analytical report, whether it is true or false. So for all these things there should be a co-operation between the department and the HDMC people. It is not KMF's rule but HDMC's rule.* [xl]

Quality Control of Livestock produce

Dr. Bangle also expressed the need for standardizing milk quality. He feels that in this context *Our job does not end only with the production, we should see what the people are getting, and whether the milk we are consuming is good or not. At least this should be part of the department. If somebody comes and asks me what actually the milk contains, I should be in a position to answer.* He feels that people should know what kind of milk they are getting. New kinds of milk are in the market, which are urea and synthetic milk. To make milk, urea is added. This is harmful when consumed. According to him *Synthetic milk is not from the animal source. Adding urea and other chemicals makes it harmful. In some cases starch and milk powder is added to the natural milk for it to taste like milk and look like milk. And it is totally dangerous as they add urea to it.* He feels that KMF should take an active part in standardizing and telling people which brands of milk are fit for consumption as they are responsible to the people and for their health.

Quality Control of Meat

Slaughterhouses are another area of concern for both the communities and the government agencies. An immediate attention is needed with regard to the quality of the meat that reaches the consumers. HDMC should collaborate with the animal husbandry department to standardize meat quality also. With regard to this Rakesh Bangle says[xli] *All the HDMC area should have slaughterhouses and should be controlled by HDMC. All of them should have a veterinarian to certify the meat, and to say whether it is fit for consumption. Because of the financial crunch in the HDMC, two posts of vets have been kept vacant, as they are not in a position to pay the salary. HDMC is such a huge faculty. For them paying a salary of 2000 rupees is not a big problem and they should realise the consequences of consuming bad meat. For example, in Bangalore unless the meat is certified it is not sold. The vets at the slaughterhouses certify the meat and then it is released for consumption. If it is a private slaughterhouse these people will go and test the meat there itself and check whether it is fit for consumption. Otherwise the slaughterhouse will lose its licence and will be fined. All the slaughterhouses have been licensed there. Here only 2 slaughter houses have been licensed which are controlled by the HDMC, while others also have such licences, but again we do not know what kind of meat they are selling*.

With respect to poultry Dr. Bangle says *in poultry what happens is that you can see the bird before you buy it. If the bird is sick, it will be dull and will not be feeding and the customers will not buy these types of birds. Poultry is totally controlled by the private people so the meat in the poultry is not of a serious concern. Again the HDMC should licence them, and at least the number of licensed slaughterhouses should be known. They can have a vet who can pay random visits to check if he is giving good meat or not*.

8.14. Peri urban Dimension:

Livestock remains an important livelihood for the peri urban communities particularly the peri urban landless. This is because they have access to the urban households directly and cutting out the middlemen. This can be seen in Chapter 14 where it shows an increase in the number of livestock. Natural resource based livelihoods are still extremely important for peri urban communities. Among these livestock interventions were probably the most frequently accessed by the PUI communities particularly women.

8.15. Impact

Looking at the change in livestock by wealth ranking categories (Figures 8.1, 8.2 and Table A8.2 in the Appendix) the following findings emerge:

- The population of cows has declined among the poor and very poor and increased among the rich
- The population of buffalos has declined among the rich and increased among the poor and very poor.
- Small livestock like goats has increased the most among the very poor (25 goats) while the sheep population has declined across the board.
- The highest increase in livestock has been in poultry among the very poor (104 birds) whereas the rich experienced a decline in poultry.

Figure 8.1: Total Change (%) in Livestock By Wealth Categories

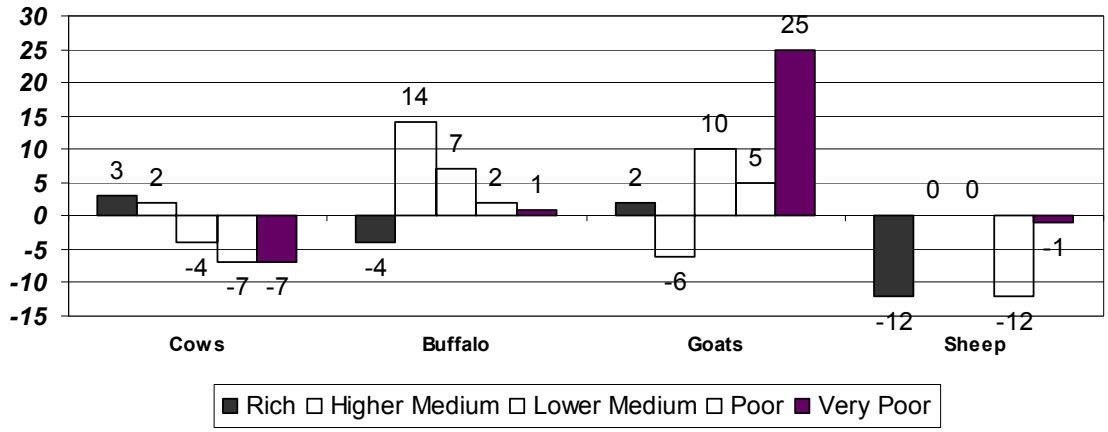
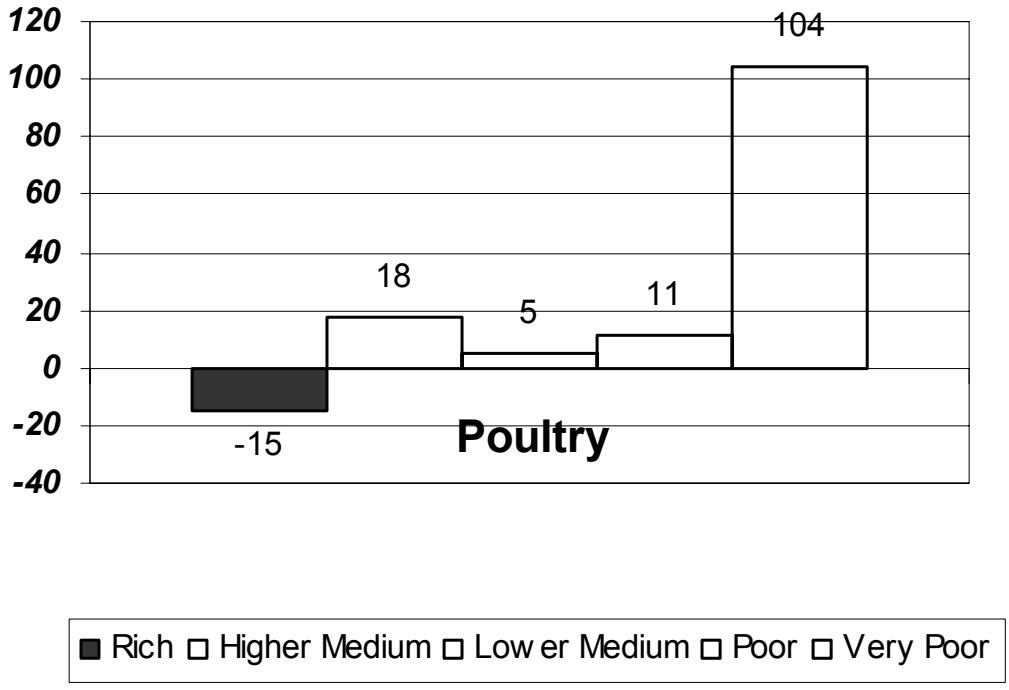
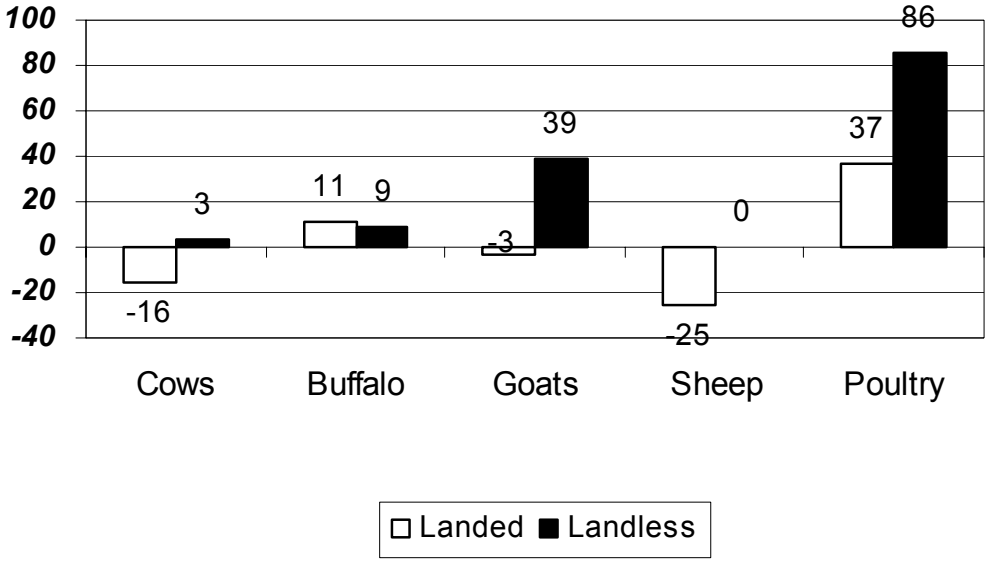


Figure 8.2: Change in Poultry (%)



Thus despite drought buffalo appear to an option for investment for livelihoods for the poor and very poor in the PUI as do goats. Poultry also appears to be a popular livelihood option among the very poor.

Figure 8.3: Change in Livestock by Landed/Landless



Examining the change in livestock for the landless vs landed categories of families (Figure 8.3) the results are better showing that for almost all categories of livestock the population has increased among the landless (with the exception of sheep that has remained the same). However for the landed, while the buffalo and poultry population has increased, cows, goats and sheep populations have decreased.

Thus, for the landless in the PUI, livestock remains an important investment and livelihood option.

Reasons for change as reported by participants (Table A8.3) included the following:

- 10 percent of the families reported an increase due to the project interventions
- 17 percent sold their livestock birds
- Close to 12 percent saw an increase due to reproduction
- Some reasons that could have been more periurban was the lack of fodder and the shortage of labour to take care of animals due to which the animal population declined (1 percent and 3.2 percent respectively)

8.16. Conclusions and Recommendations

The main conclusions included that in the PUI livestock remains a major livelihood option especially dairy and poultry. Major factors that deter livestock activity in the peri urban are the scarcity of land, fodder, water and labour.

- Tanks are the main source of water for drinking for the animals and their rehabilitation can help provide water especially in drought prone areas.
- Agro forestry was found by the project to help address fodder needs.
- Taking advantage of urban markets would help livestock rearers make their living more productive.

Poultry and small livestock are important interventions for the landless as it requires less initial investment and maintenance is low cost.

Interviews with government officials also revealed the lack of vigilance in quality control especially of milk. If government were to test milk quality and then make the consumer aware of which milk products are safe, then large quantities of synthetic milk entering Dharwad market would decline and instead a niche created for fresh produce peri urban producers around Hubli and Dharwad cities.

Among the livestock initiatives some were seen as particularly successful. For instance, the de-worming and vaccination camps, in Gabbur in 2004, 72 buffalo calves survived. Typically the survival rate of calves is extremely low and this year almost all, 90 percent, survived. Just this intervention alone added assets is worth 350,000 rupees. Poultry was also successful albeit not in the first year because people were not used to this new breed of poultry. It took a year for people and the team to evolve methods to deal with improving the survival rates through local knowledge and strategizing and build chicken houses partially supported by the project to help turn the intervention into a sustainable livelihood.

Vaccination camps saw better attendance over the years since awareness was created by the project on the importance of vaccination. In the first year in some villages attendance was very low as people did not know or trust this technique and this resulted in the team changing strategies and raising awareness through the sanghas, which finally resulted in better attendance in the following year.

Goat rearing was successful among sangha women and among the landless. It was introduced as a livelihood option by the project and is one of the successful occupations that have been introduced in the peri urban villages. Now goats owned by the sanghas have reproduced and there is a herd of as many as 25 more goats in the villages, which again has added assets worth 25,000 rupees to the sanghas all of whom are women.

The impact of the cattle feed trials was seen in the form of higher milk yields. However it was unsustainable because it was expensive compared to traditional fodder and the feed itself was not locally available in the villages but only in UAS or in the cities. Thus people did not continue to use this new feed.

Fodder initiatives on the other hand were extremely useful and the fodder that yielded from planting of fodder species in fields, bunds and common lands resulted in a the availability of more green fodder, despite drought.

An important intervention for sustainability of livestock that needs research after the project ends is the performance of Village veterinary workers and Village Poultry workers. As of now they have been trained to deal with the health of livestock. They have been given a kit of first aid with cheap medicines compared to allopathic medicines as they are ayurvedic and homeopathic and this is more sustainable for the village community.

Chapter 9: Crop Demonstrations

Also see Annex L. During the first district steering committee meetings the Vice Chancellor of UAS suggested that as UAS was part of the project the project should make use of the facilities provide by them such as improvised seeds to introduce the farmers to new technology. Through crop demonstrations, known in UAS parlance as 'frontline demonstrations' (FLDs) new varieties of seeds, such as paddy, soybean, cotton, little millet, groundnut, and hybrid sorghum developed by scientists, were introduced to farmers. (For further details on the FLDs also refer to Annex Lon frontline demonstrations)

9.1 What is a Frontline Demonstration?

Front line demonstrations are a method by which some of the improved technologies from the University of Agricultural Sciences can be disseminated to the farmer. Farmers tend to use the same seeds or technologies that they have been using through the years. According to Dr. Hunshal, *to bring in a change, improved production we thought these trials can be given to them. The variety I have given maybe the same that they are using but there is always a change.* When the farmer compares the yield he gets from his seeds to that which UAS has given he will be motivated to change to the new variety. During the demonstration a continuous follow up was planned to understand the differences at the various stages and what were the inputs used and why they were used or why there were no inputs used.

9.2 Methodology

UAS went to the villages met the farmers and told them about the FLDs. UAS staff also inspected the fields as they had certain criteria that had to be met such as fertile soil and that the farmer should have at least two acres of land on one acres he would grow the seeds given by UAS and on the second he would grow his seeds as a control. The farmers were given training on how to grow it and pest control measures.

9.3 Process and problems of choosing the farmers

One concern during the front line demonstration was that of selection of farmers in whose fields the demonstrations would take place. When it was first decided that certain number of demonstrations would be given, the community organisers of each village discussed with the farmers and created a list of farmers. Later, due to unforeseen circumstances, the number of demonstrations was reduced. The farmers were selected for trials in advance and were promised that the seeds will be given to them. But sufficient seeds of Savi (Minor millet) were not available and the number of groundnut trials was reduced. The trials of cotton, Soya bean, and maize were not given. The number of trials per village was limited and it was difficult to select the farmers for trial. Many who were interested were left out. The farmers who did not get seeds or trial plot started demanding some other type of benefit or help.

According to Jyotiappa Mahashetty, Gabbur, *We were told that we would be given seeds. The seeds were given to the sangha. In the sangha were wrote up everyone names on paper and then picked one name and my name was chosen*. For the sanghas

in Channapur, *Cotton seeds, Saavi, Little Millet seeds were given to us. The quantity of the seeds was not enough for 5 people, therefore it was given to me to sow and check the yield. We all decided to let one farmer have it to sow. If this year the yield were higher than usual, then I share the seeds with the rest of us to sow the next year. The others did complain that they didn't get it, but the issue was ended there and none carried any grudge. All those who needed seeds were given the kind of seeds they had asked for.*

R.B Hiremath from IDS felt that, *the COs should ask the farmers to decide whom the seeds should be given to. If there is a selection process without groundwork there will be a quarrel. There will be a problem. It was not a big problem for us in our villages. We went to the farmers and asked them to choose. The farmers are not unhappy about who the seeds were given to. In Mugad the groups have identified most of the people. Otherwise a committee can be formed to choose the people. It is difficult to say that no one is unhappy but it is not a big issue. The farmers who have got the seeds are happy.*

9.4 Types of Frontline Demonstrations

There are three types of demonstrations namely varietal trial, Integrated Pest Management (IPM) and Inter Cropping. In varietal trial the scientists test if the varieties released from the university are superior to the usual varieties used by farmers. This is observed mainly through the yield. Integrated Pest Management (IPM) is a procedure to control pests without using harmful chemicals. Inter-cropping can be defined as growing two crops in proportions in the same field like red gram and Soya beans, in the proportions of 4:2 (4 lines of red gram and 2 lines of the other crop). The main concept of inter-cropping is that if one crop fails, the farmer at least has the second crop to fall back on and does not suffer a complete loss.

9.4.1 Varietal Trial

According to P.T. Goroji, UAS, *There are no major problems regarding crops in other villages, but we can change the crop varieties which are grown there. In Mandihal and Channapur they are growing two varieties of paddy namely, Sali and Champakali. So there we have given Intan, another local variety of paddy, which can give maximum yield. In Channapur they were growing hybrid seeds of sorghum, released from some companies. Now we have given the demonstrations of sorghum varieties like CSS-15, CSS-16, DSV-2, DSV-17, certain hardy varieties released from the university. Keeping all this in view, can we change the cropping pattern, or can we change the productivity in the PU villages through the frontline demonstrations.*

It was decided to conduct trials of Savi (Minor millets), Paddy, cotton and Sorghum in Channapur and five farmers for each are selected. In Gabbur it was decided to conduct trials on Groundnut, Soya bean, Greengram and maize and five farmers for each crop were selected. For this meetings were held in both the villages where scientists from UAS trained the farmers. In Gabbur Dr. Malligwad, Dr. Adiver and Dr. Hallikatti trained the farmers on agronomic and cultivation practices in groundnut and on millets and in Channapur. According to the sanghas in Channapur, *We had a couple of meetings arranged with the UAS officials initially and got information regarding usage of different kinds of seeds. They said they would provide us with*

better quality seeds in that meeting. We used to sow only one kind of seeds every year and that is why our yield has not improved. They gave us little millet seeds. Some were given Ragi and some others were given Jowar seeds. When the UAS and the IDS team discussed with us about NRs and the related problems, they told us that the seed variety used for sowing was not of high yielding quality say for example cotton seeds, the soils are also not yielding good crops, and the water retention capacity of the soil is very poor

According to BAIF staff, *In Gabbur a groundnut varietal trial was conducted. One farmer was given this variety. He found fewer diseases in these variety crops. Size and weight of the nuts was more than the local variety. He has not used the fertilizer. The important one was the control of diseases. Fodder collection both in quantity and quality was good (groundnut plants are used as fodder). He has stored this variety, which will act as seed for the next year. Many other farmers are demanding this variety. Some are even ready to pay for the seeds if they can't get it free from the university*.

Jyotiappa Mahashetty, Gabbur said, *I was told that I would get a good yield so I took the seeds from BAIF. The variety is good. There was no rain so the yield was less. Even then I have seen the difference between the seed I used to use and the seeds that were given to me. I normally get 25 bags of groundnuts but this time I got 15 bags because there was no rain. If there is rain then I can get up to 30 bags. I got two bags this time but I have not sold it because it is of a good variety. I got the seeds in July. There is more oil content in the new seeds given. I have kept 7 bags of groundnut to be used for the next season for 4 acres of land. They did give me some pesticide. I did not use the pesticide because there was a shortage of labour. Neighbouring farmers did come and see my crop. I want to use vermi-compost for my groundnut crop the next time*.

For Nehru sangha and Maruti sangha, Channapur, *The seeds were given to us in the month of June. They also have taken photos of the lands. They also had given hybrid seeds to many farmers, which yielded very high. Even though the rains moistened the crops during the harvest time, the yield was good. The yield has doubled, we got 2 and a ½ quintals of savi from our own seeds, but now we have reaped 4 and ½ quintals from the seeds provided by the UAS. We sold 4 quintals in the Hubli APMC, and retained the rest ½ quintal for our use. About 10-15 kg are more than enough for sowing that has to be distributed amongst the rest of the farmers as was decided earlier. We would not eat it, as it requires a lot of milk or milk products like curds and buttermilk, which lends it a good taste, which we cannot afford. The straw reaped was also useful for our cattle as dry fodder, which too was taller than the usual. It also depends upon the strength of the soils.*

For Gangappa Hanumanthappa Yadravi the story was different. His crop failed because of very little rain. As he puts it, *I possess 4 and a half acres of land, on which I grow paddy, corn, Jowar, horse gram and also cotton by adjusting a yield here and there. They had given us 35 Kg paddy seeds in April 2002 that were destroyed due to lack of rains. After sowing there were scanty rains and the paddy grew hardly for 2 feet in 6 months, flowered and were ruined as the rains did not occur. All the flowers died off. It had come up very well as compared to our previous years crops, but the rains failed to help. I used the remains as fodder for my cattle. I have 2 oxen, 2 bulls,*

a cow and 2 calves, one is a year old and another 6 months old. It was all a complete loss. Since there were rains few days back, I have ploughed my farm 4-5 days back. Our lives are totally dependent upon what our children earn from the daily wages by working in the quarries. My plans are to sow corn, paddy, Jowar and horse gram. Once it starts raining, I shall buy the seeds. We are expecting rains but it is also God's wish. Elsewhere it had rained adequately, it is only in these few regions that it failed. There are chances of raining properly.

Another farmer in Daddikamalapur had sown his own paddy seeds beside the paddy seeds given by UAS so that he could see the difference. He had been given fertilizers, which he mixed with the seeds. He had not been given any further instructions. Pawadshetty said that there is a card against which they have to check the colour of the leaves. Depending on the colour they would have to put more fertilizers. The farmer said that the colour of the paddy leaves given by UAS was better than the others.

Continuing with the frontline demonstrations that took place in 2003, in 2004 too seeds and seed treatment was given to various farmers in the project villages. This year other than just giving new varieties of seeds farmers were also given the following:

- Seed treatment
- Fertiliser management
- Sowing methods (direct sowing methods)
- Pesticides
- Soil sample collection
- Germination trial

In Channapur, Bulla, CO, BAIF, conducted a Farmer's Field School in Integrated Pest Management for Cotton. In the previous year Bulla had been sent for training in the same and this year he transferred this knowledge to the farmers.

The following tables show the list of the trials given in the six villages

Sr. No.	No. of FLDs	Total area	Crop	Village	Remark
1	10	10 acres	Minor millet	Channapur	Varietal trial
2	3	2.5 acres	Sorghum with Soya bean intercrop. Variety Sorghum-CHS 16	Channapur	Intercrop trial 3:6 ratio
3	3	2.5 acres	Sorghum with Red gram intercrop. Variety Sorghum-CHS 18	Channapur	Intercrop trial 4:2 ratio
4	3	2.5 acres	Sorghum	Gabbur	Varietal trial

5	1	15 guntas	Cotton Variety – Abadhita.	Gabbur	IPM trial 5 guntas intercrop with castor-6:1 ratio 5 guntas intercrop with Bhendi-6:1 ratio 5 guntas solo cotton
6	1	10 guntas	Cotton Variety – Abadhita.	Channapur	Dry sowing trial. 5 guntas before monsoon and 5 guntas after monsoon
7	20		Minor millet	Mugad	
8	10		Minor millet	Mandihal	
9	10		Minor millet	Daddikam alapur	
10	2		Soybean/Jowar	Mandihal	
11	1		Cotton/Ladies Finger	Mugad	
12	1		Jowar	Mugad	
13	1		Jowar	Daddikam alapur	
14	1		Cotton	Mandihal	
15	1		Cotton	Daddikam alapur	
16	12		Minor millet	Kotur	24 kg
17	1		Soybean+ Blackgram	Kotur	80kg (soybean)
18	1		Soybean+ Cotton	Kotur	40kg (black gram)
19	1		Soybean+ Jowar	Kotur	16kg

In Gabbur three sangha members *(Ashok Mudhol, Mahadeva and Basappa)* were given sorghum. Their yields ranged from 500kg to 700 kg. They were happy with the seeds.

According to IDS Staff in Mandihal, *Ten members had given two kg of savi. Among them eight members had proper yield of minimum 40 to maximum 60 kg. They used the grains for their family. Fodder is used for their cattle only. Two kg of cotton seeds was given to the one member he had yield of four quintal of cotton and he sold two quintals for Rs. 3600 and two quintals for Rs 4000. Quality of cotton is good. So he got good price for his cotton. Before growing IPM cotton the member use to sell his cotton for Rs. 1600. Even though there was no rain the member had more yield of cotton as the seeds are of good quality.*[43] The farmers of Mandihal said, *seeds of*

[43] Interview with Siddu, CO, IDS

soybean, savi, Jowar, mushrooms were distributed by the agricultural dept. Grass is not grown because of the lack of rain. Of the three and a half kg of soybeen seeds which were given the farmer got one and a half bags of soybeen. Out of 3 kg savi given one bag of save was harvested. Due to drought we didn't get a good yield of Jowar. Of the one kg of jowar seeds grown we only one bag of Jowar. [44]

The farmers of Daddikamalapur said, *Jowar and savi are distributed among the members form IDS. Dhanabai got 2 kg of savi and grown two bags of savi (each containing 40kg). Gouri of Durgadevi sangha has grown Jowar and toordal. She has grown 10kg of toordal and 1 quintal of Jowar. She said it is very helpful to her in providing the food properly and conveniently to all her family members*. [45] Interview with Kanu (2010): *Last year UAS team approached me and introduced the system of intercropping. As the rains failed and the seeds forintercropping was available free of cost I opted for it. In my 5 acres of land only 1 acre I tried for this new system. They gave the seeds of tur dal and sorghum. Intercropping is a good system but it is vary labourioous. The seeds given were also good. But the yield was not up to the expectations due to failure of rains. It is a profitable method of farming. This year I wanted to do but did not dare much due to the failure of rains. If water availability is an assured factor then I will think of doing it*.

In Kotur the farmers explained what they had been given, *People were given savi, Jowar and cotton seeds by IDS. The seeds are of good quality. Because of this we had got better yield than the previous one. Jowar and cotton crops have grown properly and have given better yield even though rain is not there. People are requesting to give more savi, Jowar and cotton seeds.* [46]

Ajambi and Imamsab[47] had been given seeds last year. According to them, *UAS told us it was of good variety. We did not have any seeds or money to buy seeds so when they gave the seeds I accepted. For 10 kg of seeds I get 3 quintal of grains. There were no rains. The grains were smaller. The yield of our type and this new type was the same. If we had to buy the seeds it would have cost us 130-140 per packet. Other people have said that the fodder is good. The cattle ate the fodder. Earlier they never used to eat this fodder. The fodder was more tender. This year again they have been given seeds. One acre they have grown sorghum and on two acres they have grown maize.* As they had worked hard UAS decided to give them seeds this year too. This year they have given sorghum and maize.

Farmers in Mugad said, *In UAS members have taken the 2 days training. UAS has supplied seeds of Jowar, toordal and saavi seeds are supplied by BPF. We could not do any thing because of the failure of the rain. Some people grow saavi in very small quantity*.[48]

According to Kalappa D Gali[49], *UAS gave me cottonseeds to sow. Initially I doubted it but then accepted it. They had asked me to sow at a gap of 2 feet by 1 foot, but I did*

[44] Interview with Sangha members, Mandihal
[45] Interview with Sangha members, Daddikamalapur
[46] Interview with Sangha members, Kotur
[47] Kotur
[48] Interview with Sangha members, Mugad
[49] Mugad

not do so. Because I had sown ladies finger which is a insect preventative crop. The seeds were of good quality but the crop yield was not so satisfactory because of the failure of rains. So could not assess the outcome of the FLD. But I will try once again. This year I have not tried because of personal problems but next year if the rainfall is good I will try it.

For Laalsab[50], *Last year there was drought. We did not have money to buy seeds. We got these savi seeds from the sangha. We sowed it. But the yield was not successful because of the lack of rains. The quality of the seeds was good. The size of the crop was more compared to the other seeds. We will try once again. This year we did not try because initially it rained well and we sowed paddy. We did not eat it so we are unaware of the taste*.

Mallesh Kori[51] was introduced to intercropping of sorghum and toor dal. He has traditionally intercropping in the ratio of 4:1 but UAS asked him to do it in the ratio of 2:1 but he does not prefer this method. He says in this system the gap between the two sees is small so the sunlight does not reach uniformly to all the crops. He thinks it is not productive. The traditional method is better.

9.4.2 Integrated Pest Management (IPM)

Goroji explains further *For example, if you take Mugad, earlier about 60-70 farmers used to grow cotton of the 800 farmers in total. But if now you take the data, you can find hardly 4-5 farmers growing cotton. That is mainly because they are not aware of the control of pests that attack cotton. They say that the cost of cultivation is more than the output they are getting. There are several technologies where you can control the pests without investing much in the cultivation. The cost of the insecticides is very high, which they can't afford. So now we have released some of the pest control measures that are affordable. Similar problem holds good for groundnut at Kotur and Gabbur. They have grown it, but there are several major diseases attacking groundnut. Fungal diseases like Sclerosim rolphegia, commonly known as boost (in English).*

According to Goroji *At Channapur we have given a chemical treatment to the cotton seeds with a chemical like Imatoglophide. Cotton seeds were treated with the chemical, that controls the boll worm and sucking pests. Initially we have provided them the chemical free of cost, in order to create awareness. Next time if they need they can purchase it from the market. About 5 g of the powder is to be applied to a Kg of seeds before sowing them. This lead to the control of the sucking pests, like aphids, thrips that suck the sap of the plant and Heliothis boll worm to the maximum extent. The farmers are very much surprised about it because, the plot treated with this chemical is fully free from the sucking pest and the boll worm. On the contrary in the check plot where he sprayed another chemical he usually did, 3-4 times there was no control of the both the pests. although the plots are adjacent to each other, there was no cross-infestation from the check plot because the chemical helps in increasing the immunity of the treated seeds, which become resistant to the attack of the pests.*

[50] Mugad
[51] Interview with Mallesh Kori (4724), Mugad

Secondly, we have also asked the farmers to grow ladies fingers (bhindi) all along the borders of the plot. It is a very cheap mechanism and one can grow it easily. We have also provided them the seeds of the same. A single row of this has to be grown all along the border of the field. The purpose of having this is the boll worm of lady's finger will synchronise with the boll worm of cotton, means the boll formation takes place at the same time. Heliothis boll worm instead of attacking the cotton will attack the lady's fingers. So automatically the pest population is controlled. This mechanism was not known to the farmers earlier. It is a very cheap alternative. Once the boll worm attacks the lady's finger they are to be pulled out by roots and discarded.

There is a 75-80% of eradication of the boll worm. The farmer gained almost double the yield as well as income as compared to the check plot. When you compare the cost-benefit ratio in the demonstration plot, while in the check plot he had to spray chemicals like ecolex almost 4-5 times, which costs more than he has to invest in the lady's finger. It would cost him about 400 rupees per litre.

Only one farmer carry this out in his farm as we have selected only one farmer for IPM demonstrations. A single farmer is selected from each village because who has to pay for the seed treatment chemical? The concerned scheme has to give. And they have the limited provision to afford a single demonstration in each village. Now that the farmers are aware of this technique of controlling the pests, the other farmers are also willing to take this up in their farms. We took about 25 farmers from Mugadh, DKpur and Mandihal for exposure visit to this village. They are very happy and have learnt the technology and want to adopt it. Even all the farmers from Channapur have visited the farm to learn the same.

Similar case holds good for groundnut in Kotur, where too an IPM trial was conducted. There we gave to the farmers GPBD4 seeds, which are fungus resistance seeds. Moreover, we asked the farmer to treat the seeds with rizhobium and trichoderma. These two are seed treatment microbial cultures. 200 g of this culture is to be applied to one acre of land. The seeds are to be treated or smeared with this culture an sown. Both of these would hardly cost 60-70 rupees. This helps in controlling a major disease like Sclerosim rolphegia. It is a fungus, the growth of which is held up by trichoderma. The plants wilt and fall within 30 days of the fungus attack, after which it is a complete loss. Sometimes 50% of the plot is damaged. Most of the farmers were facing this problem.

After this treatment we have observed the groundnut crop in the entire farm to be completely free of this disease. We again took the farmers of Mugadh, Mandihal and DKpur to Kotur for a visit. And most of the farmers of the same village have seen the plot and have observed and learnt the technology. This year most of the farmers are interested to purchase the microbial cultures. Most of them were asking me about it. They never did anything else for treating or avoiding this disease. They didn't know of any technology or any other remedy.

This technique is highly economic, as the culture costs only 60-70 rupees. While fungicides would cost 300-400 rupees per litre, and even if you spray them 2-3 times, they cannot control this disease. Secondly, GPPD4 variety of groundnut is itself is resistant to rust disease, another fungal disease as well as other fungal diseases. This is a variety released from our university, for the seeds of which you have to approach

us every time. Because of these two factors, farmers are convinced and are asking for the seeds of this variety.

And interestingly the university has purchased the seeds from the farmer by paying a higher price to the farmer, as the role of the university to multiply the seeds, to further sell them to fulfil the needs of other farmers. They have paid rupees 1600 per quintal of groundnut seeds, while the market rate of the groundnut seeds is 1300-1400 rupees per quintal. We have to convince the farmers for buying the seeds and that is why we pay a higher price, otherwise they would deny to sell them. But initially we have given almost 50 Kg of the seeds free of cost, which cost us 800-900 rupees.

One thing that went wrong with this trial was that the farmer had used ladies finger only as border crop. But he should have done intercropping too. Also Pheromone traps were not properly installed. Despite this the yield was good. According to BAIF, *he got 7 quintals of cotton in one acre. The maintenance cost was less. Reduced the use of chemicals. Saved money as number of sprays was reduced. Normally they give 4 to 5 sprays but here it was only two. Another person who has sown the treated seed from some other company did not succeed*.

Later when the crops had grown field days were conducted where farmers of Mandihal, Daddikamalapur were exposed to demonstration plots in Channapur. Farmers were impressed by cotton demonstration where seeds were treated with Imidacloprid pesticide and ladies finger was sown on the borders of plot.

It is hoped that if the farmers keep seeing new varieties of crops giving higher yield every year they would start using these better varieties of seeds. They would also be motivated to come to UAS on their own to buy the new varieties. According to Dr. Hunshal, *What needs to be done. So we have a questionnaire where we ask them why did they take up the trial. They may say because the university gave it to us. This question is repeated after the third year and then people may say it is a good concept. Or they may say that the university is a recognised body and they have good seeds and we do not have good seeds with us. Next year we will have more number of farmers because we will be conducting some kind of field day where all the farmers will get together where they see the crop, we educate them and more people will start to say we will also grow this. It spreads. This year it maybe 10 people, next year it may be 100 people. If it can increase in this ratio then probably improved variety of seeds can occupy a larger area in the peri urban area. In Channapur you will find that with the intervention of UAS scientists that farmer does not see insects or pests on his cotton crop. Where as in other fiends where this is not done the crop have diseases. They are spraying. This fellow has not sprayed. You can see a marked change. That is why we want to make it more participatory as well as scientific study on this. So when Goroji goes when the plant is flowering he will measure the length of the plant. So by this you find that people start accepting new technology. And if there are any lacunae you can come back and tell the scientist look the problem is this can you rectify it. In the meanwhile we also see that some of the good scientists train the farmers. Not continuously. The sorghum man has visited, the paddy man has visited, and the groundnut man has visited once.*

9.5 Germination Trial

A germination trial was done in Gabbur to understand the best methods to sow in sewage-irrigated areas. There were three plots each for wheat, sorghum and maize. The plots were as follows:

- Flat bed 2x2 metres
- Raised bed 2x2 metres
- Ridges and furrows 2x2 metres

The germination rate for each was compared. It was found that the ridge and furrow method gave the maximum germination. This was followed by the raised bed method. But, the farmers said that the ridge and furrow method was expensive and would not be able to follow that method.

9.6 Farmer's Field School

A full season (seed to seed) session of farmers' field school on IPM practices in cotton was conducted in Channapur. Nitturkar explains, *FFS in IPM in Cotton is Farmer's Field School in Integrated Pest Management in Cotton. Bulla, Co, BAIF was sent for a six-month training programme, which he conducted for the farmers in Channapur. FFS is a seed to seed training. That means from sowing of seeds till harvesting. It runs through the whole season. It is focused on the IPM practice and not on spraying chemicals. In IPM nature takes care of all pests. If it is beyond nature then one can spray herbal pesticides and if that does not work then chemical pesticides can be sprayed. Biological control and natural control are parts of IPM. One farmer is selected as a collaborator every week and on a fixed day at a fixed time all the students come to that farm to observe. The experts and bulla demonstrated. The farmers observed the plants, insects and pests. Insects are helpful to the plants growth by eating the pests. There are helpful and harmful insects and both will be killed if pesticides are sprayed. If the useful insects die more than the pests then the growth of pests will not be controlled. So it is very harmful to use pesticides. The insects eat thousands of pests thereby checking the growth of the pests naturally. This actual demonstration will be given to the farmers at the farm and the farmers will then do the same in their lands. First the farmers have to sow traps crops around the cotton crop. Bhendi is a good trap crop. Then there is seed treatment, where the seeds are mixed with some chemicals. Pesticides and chemical fertilizers were not provided. Seed treatment chemical was given and later pheromone traps will be given. The insects give out some smell that attracts the insects together for reproduction. There is a trap and a capsule of pheromone that attracts the insects towards the net and become trapped. Therefore the need for pesticides is reduced. The farmers were trained on how to use these traps. Equally system analysis that mean at a given time, there will be 100 pests and 100 predators and other factors will be also there. Which is the type to excess frame. We take sample and to the test of the pest and (E. T. level economic thresh hold level is there) peadator proportion. If the peadators are less than the proportion level of maintaining the pests then it is advised to use sprays. Cotton doesn't need more water like other crops. It needs less water. Here they can grow cotton as a regular crop.*[52]

[52] Interview with Nitturkar, PO, BAIF

Twenty-five cotton-growing farmers were enrolled for the school. Weekly classes were conducted for these farmers from sowing to harvesting of cotton. Every the farmers were trained about the activities to be carried out in their field. Apart from theory classes the activities were demonstrated in the field of collaborator. The session covered[53]

- Layout and design of plot
- Seed treatment.
- Sowing technique.
- Sowing of trap crops.
- Defoliation trials.
- Identification of pests and predators.
- Ecosystem analysis.
- Insect zoo
- ET level of pests
- Harmful effects of chemical pesticides.
- Biological control of pests.
- Importance of birds in pest control and importance of trees as bird perches.
- Use of pheromone traps.
- Use of non-chemical pesticides
- Harvesting of cotton and estimating production.
- Comparison with control plot.

Impact:

- As this was a draught year less incidence of pest and disease was observed.
- Farmers spent less on spraying with no reduction in yield.
- No poison hazards.
- Increased awareness about importance of tree
- Protection of ecosystem.
- Identification of pest and predators on land by the farmers them selves.
- Analysis of pest and predator population and decide the use of control measures.
- Awareness about natural predators particularly birds.
- Use of locally available bio pesticide.
- Reduction in expenditure-reduced production cost.
- Awareness about ill effects of over use of pesticide.

Channapa, a farmer in Channapur was one of the farmers who underwent the FFS in IPM in cotton. He was given a powder (gocha powder), which was applied to the seeds before sowing, and he was also given some pulses that he was asked to grow around the cotton. Together, the powder and the pulses would help reduce the number of pests and insects from attacking the cotton crop. Earlier when the farmers used insecticides and pesticides they used to kill both the helpful insects and the harmful pests. The helpful insects were helpful because they used to eat the eggs of the harmful pests. *One time I have used pesticides to the cotton crops even though Bulla told me not to use it. I thought that if I don't use these pesticides I might not get proper cotton yield. But now I came to know about the disadvantages of spraying pesticides and insecticides. Therefore in future I will not use pesticides and*

[53] *From BAIF monthly reports*

insecticides. Chemicals kill both type of insects helpful and harmful. Here helpful insects died more in number than the harmful insects. The harmful pests will develop very fast and the helpful insects grow very slow. This will spoil the growth of cotton. If we don't use spray then it will balance the plant naturally. Earlier I had the yield of two quintals of cotton and this time I got four quintals of cotton (without using pesticides). So this time I enjoyed more profit than the earlier. I saved nearly Rs. 1000 which will be spent on the pesticides. I have two advantages by not using chemicals 1. I saved money and time by not using oil spray, 2. I got more yield.[54]

9.7 Problems

Another problem, which arose, is that while most of the scientists promised to come to the village they either came only once or they never came at all. According to Jyotiappa Mahashetty, Gabbur, *UAS came to my field and saw the crop. They wrote down something and went. They did not tell me anything else*. On the on the hand they wanted data of the crops which the RAs had to collect. As Goroji explains, *There are several chances of pressure from the concerned schemes, when we give our demonstrations. "We want such information about the crop, we want the date of sowing, we want the survey number, and we want to visit the field". "See some scientist from Hyderabad is visiting next week, so you be here." "Some scientist is coming from Delhi, go and show them the plots". So there are several pressures on us, on me particularly last time. There were several officials to come, so they said, "Goroji, you have given the frontline demonstration, you go with them and show them the plots." Again we have to request to the CO's. This lead to heavy work on both the RA's. many a times, they just called for information like the survey number, data for this, that data and this data on the telephone, and we have to go and collect that. Many other times they want to interview the farmers, we have to take them to the field. These were the problems generally. However, we have managed to solve them last time.*

Main thing that went wrong in the process was selection of the people and change in the number of trials. May be the number of trials are out of control of the University team of the PUI project. They told us some number, we in turn assured the farmers and they it didn't happen. Strategy adopted was different in different villages. In Gabbur, for groundnut two trials were assured. There was lottery for selecting these farmers. We got one trial, so there was a lottery system. This helped in solving the problem as five members were demanding for the trial and we had space for only one.

In Channapur, savi seeds were promised for five persons. But we got seeds for only one and we were asked to distribute it among five farmers. When we discussed with they said, if we all five distribute it will not be enough even for a row. They themselves decided to give to one person.

One more thing about these trials is that they are not suitable for small and marginal farmers. Small farmers sow half acre cotton, half acre jowar and cannot put one type of crop in one acre. This is a problem only for poor farmers for big farmers the FLDs are not a problem.

[54] Interview with farmers in Channapur

While there have been problems in the selection and distribution of the demonstrations, the crop yield, despite bad rains, have convinced the farmers and some of them have even kept some seeds to sow the next season. Some of the farmers are even willing to spend money and come and buy the seeds from UAS for the next season. While planning this year a few precautions are been kept. UAS will first find out definitely how many demonstrations are available before the farmers are told about it.

According to Goroji, *Their response was appreciable. The frontline demonstration seemed to have helped them a lot, because they said they were not aware of the technologies like IPM and others. If the farmers are interested to have this variety of seeds they will have to tell us. We will contact the concerned scheme and they will provide the seeds.*

In most of the villages the farmers are just using their own seeds from their earlier yield, without incorporating the recent agricultural technologies that have come up. The farmers should be in touch with the university in order to get seeds that would give higher yields. There are several chances that they can have better varieties, that are also disease and pest resistant, for which they should be in constant touch with the universities. Secondly, the frontline demonstration can be given to only few farmers in the village. The good thing about these demonstrations has been the better yield that most of the farmers have got. Now most of the farmers know how to control pests and diseases without investing in and applying the chemicals in their fields. And they can always guide the other farmers.

Control of pests by about 80% has been a major success in our demonstrations. Increase in the yields by about 25-30% can be the second indicator of success. We have gained a very good opinion of the farmers which is essential in any program as such. They are very happy with us. Increase in the fodder yield is yet another indicator of our programs' success. Reduction in the use of chemical fertilisers and pesticides also can be considered one.

The farmers can reduce some of the adverse effects on the water by avoiding the use of chemical fertilisers and pesticides. Thereby the drinking or domestically used water is not contaminated by such chemicals. Due to almost all the demonstrations, the farmers have reaped a better yield, they can get better price from the urban markets, therefore their livelihood can be expected to be better.

A weedicide trial was held in Gabbur. Three participants were chosen and experiments were conducted on tree crops and vegetables using four tryes of weedicide. According to BAIF staff, *in two plots result was not favourable. In one plot the result was good. In the other plots instructions were properly followed. If we conduct the weedicide trial immediately a day after planting, then it will be effective. Otherwise if we spray it after three or four days, by the time weeds would have already grown*. There were some problems while doing the weedicide trial. *Land preparation was delayed. When the UAS people came land was prepared. So only one out of three plots could survive. In the successful plot out of four chemicals, two were effective*. An indicator of success would be if there are no weeds after using the weedicide. Nitturkar feels that, *this trial is not yet complete. Out of three locations, it was a failure at two locations. That too only two chemicals. There is no data to*

compare. At least if we had got the data of two plots then we could have told which of these were effective. At least if one crop in all the three plots were effective, then we could have compared. I personally feel that the trial should be repeated again. This trial was done to make some recommendation. That this variety is good for you being used in your area. But we don't have other data to validate the information from this plot.

9.8 Peri-Urban Dimensions

According to BAIF, *Access to the university helps them to have good inputs. Villages around the city which are the peri-urban villages are usually linked to the University. People have easy access to university inputs. They learn about new seeds and other information. Rural people are dependent wholly on dealers*. To sum up Nitturkar says, *In terms of results some were successful and some failed. Anyway it is a trial. They are bound to fail somewhere. During the process there were some peri-urban aspects*.

According to Dr. Hunshal, *FLDs have made some changes but we have not been able to really make an impact. For example the same crop was given to ten people. One person got 5 bags, another got 3 bags and a third person got 1 bag. My question was why is this difference. The soils are the same, rainfall is the same but it is the farmer who is different. So I am trying to see if urbanisation has had any effect on the crop. The farmer may not be able to work everyday in the town he is not bothered by agriculture. He just wants to grow it and see if he can get a better yield. The farmers are happy with the FLDs. They have said for example that for little millet, though the yield was the same they were happy with the harvest because they could use the stalks as fodder. The soybean gave them a better yield than the one they traditionally use. The groundnut variety we gave them had a better resistance to disease and pests than the variety they used to use. My point was that if their varieties gave them two quintals and if the university variety gives them three quintals then they should use this better variety. Awareness about the varieties is not there with the farmer because of a number of reasons. One is that they do not get the seeds on time, they may not go to the right person to buy the seeds and even if they get there they may not get the right variety of seeds. These are all the constraints of the farmer getting the seeds. They will have to maintain their seeds. In the case of millets they have all retained their seeds and they will use it again this year. Spreading of a variety is not easy it takes a few years. For example if you give ten people in a village then the next time you will find 20-30 people using it. Thats all. It a village like Mugad it will take a longer time. Process is very slow in the adoption of a new variety. The reason why they are happy with these varieties is that they are of a shorter duration than the other ones. The traditional ones take longer and therefore they need more water. These varieties take a shorter time to harvest and therefore they need less water. The hybrids and improved varieties take a shorter time to mature.* [55]

According to Goroji, *The PU aspect of this component is, if you take the example of Intan, the paddy variety the seeds of which are specially used for making puffed and beaten rice or flaked rice. If they get better yield from this variety they can sell it to the urban area. It has got a high demand as it is exclusively meant for commercial*

[55] Interview with Dr. Hunshal

purpose and it fetches a higher price. If Sali and Champakali fetch rupees 400-450 per quintal, this variety is sold for 600-750 rupees per quintal. Thereby their livelihood increases.

Dr. Hunshal analyses why people have not adopted some of the techniques, *They had a cotton experiment in Channapur and the farmers were convinced. Why cannot people just use bhindi*[56]*? They just ignore it. Everyone knows that growing bhindi reduces the number of pests for the cotton plants. With this knowledge at least 20-30 farmers should be doing this. But they don't do that. When there is a big difference (from one quintal to four or five quintals) in the harvest then the farmers adopt the new practice. But when there is a marginal difference then they do not adopt it. Also maybe the farmers in these villages do not use as many sprays as the other farmers do in irrigation projects. The numbers of sprays are hardly four or five. We have to see what people do in the next season. If they adopt it then they are convinced, if they don't then we will have to find out why they have not adopted it. I keep telling my RAs they have to go and ask why this man got one quintal and the other man got five? You also see the size of the family, the other livelihoods they have. Are they solely dependent on the land or depending on some other activities. If they have a number of activities and he is getting income from other sources then you can say that land is a secondary thing for him*.[57]

On the peri urban effect Dr. Hunshal says, *Conducting an FLD in the peri urban and in the rural areas is a lot different. He has a lot of other opportunities and is not bothered. Also millets give low yield anyway. Per acre you get some two to three quintals maximum. He will not get much money from it so he does not bother. Many of them grow it for their consumption. Why does the cropping change in peri urban areas? Cropping patterns have changed in Kotur to less labour intensive crops such as Mango. There was a large area under paddy and that has shifted to maize. Tobacco used to be grown in Kotur. This has happened because people commute. Tobacco is a cash crop but it is labour intensive and the young people do not want to do that. They go off to the factories and the older people are left to look after the land so they have to change the crops to lesser intensive crops. In Kelgeri how many people really work on their land? When it starts to flower or fruit they give it out on contract. All of them are working in Dharwad and many of them from Kelgeri are working in Karnatak University*.[58]

Dr. Hunshal talks about the difference between conducting trials in a research station and in doing frontline demonstrations; *traditionally for three years we do a trial of an FLD in a research station. In a research station you are not stimulating the condition of the farmer. The research station is well endowed and is luxurious. The problem of the farmer is something else. You are trying to address something else here. Once three years are over you send it for a trial in a larger area. Then the department for agriculture conducts it in the farmer's fields for the next two years. Then it comes for recommendation in the sixth year. If you go back and see the farmer's fields it variety does not exists. This happens because you have not felt the pulse of the farmer, which we call as a farmer's participatory research. We are trying to do that now. We are trying to identify people for an exposure visit where we can show them that if you do*

[56] Ladies finger or Okra
[57] Interview with Dr. Hunshal
[58] Interview with Dr. Hunshal

like this then this will happen. Then they themselves will understand. They say yeas we should have done this in our village, we should have planted this across our bunds. They start thinking and when we sit together and decide what is to be done they themselves will tell you. That is what is called as participatory research. If they encounter a problem with the crops, then that is a problem that the scientist has to solve. There is always a difference of doing on the university and on the farmer's land because the farmer's condition if different and the crop performance is something different there and something else here. The crop can be very good on the university farm but not very good there. It likes luxurious things. In the farmer's field it gets only 25-30 percent of the inputs we give it. So it is not happy. Some other variety maybe happier. So farmer participatory research is very important and my team is quite confident of doing that. That is a capacity they have built. The capacity building of the PUI team has been very high.[59]

[59] Interview with Dr. Hunshal

Chapter 10: Livelihoods

10.1 Nature of Poverty

Also refer to Annexes E, F and G.

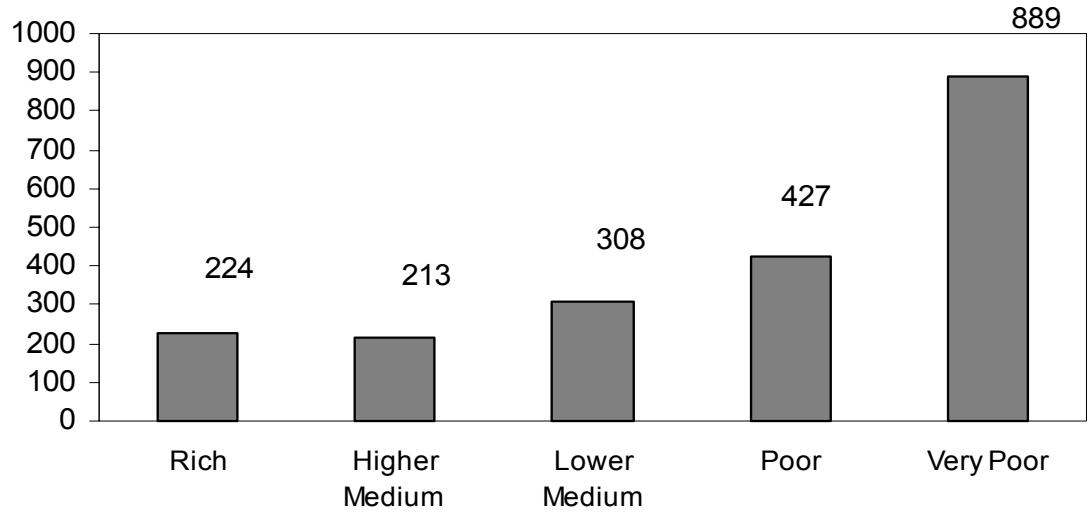
The first step in the project was to identify the poor. There has been broad criticism about traditional measures of poverty. Therefore alternative methods were explored to measure poverty and identify who are the poor particularly in the peri urban context.

As a result of these explorations, it was decided that the team would work with the communities to conduct wealth ranking exercises across the six villages to categorize each household into the following five wealth ranking categories:

- Rich
- Higher Middle
- Lower Middle
- Poor
- Very Poor

The break up of all 2,098 households across these wealth ranking categories have been provided in Figure 10.1 and Table 10.1 in the Appendix.

Figure 10.1: Number of Households in Each Wealth Category



For the methodology of the wealth ranking exercises please refer to the Chapter 3 on Research methodology.

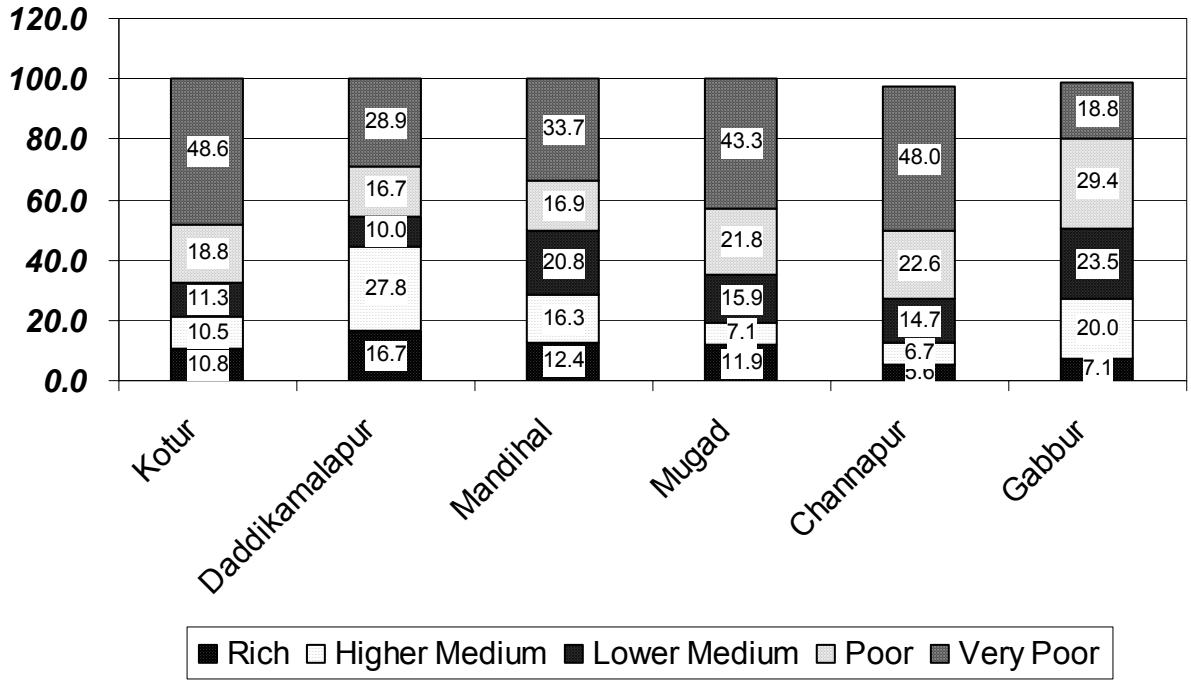
Wealth Ranking Categories

- The highest category was the very poor comprising 42.2 percent of the total number of households, followed by the poor (20.3 percent).

- The rich comprised only 10.6 percent of the total households surveyed.

Wealth Ranking by Village

Figure 10.2: Wealth Ranking by Village



In Channapur and Kotur close to half the population belongs to the very poor category.
In Mugad 43.3 percent of the population belongs to very poor category (Table A10.1). Gabbur had the lowest proportion of people in the very poor category (18.8 percent) but it had the highest proportion of people in the poor category (29.4 percent)

Adding up the proportions of poor and very poor in the villages to identify the primary beneficiaries, it can be seen that Channapur had the highest proportion (70.6) followed by Kotur (67.4 percent). The village with the lowest proportion of poor and very poor populations is Daddikamalapur with 45.6 percent followed by Mandihal (50.6 percent). For details of the characteristics see Annex on Livelihoods.

Comparison of Households by Income and Wealth Categories

Categorizing households into both wealth and income categories findings show that:
- The highest percentage of the very poor (49.2 percent) and the poor (42.6 percent) as per the wealth category classification are concentrated in the income range of 5,000 to 10,000 rupees per anum (Table A10.2).
- Only 5 percent of the very poor fall in the higher income categories
- About 35 percent of the very poor are either earning below 5,000 rupees or between 11,000 to 25,000 rupees.

- The lower middle class (like the poor and very poor) have the highest proportions of their households in the income ranges of 5,000 to 10,000 rupees.
- The upper middle classes have their highest proportions (33 percent) in the 11,000 to 25,000 rupees range but have at least 26.3 percent in the 5,000 to 10,000 range.
- The rich however are more or less equally distributed between the 5,000 to 10,000 (24.1 percent) and 11,000 to 25,000 (25.4 percent) rupees ranges.
- One interesting finding is that the rich are present in every income category. Likewise ever the poor and very poor are actually present in the higher income ranges.

Thus looking at the poor and very poor we see that it is fairly consistent with income categories. However seeing that the rich and other classes are also concentrated in the same (lower) income categories as the poor and very poor, it suggests that income is not as accurate a measure of poverty as is generally accepted. The other factor that may have skewed results and cannot easily be controlled for is that people do not give accurate income estimates and can often report lower amounts. The second factor that leads to inaccuracies is that agricultural incomes vary from year to year based on the rains, markets, prices of agricultural inputs and several other variables.

One reason for discrepancies among the poor may be due to the urban job opportunities where as found in Kotur despite being landless having a factory or urban job provided them a regular income which could put them into a higher income category. The reasons why the rich may have lower incomes is despite owning large amounts of lands, due to rain or crop failure or market gluts, their incomes for that year could have been low it they could simply have underestimated their income for the surveyors.

Comparison of Households by Land Holdings and Wealth Categories

Among those who reported having any land a comparison of land and income categories is shown in Table A10.3.

- The highest proportions of the poor (42.9 percent) and the very poor (44.9 percent) have between 1 and 3 acres of land.
- The highest proportions of the rich (31.8 percent) have between 5 and 10 acres of land.
- At least a fourth of the higher middle, lower middle and poor classes also have between 5 and 10 acres of land.
- About 17 percent of the very poor have between 5 and 10 acres of land.
- Not very many the very poor (13.2 percent) or the poor (6 percent) have less than an acre.
- The higher middle class is spread out equally between 1 and 10 acres.
- About 15.9 percent of the rich, 27.1 of the upper middle and 30.3 percent of the lower middle classes also have only between 1 and 3 acres.

This shows that land holdings in these villages mostly seem to be small. It would be difficult if only land and income were taken as criteria to distinguish between the classes. Wealth ranking thus provides a more nuanced picture of the nature of poverty particularly in the PUI.

10.2. What Defines Poverty in PUI According to Participatory Wealth Ranking

The following section describe local perceptions of the characteristics of different socio-economic categories in each of the six villages. The community was asked to classify each family into the wealth categories and provide reasons. The following section summarizes the reasons for classification in each category[60].

- Rich: The common criteria included owning land, owning a house, and having a factory or government job. While all village communities provided possession of land as a criteria for a family to be classified as rich but the amount of land varied from one acre to 24 acres across the villages. In at least four villages, having livestock as an asset is considered to be a sign of wealth. Some of the villages seemed to have stronger peri urban definitions of the rich such as Kotur and Gabbur. In these villages, factory jobs, showroom jobs, owning auto rickshaws, running STD booths, having horticulture plantations or being a lorry driver all pointed to specific urban opportunities. Trading as an occupation, working in institutions such as UAS, land being converted into residential plots or to horticulture plantations, renting out of homes, are all specifically peri-urban options, which have been associated with opportunities for being wealthy. Social criteria such as being a member of the school betterment committee or a member of the Gram Panchayat that raised the social status of the individual was also seen as a criterion of wealth. Running a business especially a Grocery shop is seen as lucrative.
- Higher Middle: Here again owning land and owning a house is seen as minimum criteria for a family to be classified as wealthy in all villages. Type of land is also seen as important be it fertile or irrigated and then even owning one acre is sufficient for a family to be seen as wealthy. Additionally in most villages having more working members and less dependents are important wealth determinants. Again specific peri urban opportunities were mentioned such as holding government jobs, working as bus or lorry drivers, being a mill or factory worker or a bus conductor, being a pension holder, getting compensation for loss of employment, working in a hotel, working in courier service, tractor agency, private service, being a private doctor or a lecturer. Mention has also been made of having male children, bucllocks and buffalos, owning a vehicle, owning machinery such as a threshing machine or a borewell, running businesses such as grocery or tea shops or doing dairy, pottery or running a petty business, as criteria for being wealthy.
- Lower Middle: Here owning land is seen as a criteria but the amount of land is as low as less than an acre in some villages, to between 6-7 acres. Here land being not fertile or having more dependents, physically handicapped people or having more children, especially female children are all seen as characteristics that lower the family status. However having women work is seen as a positive wealth determinant. Alcoholics is seen as a determinant of poverty. Peri-urban opportunities include working as a postman or a watchman, working in a garage, telephone agency, selling vegetables, engaging in trades such as being a paddy

[60] Refer to Appendix 2: Characteristics of Different Wealth Classes in "Dynamics of Peri Urban Poverty and Alternative Livelihoods for the Peri urban Poor." Paper presented by Anasuya T. Patil and Meera Halkatti in Conference *The Peri Urban: A Bridge for Rural Urban Collaboration*, Feb 8-9, 2005, at The Capitol, Bangalore.

merchant, having plantations, being a pension holder, getting urban technical skills were listed as urban opportunities to earn wealth. Half the communities saw owning livestock as important. Having a village job such as anganwadi workers, or being a tailor, owning equipment such as chilli pounding machines, tractors which can be leased out, tempos are seen as lucrative.

- Poor: The poor have been characterised as owning no land and working as agricultural labourers or owning a small amount of land of between 1 and 4 acres, or leasing out their land. Other characteristics that keep people poor are having alcoholics in the family, having fewer working members, large family sizes, more dependents, more small children, more female children, and having handicapped or sick people. The peri urban features related to poverty include having more expenses in a family due to lot of in-laws coming because of proximity to the city, and type of work including working as labourers in the UAS farms, or as workers in the quarries or doing goundi work. Staying in a janatha plot, not being able to save, share cropping, or owning small animals such as sheep are other signs of poverty.
- Very Poor: Being landless and having no home was seen as most communities as being very poor. Having sick, aged, or handicapped members in the family, more children, small children, female children, female-headed households, being agricultural labourers, being homeless, indebted and having alcoholism or other bad habits were other characteristics of the very poor. Type of work done by the very poor included agricultural labour, quarry work, work in hotels, firewood or bangle or egg selling, work in fisheries or in brick making or laundry work. The ability to avail of only low income urban jobs or being unable to avail of any other urban opportunities was a feature of the very poor in the PUI.

Overall the characteristics used in the description of different socio-economic categories were based mostly on ownership or access to land, occupation, ownership of machinery and equipment, diversification of activities by family members and ownership or type of house. Social or human capital also plays a role in the wealth characterization. Skills and technical knowledge was seen as having a positive impact on livelihoods and alcoholism a negative impact on livelihoods in almost all villages except Daddikamalapur. In almost all villages the very poor included those having more dependents, widows, or nobody working in the family, beggars, handicapped children and more female children.

Thus wealth ranking takes more than income or land into consideration in the determination of poverty. It takes into consideration the following aspects

- Dependents captured not just by larger family sizes, but the ratio or working to non working members and the existence of the sick and aged members.
- Having female children or widows or female headed households are all listed as indicative poverty. Some of these gendered characteristics have monetary implications such as expenditures likely to be incurred for marriages of female children where as others like widowhood has lower social status which is perceived by the community as affecting overall well being.
- Alcoholism also has both social and economic implications for poverty. Economically expenditure on alcoholism lowers family disposable income but also has a social stigma attached to it. It affects family relationships and gender relations.

- The peri urban dimension of poverty is positive in that urban opportunities provide a buffer during times where agricultural work is unavailable due to seasonality or drought.
- The type of work also distinguishes the poor from the very poor from the medium wealth group. For instance, more insecure work is seen among the very poor. More menial jobs are seen among the poor and very poor where the primary distinction is ownership of small holdings vs landlessness. The medium categories work is jobs which seem to be salaried or earn income off leasing out assets or being engaged in trades.

The majority of interventions were with the poor and very poor Table A10.4. Of those who received interventions 67.4 percent were poor or very poor (Figure 10.3). These livelihood based interventions took place in stages which began with sangha formation and ended with provision of revolving funds. The following sections will detail these interventions which included the following

- Sangha formation
- Savings and credit
- Building bank linkages
- Training and capacity building
- Group purchase
- Initiating income generating activities (IGA)
- MOVE
- Revolving Funds
- Matching Grants

10.3. Forming a sangha

IDS and BAIF started work by forming sanghas from the planning phase itself. Where there were sanghas already in existence, efforts were more towards reviving or strengthening them. The NGO staff living in the village visited every house to talk to the women about sanghas and the advantages of being in a sangha. In two villages, Mugad and Channapur there were existing sanghas. In Mugad, IDS had worked in the village ten year ago and had formed sanghas at that time. Some of these sanghas still exist. In Channapur, another organization working in the village had also formed women's sanghas. Once the sanghas were formed, they are trained on how to run a sangha, how to conduct meetings, how to save, how to conduct bank transactions, internal lending, livelihood activities or dealing with community based issues. The formation and strengthening of sanghas is a continuous process. For more details on sanghas formation refer to chapter 5.

10.4. Savings and credit

After forming a sangha, the group starts saving, sometimes immediately and sometimes it takes them a few weeks. The groups meet weekly and save a small amount of money each week to build a common fund. Most sanghas use this money to provide loans to their members, undertake income-generating activities and to bear the costs of members going to government offices and banks for sangha work. The groups keep their records and manage their own money. They learn how to manage a

bank account. All members, on rotation, go to the bank to make deposits and withdrawals.

Thrift and credit activities help the poor access money to meet their immediate needs and also decrease their dependence on moneylenders for loans at high interest rates. One consequence of saving has been the elimination of past debts.

According to Thuljabhavani and Durgabhavani sanghas, Daddikamalpur, *Once the sanghas began, in the next week all the members deposited ten rupees each. This went on till five months and thereafter the entire amount was deposited in the bank. We started lending money internally after about eight months of sanghas formation, i.e., in about November.*

According to a sangha member from Gabbur *I have taken a loan of Rs. 5,000 from the maha sangha to buy groceries for my petty shop and to also start a banana business. I buy bananas from Hubli and sell it to small shops. I took the loan four months back I have repaid Rs. 4,000 and I still have to repay Rs. 1,000.*

According to Mallavva from the Gramadevi sangha, Gabbur *I took a loan of Rs. 5,000 from the maha sangha and I bought a buffalo. I already had four buffaloes. I get 2-3 litres of milk from the buffalo I bought. The buffalo I bought was about deliver and it cost 7,700, so I put in 2,700 of my own and bought the buffalo. The money I get from selling the milk is my only income.*

10.5. Bank linkages

Every self-help group has a bank account where they deposit their savings. Initially they keep the savings with the sangha. As the savings increase a bank account becomes essential. Also the bank is an institution with several facilities which people need to be exposed to and use. The first step is to open a bank account and deposit the money. A bank account represents a safety mechanism where people know their money is safe and they can get it back. They learn how to deal with the banks and interact with officials. They learn about official interest rates, the interest rates they are charging in the sangha and about future possibilities for getting bank loans. Also bank accounts are essential to get access to government programmes. According to Thuljabhavani and Durgabhavani sanghas, Daddikamalpur, *We are all used to the bank procedures now, but initially it was very scary. We go in two's or in singles to the bank. All the members go to the bank in turns. The bank is in Mugad village.*

Several examples of uses of loans taken by sangha members have been provided below:

- The Malaprabha Grameena Bank, Mugad, provided Rs.500 per sangha member to all the sangha members of all the sanghas. Durgadevi sangha for instance received Rs.6500, for there were 13 members in all in this sangha. According to the sangha members *Few of us bought feed for the cattle, one amongst us bought a chicken, and one of us got home a buffalo after paying the remaining amount of the 5000 rupees. I have 3 months to repay the loan. While I have borrowed Rs.2000 from the sangha, the bank gave Rs.500 and the rest was from my own savings.*

- *I (*Prema Badiger*), repaid the loan amount taken from our sangha that was overdue, which was to be returned to the sangha with an interest of 3 percent. The bank loan amount of Rs. 500 was additional. And I am returning the bank loan at an interest rate of 5 rupees per 100 from earnings from my sewing business. I stitch school uniforms, blouses and petticoats, and so on.*
- Another woman had borrowed money from someone in the village with an interest of 10 percent which she repaid with the bank loan. Pawadshetty then advised the woman that the bank loan is to be used for production not to repay loans. She therefore returned it to the bank by borrowing Rs.500 from her neighbour.
- One sangha member said that she bought fodder for buffaloes with the bank loan. By consuming this fodder the buffalo yielded better milk, about half a litre more than usual, which is sold in Dharwad by her son who also goes there for work. He gives this money to her.
- Poultry gained momentum despite drought. One woman bought a hen with the bank loan. She collects the eggs and let them hatch, multiplies the chickens and sell them at the rate of Rs.80-90 to Rs.150-200, depending upon the health and size of the chicken. The chicken business is most lucrative around the festivals.
- One sangha got Rs. 26,000 and another sangha got Rs. 20,000. Three people brought buffalos and three people built house roof and one member purchased betel nut for her husband and opened a pan shop also.
- B.B. Fatima Sangha from Kotur has taken loan of Rs. 5,000 from Vijaya Bank for Agarbatti making. Bank Manager and Mr. A. A. Attar who supplies raw materials for the agarbathi making visited the SHG. Two SHG members have purchased raw materials worth Rs.10,850 for the production and sale of Agarbathi.
- Two sanghas have got loans from MG bank in Mugad for Rs 20,000 each. One member from Akkamahadevi SHG purchased a buffalo. Other members have also purchased cattle, poultry, goats, tailoring machines, started a petty shop, bangle vending and one member even bought a smithy kiln stone.

10.6. Training and exposure visits for IGAs

Training and exposure visits have been an important input for the sangha members to improve their livelihoods. All the sanghas have been trained on the sangha concept to bookkeeping and accounts maintenance and also in economic development and natural resource management. Training on savings and credits, creating awareness, bank transactions have also taken place. Exposure visits to different places has raised the awareness on income generation and dealing with government agencies. Now the poor and especially the women feel more confident to talk to men and to get work done through government agencies.

According to the Tuljabhavanai sangha members from Daddikamalapur *We were initially taken to Channapur, a village nearby Hubli as well as Arvatgi, Kittur, Kotur and UAS. We learnt about Rabbit rearing for meat and housing loans lent through the sangha account to the members in Arvatgi. There were also people who had bought buffaloes with the help of the sangha loans. In Channapur, we met members who were sowing cottonseeds and plantation of neelgiri (eucalyptus) tree saplings. In the UAS, we all saw how fodder for the bovine was prepared and also a feed chopper. We also*

saw cows, buffaloes and chicken. We have all started small-scale business. Also we bought green fodder through our sanghas, after we all went around for exposure visits.

Mehoobi from Channapur describing the importance of exposure visits talked about how because of the exposure visit only did she decide to build her orchard.

Box 10.1. Learning About Orchards

We received Rs.1.5 lakhs from the SJSY program and 14 members received 14 buffalos. We started wadi six months ago. We have two buffalos, one is our own and the other is from SJSY. In an exposure visit to Tiptur I saw wadi. We didn't know how to cultivate crops and grains, we only knew how to cultivate dry land crops. Then BAIF told us how to do wadi. We own seven acres of land.

.

Impact

We have only known about wadi for six months. We did not know there would be a positive change in yield, but now we are seeing increased yields. The only benefit I received was the green fodder, which I gave to the buffalos. After we joined the sangha we learnt to feed our buffalos from our own lands. We got enough green fodder for one to one and half months. We never went to other's lands to feed the cattle and the quantity of fodder was better on our own land. So this was a huge advantage for us. We found that we had greater yield and a longer milking period. Before joining the sangha the animal used to yield only two litres per day but now it gives nearly two to two and half litres per day. Because of the increased yield we were able to produce more butter.

I make curds and butter from the milk, which I sell in the market in Hubli. I sell curd on alternate days for Rs.40 to Rs.45 and I sell butter for Rs.60 to Rs.70. Because of drought the buffalos yield much less because there is a shortage of fodder. This has affected the production and selling of milk. The sangha only gives loans of Rs.2000 to Rs.3000 which is not enough to buy a buffalo. I have decided not to buy any more animals because there is a lack of fodder.

Peri Urban Effect

Since I have started wadi, I want to concentrate only on my land. If the buffalo gives milk, I will sell it, if not I am not going to invest in another buffalo. Selling butter and curds is easier than working on other's lands for Rs.25 a day as a labourer. I go to work in the morning at 8 am and come back by 12 noon. The rest of the day I work in my field. Agriculture and dairy help me equally. Agriculture provides food throughout the year and dairy provides money for buying small items. Since the city is near I can go and sell milk and curds.

Interaction with other stakeholders

I went to UAS for an exposure visit. I benefited from this because as a result of this visit I started Wadi.

10.7. Group purchase

According to Thuljabhavani and Durgabhavani sanghas, Daddikamalpur, *We used to talk, and discuss about what all activities that could be taken up through the sangha in the meetings. After four weeks, when everyone started saving and about 300-400 rupees was collected, we all started purchasing ration for the sangha members. We discussed in the sangha amongst the members about the group purchases and decided to do so on our own. We all learnt that there could be a lot of profit if we do group purchases. Besides this we learnt about the wholesale and retail type of market. IDS gave us clue as to how we could do it. We bought items such as edible oil, soap powder, sugar, matches and we also brought saplings from the Forest office, like, curry leaves and guava fruit trees. We sold the saplings here in the village. Also the transport charges were incurred on the sangha account.*

Group purchase in an initiative unique to IDS, which helps introduce members to money transactions, wholesale and retail rates and so on. Group purchase helps women save money and this plants the seed towards beginning small income generating activities. Group purchase is taken up as a first step towards Rural Enterprise Development Programme (REDP) activities. Simple things like buying soap and selling show them how businesses are run, how much profit they can make, how much profit middlemen make and how much can be saved. Through this they understand money, the market, market dynamics, and how to do business together.

10.8. Initiating IGAs

According to Nitturkar *We will have to think individually when we talk about activities for the communities in the peri urban. If it is a group activity then it means more production that is followed by marketing problems and other such things. Each individual's skills will be different. This is peri-urban feature. They have varied skills. Now we are trying to improve their livelihoods through linkages.* Thus periurban communities require a different approach keeping in mind their varied skills and the issue of marketing as many of their activities are driven by urban demand.

The communities in Gabbur and Channapur were helped to procure dairy animals while some sangha members started goat rearing, nursery and vermicompost. Two women who have taken up nursery have worked with some forest nursery in the past. Since they had some prior experience with this activity, they started doing nurseries. Rural populations have mainly agriculture based skills and capacities.

Several strategies are used to improve people's livelihoods including building their credit history, credibility with banks, teaching people vermicomposting, agro forestry and other natural resource based livelihood strategies. In fact it is interesting to see that bank loans have been taken for natural resource based livelihood activities but many of these activities have a ready urban market. For example, In Daddikamalapur, the women from the Tuljabhavani sangha, took loan of 6500 total for the first time and for the second time rupees 24000. The first loan of Rs. 6500 loan repaid. Through that they took chickens, goat and buffalo. A few birds died. Out of the remaining birds she got 18 chickens. They plan to sell chickens once they grow. Besides this they purchased in-group on wholesale base some provisions and sold it. They got rupees 600 profit and it has been deposited in bank.

Box 10.2 describes how Neelama a sangha member in Channapur from Sujala sangha was trained in an NR based livelihood activity such as vermicomposting.

Box 10.2: Natural Resource Based Livelihood Activities: Vermi composting

This Sangha is one year old. Due to this sangha formation the women have got awareness and got the experience to go outside. Earlier the women used to listen to the men and do as they said. The men did not allow the women to go out of the house but now all this has changed. This is a new sangha and have activities like going to the bank. The members are given chance to go to bank in rotation and Neelamma's turn has not come yet. At sangha meetings they discuss their problems and find solutions. Neelamma has not yet taken loan. The bank people have visited and given some information about loans and they have promised to help the women in the future. Sangha has given all the people knowledge and awareness. People have reduced drinking because the sangha members have stopped the sale of alcohol in the village. Sangha women wanted the drinking of alcohol to stop. So they spoke to the men saying not to drink. Some men continue to drink from outside but they return to their houses and sleep and they don't disturb anyone. Due to this there is an increased saving of money at home, which is used in the sangha.

Neelamma said that she attended a EDP training on income generation activities that included papad making, chutney making and roti making. Before that she was doing vermicompost. She was trained how to do it on scale. She had been doing vermicompost for one year before she was trained. In the beginning the crop she grew was unsuccessful. After that she got one yield. She used paddy and the third time she used straw. She used maze leaves and guava leaves. She learned that using the leaves the crops grow quickly. The best gobra she got is from the first experiment. The leaves made the crops grow more quickly. Neelamma spoke about her process and they said that she was doing fine and she could continue doing the same. When they formed their sangha BAIF gave her the idea to do vermicompost. She saw people doing it in the village and she got help from Bulla. He gave her the worms. She dug the pit, she got guidance from BAIF. Bulla said to make shade for the vermicompost. She planted castor along the pit to provide shade for the pit. Not enough shade was provided for the pit. The quality of VC was good and helps to retain the moisture in the pit and the worms are more active and their multiplicity increases. Temperature is more optimum and if exposed to the sun the activity of the worms goes down.

Neelamma has four acres of land. She has produced ten quintals of compost. For her cotton crops on 1 ½ acre she applied seven quintals of compost. By application of vermicompost the moisture is retained in the soil for a long period of moisture and plants grow freely and healthy. She got five quintals of cotton in less then a year. The previous year she got only one quintal using DAP fertilizer. The yield is higher because of the new compost. Last year she used three pesticide sprays and chemical fertilizer. This year she used only one pesticide spray and organic fertilizer. She used to spend one thousand rupees on chemical fertilizer which she saved this time. This time she spent only two hundred rupees on spraying and four hundred rupees on pesticide. She used less pesticide because the crops were healthier. Neelamma got more yield of cotton this year that is 4-½ quintals per acre. Minimum was ½ quintal per acre. She earned five thousand rupees last year from the sale of cotton. This year

she got 2 quintals for Rs.4600, and she sold another two quintals for Rs.2100 rupees each, the last one quintal was sold for Rs.1500 rupees. She sold this in Hubli, APMC. She goes once or twice a week to the market where she purchases everything she needs. She is happy living near Hubli.

One member from Akkamadevi sangha bought a buffalo. Some of the sangha members want to take up making rotis as an IG activity. In Mandihal village Sri Devi sanghas has purchased two goats and Durgadevi sanghas of Daddikamalapur has purchased two buffalos and in Krishna sanghas two members have taken loan for the purchase of bullock cart for dairy.

Livelihoods that were successful which were not based on natural resources included agarbati and soap production both of which had strong marketing strategies and components. Box 10.3 provides an illustration of how livelihoods using diverse marketing strategies which are more possible in the PUI can become successful.

Box 10.3: Diverse Marketing Strategies: The Agarbatti Case

Bibi Fatima Begum Stree Shakti Sangha (Stree Shakti SHGs are a Government initiative) members were inspired to start manufacturing agarbattis after watching a television serial called Bhagirathi. In the serial the heroine works in an agarbatti factory and wants to start her own unit at home. She leaves her job and sets out to manufacture agarbattis on her own at home. She goes through many ups and downs in her life and slowly expands her business.

Inspired by this the sangha members decided that they too wanted to start manufacturing agarbattis. They did not know where to go and how to start. They asked Borekar a community organizer from IDS to help and he took them on an exposure visit where they were given basic training on agarbatti making. From then on he has been helping them with training and exposure visits. In the beginning they had a lot of problems but they were determined to continue as the heroine in the serial too had faced many problems and she succeeded in the end. They incurred a loss of Rs 3,000 but they still continued.

Today they have been selected for the SGSY loan and they got Rs 50,000 from Vijaya Bank. Of this money Rs 25,000 was a subsidy and Rs 25,000 was repaid along with the interest. Once this was repaid they got the second amount of Rs 50,000. With this money they have taken two rooms (paying a rent of Rs 1,800) on rent where they make the agarbattis and store the stock. They have also bought a fresh stock of raw materials (For Rs 10,000).

The sangha members work only for one week in a month. In this week they all collect in the rented room and work from 12 noon until 4pm after they have finished all their housework. The rest of the days they work in the fields. They meet once a month where they discuss their agarbatti production and marketing, the problems they are facing and how to solve it. Each member earns about Rs. 2200 per month but this money is deposited in the sangha and the members have not distributed among themselves as yet.

They have diverse marketing strategies. They supply agarbattis to shopkeepers in Kotur and in Hubli. They also sell in other villages such as Mishrikoti, Herehonnalli, Kalghatgi, Bhairidevarakoppa and other villages surrounding Kotur. They also send packets of agarbattis with their husbands and sons who travel to different places as truck drivers. They also come to IDS office every month and sell there. They also go to the TP and ZP offices and sell there.

The women also attend fairs and exhibitions held for handicrafts and cottage industries and sell their products there. They have gone to the:

- Gram Shree Mela conducted by CAPART. There they sold about worth Rs.4000 and had a profit of Rs.2000.
- Mahila mela at the Glasshouse in Hubli. *There we sold the product worth Rs.3000 and had a profit of Rs.2000.*

In both above said exhibitions were good experiences in marketing. *We learnt to interact with the people and to convince them.*

In one of the exhibitions staff from Hindustan Lever Limited (HLL) and the Joint Director of Women and Child Welfare Department were invited as judges. Among the seven agarbatti making sanghas they found judged the Kotur sangha the best.

They have asked shopkeepers for feedback and suggestions and accordingly the women improved their production. Currently they produce nearly 100 dozens of packets per month and sell them. Presently they are getting orders from the shopkeepers to supply agarbatti packets. The sangha collects the order. The product is distributed equally among members to sell. At the next sangha meeting they deposit the money they have earned and take new packets. In one month they sell product worth Rs.10, 000 earning a profit of Rs.4000 per month. To date the women have deposited Rs.20,000 in the local Vijaya bank.

Many people have visited the sangha to learn about their work. Some members from CEDOCK had visited the Agarbatti production unit. The sangha members are confident about their production and marketing. They now want to register their business. One of the problems they have been facing is that of brand name. They were using packets with some different name already being printed on it. But because of this now many people are accusing them of being fake because they are using names of other brands. They now want to get a name of their own and register it. They have identified many names but have not yet decided which name they want to finally choose. Once they register it then they will get packets with their name on it and they will have an identity of their own. The president of the sangha was to go to Bangalore on the 4th of May to get their brand name registered. They have been registered but they have not yet selected their brand name.

Other women in Kotur wanted to work for this group but the sangha members feel that they do not have enough business as yet to take in other women. In the future they do want to take in other women and expand their business. They have already started employing a few women outside the sangha to make agarbattis. They now also plan to expand their business to candle making. They have also registered to get a coin phone that they can install on their lane.

See Annex B, Plates B22, 23, 24.

10.9.Revolving funds

Sangha formation has been an important strategy to organise the poor, especially the women in the peri urban. To sustain the activities and support the sanghas, village federations of sanghas were formed consisting of members from the sanghas who rotate. Revolving funds were given to these federations, which would in turn on lend to the sanghas. The revolving funds would help the sangha members access higher amounts of credit and would also generate funds for the federation to sustain its activities. Members of each federation decide on the rules and regulations of managing these revolving funds.

Considering that availability of credit is a major problem for poor in the peri urban villages and moneylenders were exploiting them, supporting the federations with revolving funds increased both the unity and self-reliance of the sanghas and the members.

Initially the sanghas did not have sufficient amount to meet the credit needs of members so most of internal lending was for consumption or emergency purposes. Revolving funds provided adequate funds to finance economic activities.

The revolving fund in Gabbur was routed through mahasangha. An initial amount of Rs.30,000 was given to mahasangha as a capital grant from the project, which in turn was given to its member sanghas. The sanghas prioterised the utilization of revolving fund for income generating activities. As the sanghas utilized this money in a proper manner, the project arranged to release an additional amount of Rs 20,000 as revolving fund to mahasangha from its central pool fund. This money remains with mahasangha, which gives loans to its member sanghas for lending to their members only for income generating activities. The sanghas taking loans from mahasangha repay the amount within agreed period. From this revolving fund six sanghas have been given Rs 10,000 each and each of them have to return Rs 5,000 to the Mahasangha within six months. Sangha members have taken loans from various activities such as buying buffaloes and goats. It has been shown that they key constraint to expanding income generating activities or starting new ones is availability of credit. Revolving funds have been a vital catalyst.

In Channapur the mahasangha has not yet been formed. Each of the sanghas was given Rs 10,000 towards the revolving fund. Rs 5,000 were given from the central pool of funds and 5,000 were given from BAIF project funds. This amount will be on lent to the members towards IG activities only. After six months, by which time the Mahasangha will be formed, each sangha will retain Rs 5,000 in their accounts and return Rs 5,000 to the Mahasangha. At the close of the project, the intention is to link Channapur SHGs with those formed during the EU project in the nearby Surashettykoppa cluster.

In IDS villages a revolving fund of Rs 10,000 has been given to the VDS. This will be on lent to the sanghas for IG activities. In Kotur the VDS has 22 members and have started a bank account. Each of the sanghas contributes Rs 10 to the VDS every meeting. Before they started the VDS sangha members were taken on an exposure visit to see other VDS.

10.10. Matching grants

In Gabbur and Channapur, BAIF gave sangha members 50 percent matching grants to either start a new activity or to improve their current activity. This was a strategy designed for the landless. The maximum grant they would provide was Rs.3,000.

In Channapur, three male sangha members were given matching grants. One member expanded his grocery shop, another bought an air compressor for his tyre repair shop and the third bought raw materials for his photo frame business. Presented below are some of these stories. It must be remembered that the members had just started and the activities are still new (Box 10.3 and 10.4). BAIF has not targeted landless women but plan to do so in 2005.

Box 10.4: Matching Frames

Madivalappa S Kammar is a member of the Maruti Seva Sangha. He comes from a family of carpenters. When his father was alive, his father, his brother and him used to make farming tools and also do some blacksmith work. They also used to make photo frames and sell them at the various fairs. After his father died the brothers could not keep up with the photo frame making business as they had to go to the city and work as carpenters. When he got to know that BAIF was helping landless sangha members he approached them to restart his photo frame business. To get his raw materials he needed an initial capital investment of Rs 6,000. BAIF said that they would give him half the money (Rs 3,000) and he would need to raise the rest of the money himself. Now that he has bought the raw material for the photo frames he and his family will cut them to different sizes and take them to the next fair. The fairs that are coming up are in Yellamana gudda, Godachi, Singnoor, Sogal, Yamanal and Siddaruda fair in Hubli. He does not want to sell his goods right now as there has been three years of drought and the people will not have enough money to spend. He estimates that he can earn anywhere between eight and ten thousand from his current production and can make a profit of about two thousand rupees. He says sales depends on the mood of the people who come for the fair. If people have the money and are in the mood to spend then he can sell more. It also depends on the nature of the fair and the season when it is held. In Channapur itself he is not very eager to do business, as he knows most people will ask for credit and not pay him on time. Yet if someone from Channapur requests him, he does do business with them. He has learnt this business from his father but is ready to learn more. He now wants to learn how to laminate photos, as that is the latest style. He is also willing to teach others as he feels that it is important to share knowledge.

Box 10.5: Granting Tyres

Khaddar Sab is a member of Nehru sangha. He started his puncture repair business two years ago. Earlier he used a hand pump or a foot pump to fill air in tyres. This was not only time consuming but also used up a lot of his energy. When BAIF offered to assist him he decided to buy an air compressor. BAIF gave him Rs 3,000 and the remaining Rs. 6,000 he raised to buy the compressor. He has taken a loan from a moneylender at a 10 percent interest. He has put up a board in front of his shop announcing his new machine but people are not yet aware that he has this machine. He feels that in time as people start coming to his shop they will pass on this

information by word of mouth. His expected clientele is from nearby villages and the trucks that go to the brick-making unit in Channapur. The villages he feels he can cover are Giriyal, Rampur and Chourigudda. Though in Chourigudda there is a puncture repair shop they do more welding work and he does not seem to think they will take away any of his clients.

To repair the puncture of a truck/tractor he takes 30 rupees (per puncture) and 15 rupees for the two wheelers. To fill air in the tire he takes 2 rupees. Presently he is earning 30 to 40 rupees per day. With the help of Air Compressor machine, he can work with less time and energy. He is also engaged in goundi work (construction of building). There he is getting 100 rupees per day. Slowly he wants to improve his puncture business. His son also helps him in his business. He has full confidence of getting more business and profit within three or four months. Then he wants to leave his goundi work

10.11. Conclusions

The nature of poverty is different in the PUI with urban opportunities creating the potential for the poor to improve their livelihoods. In fact diversification was found to be higher among the poor and very poor in the PUI. The skills of the peri urban poor are diverse. With the project interventions on poultry and livestock (Chapter 8), on farming systems (Chapter 9) and agro forestry (Chapter 7) these skills are enhanced as are their livelihoods. It was also found that natural resource based livelihoods were more popular than non natural resource based livelihoods in the PUI.

Participatory assessment is the poor through wealth ranking exercises were found to be useful since poverty is relative, multi dimensional and this methodology was able to capture these aspects. One limitation in the wealth ranking was that the number of categories was limited and did not allow small movements to be captured among the poor and very poor who together constituted close to two thirds of the entire population. In fact some communities had come up with more than five categories. The research team needed uniform categories across the villages for the sake of comparison and simplified the categories to five, which ultimately lost the capacity to capture sensitivity of movement of the poor.

Credit is a major constraint for the PUI. Savings and credit and the revolving funds strategies helped people access credit to improve or enhance existing livelihoods or add new ones. Two fifths of the very poor and the poor reported receiving economic benefits from the project interventions. Among those families who derived economic benefits, the maximum numbers were also part of sanghas and participated in exposure visits. More than 50 percent of the very poor and close to two thirds of the poor have got access to credit as a result of the project. Also 25 percent of the sample who said they had increased access to credit were part of sanghas.

Chapter 11 MOVE

11.1 Introduction

Also see Annexes H and P. At the planning stages itself the team ran into difficulties on planning for the landless and for women. With several meetings with women's groups and NGOs as well as with government and banks it was found that very few institutions had the solution to working with the very poor and landless. NGOs and government in fact claimed that these groups were often left out. In the quest for a solution, the team explored a series of options after which it was decided to initiate a intervention called MOVE (Refer to Annex on MOVE) which would help the poor and the landless gain access to markets.

Globalization has resulted in changing economic conditions and changing markets the world over. These changes in the markets have new demands such as high quality produce which has resulted in the falling prices of commodities. These changes in the markets have given entry to many new players resulting to far more competition and more varieties. This has a direct consequence for the livelihoods of poor women, especially in the peri urban, who are now forced to deal with this new competition in the income generation activities that they undertake. Traditionally all NGOs and the government interventions have production-centered business for the poor and they are trained to become producers. Earlier the women faced competition in their traditional occupations at best from other local producers and women's groups. Today women's groups face competition in the form of local and multi national companies. Companies today are constantly innovating to produce lower cost goods through mechanized production systems reaping economies of scale making available to the consumer products that are both high quality but far cheaper. Women's traditional occupations as well as their traditional skills are quickly rendered obsolete in the face of this type of competition.

However, in the current context of changing economies, there are new economic opportunities as the business models themselves transform from production centered to service centered. In the past production oriented businesses emphasized the importance of the asset base of producers and thus benefits reaped from production were directly linked to this asset base. The service sector on the other hand is fewer assets dependent and more based on skills. It thus affords increased opportunities for the poor, which their low asset base earlier did not allow. As the service sector becomes more predominant, value addition increasingly involves customer input and producer skills rather than being asset dependent. In other words manufacturing today needs to be based on consumer inputs and therefore the poor peri urban producers need to develop the skills to understand the market and the consumer.

Urbanization in the context of globalization, through exposure changes customer tastes. Rising consumerism, changing demands with the introduction of new goods and new types of services, has radically changed today's markets. With a high premium on time, urban dwellers today would rather pay for domestic services and for the value addition to products, such as butter, rather than do it themselves. Therefore the ability to make use of these urban opportunities is what separates the poor from the very poor in the PUI. To help the very poor access these opportunities

it is important therefore that they develop the skills to understand the markets. Thus MOVE was designed as a model to be piloted in one project village, Mugad, to help the peri urban asset poor women access markets.

11.2. Access to Markets and Participatory Planning

Traditional PRA methods used by NGOs helped the poor understand local resources and the skill. These methods are helping people identify income generation activities that are based on local resources, not on the market. None of these exercises help people understand what consumer demand is and what price consumers are willing to pay. None of these methods help the poor understand the market. Thus income generation activities that result out of traditional PRA methods channel local expertise and local resources into products for which often the market demand simply does not exist.

11.3. Key Areas of Intervention

Areas of intervention involved increasing the motivational levels of women and helping them get the skills to understand the market. In the first phase the motivation of the poor, illiterate women was raised using a set of modules that combined the motivational exercises of NGOs and that of business management schools.

The women were given first hand exposure to markets using a format free methodology. This would be followed by practical exercises to help women come out with a basic business plan proposal, followed by the second field visit. This will be closely guided to ensure that women understand all the nuances and finer aspects of businesses. This would also include the financial institutions and other Government agencies to ensure that they get the required inputs and support. It was expected to take one whole year for the poor population to finalize the proposal.

Exercises to motivate SHG members in Mugad, a peri urban village were carried out by the project team during the year 2003. Thirty members from three SHGs belonging to the poor and very poor wealth class, identified through participatory wealth ranking method prior to the MOVE intervention were selected for MOVE. After this, from April to September 2005, another round was held with another five groups, one each in Kotur, Mandihal, Mugad, Channapur and Gabbur.

To understand the market women needed to be trained where they could identify different aspects of the market such as:

- Types of markets
- Developing the skills to identify a niche within the market for woman producers
- The value chain
- Attitude towards marketing versus production
- Negotiation with retailers
- Pricing and costing
- Understanding the consumer
- Establishing a relationship with the consumer

The other concepts that was key for the women to be trained in included market oriented production; to develop market resilience to cope with a rapidly changing market. For this the poor needed to be equipped with skills to understand the market and with the skills to enter the service sector. Women tend to be excluded from marketing and relegated to production, which is one of the factors that perpetuated the feminization of poverty.

Considering the fact that market orientation was the key to sustenance, the project then designed a tool, the participatory market appraisal (PMA), which would help the women to understand the market and its changing dynamics. It mainly aimed at understanding the market and developing market resilience among the periurban poor. To meet these objectives the participants were helped to identify the flow of products in and out of the village, the different potential buyers, the prices and the value addition

First the pilots had to be conducted to develop the PMA tool and this had to happen with several visits and could not take place in a day. In the pilot crucial issues like the illiteracy was to be kept in mind and visual symbols had to be developed. After a series of visits to the market and after the women had a first hand experience of the market then a business plan was developed. The plans were different for producers and non producers.

11.4. Participatory Market Survey for Non Producers: Mugad

The first step in the participatory market survey was to identify the product that they were going to produce. For this the surveys were designed for several products, which looked at price, quantity, market and the reason for buying from that market. A pilot was done for the same. In the visualization of surveys, the women took ownership over the survey symbols. For the survey the community organizers selected the sample. Here the wealth categories were used to define the sample as women may have interviewed only people that they knew which would leave out a large segment of the market share occupied by better off communities.

Women collected data for 10 households for six short-listed products by visiting households in the sample selected by the community organizers. This sample was representative of the entire village in terms of the five wealth ranking groups.

Lessons here included the fact that women seem to have interviewed people near their homes even when rich. This may have excluded the market for different communities (not based on wealth) but perhaps caste or religion. Lessons also included the importance of developing visual symbols when illiterate women need to assess markets for themselves.

At the end of the market survey done by the women, in the first three groups in Mugad, for different products, the women finally chose to produce soap powder. With this decision the women had to understand the range of soap products. Samples of all detergent powder and detergent products in the market were bought and examined for quantity, packing, weight, colour and brand. Looking at the various prices and

quantities of the different brands of detergent powder, women understood that the price per kg varied widely from 18.50 rupees to 115 rupees per kg. From the PMA overall women were able to understand the current markets, understand the product, price, quality, quantity, brand name symbol logo and packaging. The most important insight gained through the PMA was what the demand was for the six products and they chose to produce soap knowing the demand for soap in their village was 212-425 kgs per week. A second understanding was what they could produce out of the list of products.

After this an exposure visit was conducted to an institution where they were taught the entire process of producing the detergent powder. In a follow up meeting women actually produced detergent powder, tried to use it and then tried to assess its production cost and its selling price. This step provided women much needed exposure to production and through their hands on attempts, the replication of production was also possible. After this, women tried to buy from other producers and sell other brands of soap first before entering into production themselves. Through a sale of samples (their own and other producers products) women would assess the market, only after which they would decide what to produce.

The facilitator helped them with selling tips like identification of the customer, the language of selling, time and energy to be spent on an identified customer, demonstrating the use of the product if need be, promoting and assuring the customer of the quality of the product. To create their own samples, women produced one kilogram of detergent powder and made small packets weighing 30 Gms each and priced it at Re. 1/- per packet. They tried their hand at selling first in their own village. In the training for selling the women were informed about the types of customers whom they were able to identify. This step helped the women understand whether their product had a market or not. Apart from this they also understood the local market better.

Branding the product was another important process the women had to learn which was beyond their traditional knowledge of enterprise development. They realized that a brand name once given to their product would increase the product profile.

Business plans were then drawn up which were market and demand oriented in nature. The women were encouraged to develop plans based on market forecasts. A comprehensive business plan could only be developed after the next batch of 400 kgs.

Box 11.1: Venturing into the Market

Dilshad did not know about the formation of sanghas or about what they are doing. She never went out of the house and never met people. It was another group of women who formed the sangha. Her husband rejected the idea of her starting a sangha. She paid Rs.150/- and started the sangha. She introduced the sangha concept to the women. Initially when they formed the sangha each one pays Rs.10/- but attending meetings was very difficult for them. So everyone was a step behind because they were shy to leave their homes to go to the meeting. Dilshad said that the women had never gone out of the house and been independent and talked with others about so they said that they would not do it. She agreed with them and decided that they would all go together and decide procedures. Other women have gone to the field

and market and other places. But these women have not gone to any place before the training.

Dilshad said that first they went to the market and saw how the transactions are made, how the people buy and sell products and goods. They first purchased bought cardamom and cloves, and they wanted to buy chicken. They bargained for a big chicken but the shopkeeper was not willing to give them this size of chicken. So the women left and the shopkeeper called them and said he was willing to give the other small one for the bargain rate. So the women came to know how to bargain for the rate. Here cardamom and cloves are cheap. The women were sent to different places. Dr. Subash sent three groups of women to three different markets. These women went to Murukwad market and five to six women were sent to Murukwad village which is rural.

Dilshad said that Dr. Subhas did not get tired with them. He worked very patiently to help them out because they were slow in learning. Basically they went to do a survey and they did a Participatory Market Appraisal. If the individual decided to do some business it would be profitable but since they doing it in a group doing some people delayed the payments. Initially starting a business needs an investment. But once the money comes to the sangha the amount is distributed among the sangha women. Some women invest the money in the sangha and some women take it to home and spend it for personal use. Dilshad said that they have Rs.10,000/- in the sangha. Group's purchases and profits are kept in the sangha and no woman takes it.

Impact

In the community the children had stopped going to school. But now they are going to school and they have also informed other women to send the children to school and not discontinue their education. When they formed the sangha these women did not know how to write and only one woman knew to write and she was in full demand immediately. The women were sent to an Urdu medium school and there they were not taught Kannada or English. So they found it difficult. On the 15th of August the bank manger told them how important education was. He said that education was like a salary to the women. The women came to knew how important education and reading and writing are. That is why they now feel education is important for the children. This was the reason why the children's sangha was formed. In the children's sangha everything is written in Kannada.

Effect of living near the city

Earlier people were not concentrating much on the urban markets as they were happy in the village itself. But later when they saw the peri urban market which is near to the city they wanted to travel to the city and try to copy their lifestyle. The women felt that whatever the city had, they too should have. Suppose they have gas in the city then even they should have gas. If they have any laws and rule in the city they too should have the same in the village. Government agencies should work in the villages just like they do in the city.

Dilshad said that earlier they were afraid of taking loans but once they formed their sangha, she took Rs.16,000/- as a loan from the bank to purchase a buffalo. The

women had the idea earlier that the bank will give subsidies why pay. They didn't know about the bank rules and how they should repay loans well in time and then they will get subsidies. After the formation of the sangha then they came to know what interest was and what principle amount meant. After the sangha formed they have taken care that no sangha woman goes to a money lender and that if any women needed help everyone would help them. To purchase goods they go in groups and turns. Before even for small matchbox for the house they never used to go the shop but after the sangha formed has become compulsory that everyone goes to the market. Because of this everyone has become more aware of the market rates and how to transact and how to do business.

Interacting with the stakeholder

Dilshad said that now she has learnt to speak to different people and different organizations and thereby have learnt many things. She says that *we are confident selling in our village and we can manage but we need to go and sell it in the city markets*.

11.5. Participatory Market Appraisal for Producers: Gabbur

The design of the market survey for the producers in Gabbur had a different approach. Here the poor in this peri urban village had an existing business. For them the need was to know why their customers were buying goods from them and how could they move up the value chain to expand their current business which in turn would give them better sustainability in the long run.

The steps that was followed here was to first change the attitudes among NGOs on markets. Along with the poor it was identified that even the NGOs had to be reoriented from the production to a market sensitive approach.

Orientation and introduction of participatory market surveys to producers and discussion of current marketing and production patterns was done. This was for both men and women. They were introduced to the idea of conducting a participatory market survey to better understand their current consumers.

Producers designed a participatory visual survey for existing, past and potential consumers of the existing milk products. In addition to this the value chain was discussed. Participatory data collection was the next step where the men collected data for ten existing consumers. After the data was collected the men themselves conducted a collective analysis of their survey where they identified the reasons as to why their customers buy milk from them. Based on the analysis the team tried to convince the men's sangha to build alliances with the women's sangha for butter production which the men's sangha would sell. The women sanghas went on an exposure visit to a butter making unit to understand and observe methods of butter production on larger scale.

In this process women decided that they did not want to produce butter because of insufficient milk which was because they did not have enough buffalos. Nor did they have the funds or credit access to buy new buffalos.

11. 6 Participatory Market Appraisal for Retailing

In the second round of MOVE in the five villages the PMA was conducted in the same manner as that for the non-producers. After the survey, the groups decided to do retailing (buying and wholesale and selling at retail). None of them decided to produce. This was completely different from the first round of MOVE where the members chose to produce or expand their current business.

In Mandihal, the women decided to start selling puffed rice and soap bars. They even came up with a strategy that they would buy over the weekend and sell by Tuesday, as Tuesday was the day everyone went to the city to do their weekly shopping. This way they targeted clients as their stock was running out and before they could buy fresh stock. They also devised a unique way to share the capital risks, work, and profits. Each woman will take a turn to be responsible for buying materials and must take a loan. Then this same woman will sell the product and keep the profits. Each woman will take a turn as an individual entrepreneur in this beginning phase of business and whoever meets with success with a given product will continue with that product.

In Mugad, the women narrowed down on selling clothes, as that was a major gap in the village. The women originally wanted to go to Bombay to buy the clothes, but they found a relatively cheap wholesaler in Hubli, which saved them the trip. They took a loan from the bank for 10,000 rupees and used all of the money to buy saris, dress materials, children's clothes, and salwar kameeze sets. The saris sold very well, but no one in the villages was interested in the dress materials or the salwar kameeze sets. The women made the highest investment, but they are also earning the highest profits and are on course to recoup their initial investment within a few weeks.

In Gabbur, the women decided to sell tea powder, sugar, and soap powder, which they had produced previously. The women of Gabbur were not enthusiastic about the MOVE process in its initial stages because they had steady agricultural work throughout the year due to sewage irrigation. Also, due to their proximity to the city, many members were skeptical that they would be able to start a successful business within their village. They decided to use what they learned from MOVE to sell off the remnants of a previous attempt at manufacturing soap, and to make a few tentative steps into selling tea powder. The women are confident to try new products and combinations of products until they hit upon a combination that works for their village. They have already been extremely successful with tea powder and are planning to move into edible oil. They are focusing their efforts on products with high profits and plan to continue measured expansion of their enterprise.

In Channapur, the women decided to start a grocery shop with commodities such as edible oil, sugar, tea powder, rice, rava (semolina), and other basic food items. They based the shop in the spare room of one member's house and agreed to take turns in running the shop. The shop was a great success and the women sold all the commodities they bought quickly. Channapur's distance from the city and the disrepair of the road during the monsoon season were possibly contributing factors to

the shop's success. The customers were happy with the service the women provided and encouraged them to expand their business to meet all of their grocery needs. Unfortunately as time went on, most members lost interest and the responsibility for the shop fell on the shoulders of the woman who lent her spare room to the enterprise. However, this woman is very interested in moving forward with the enterprise. She and another woman will take a loan to buy supplies and they will split the work and the profits between them.

In Kotur the women began by selling different varieties of soap bars. Although they were always able to sell what they purchased, it became difficult to carry large boxes of soap around the village during the monsoon season, so they paused their enterprise for several weeks. They experimented with selling readymade incense sticks and met with enough success to inspire them to attempt manufacturing incense sticks. They have only just completed the manufacture of incense sticks and have found a ready market in the village shops. The women sell large quantities of incense sticks to the shops at wholesale rates and sell at retail rates when they go door to door selling soap.

For more detail on all of these villages, please refer to Annex H, on MOVE.

11.7 Lessons and Recommendations

The concept of MOVE was a new focus on enhancing livelihoods, especially for the poor, illiterate and asset poor women from the peri urban. To date all interventions, be it from government or NGOs, tend to focus more on production and less on markets. The first lesson of MOVE was to change the attitudes of women and NGOs from being production oriented to being sensitive to the market, in fact to start from the market.

Another lesson of MOVE was not to get fixated on a particular product, and instead to cater to market demand. Therefore one caveat to developing market resilience, is to change as the market changes and this implies resisting product fixation. Women should learn to be flexible enough to change with the market demand given today's market dynamics.

Illiteracy was a constraint but MOVE through the participatory visual methods used helped them understand their competitors and provided them the skills to understand a constantly changing market. But the finding was that if entrepreneurial qualities existed in an illiterate person and then given an opportunity, they too can be successful entrepreneurs. A participatory approach to survey and understand the market is needed.

It took almost 2 years to fully develop and test MOVE to overcome unanticipated constraints namely the fact that women did not have assets, were fatalistic and were illiterate. However to replicate MOVE would not take more than 6 months. Yet MOVE has been developed for non natural resource based goods but needs to be refined and developed for the following four types of peri urban livelihoods: natural resource based goods (eg: milk), natural resource based services (eg: paravets), non natural resource based goods (eg: soap), and non natural resource based services (eg: midwives). Since a priori we cannot determine what is to be produced as the market

has to determine this, initiatives cannot be designed in advance to develop these four strands of MOVE.

Motivation was a crucial step, which was skipped for Gabbur which may have been one reason why it never went forward. However a second lesson was from BAIF's perspective the lack of development funds to provide the buffalo and meet the gap from the supply side. On the other hand this could result in generating a dependency and may not be replicable when taken on scale. A third possible reason for failure in Gabbur was the fact that these were producers and comfortable in producing and selling what they were already involved in and did not feel the economic compulsion to change. The final problem was that although they were selling watered down milk, they were unable to see that in the future a change in the urban markets might reduce their business or even completely oust them out and therefore did not see the need to change.

One issue was that women in Mugad were able to assess the Mugad market and it is unclear at this stage if they could have as easily assessed the urban markets of either Dharwad or Hubli. The reason Gabbur producers could do it is because there was an existing relationship with their clients and they only surveyed their clients. They were supposed to survey their previous clients as well.

To go on scale, one issue that needs to be faced is the marketing expertise which is lacking both among women and the NGO staff who will ultimately have to be trained to replicate this model. One possibility is to partner with business management marketing experts for select portions of the MOVE module and for the NGO staff to conduct the other sessions especially the motivation modules and the PMA (which is an easy adaptation of PRA).

While all NGOs promote production oriented businesses fail when it came to the market, MOVE emerged out as a solution for tackling the market head on.

Chapter 12: Gender

12.1. Introduction

Also see Annexes G and J for other studies with a gender dimension. This analysis was based on data from a gender evaluation of initiatives commissioned by NRSP, DFID conducted by Cambridge University in the peri urban interface of Hubli Dharwad, Karnataka state over a one-month period. The main research question addressed by this study was to what extent have women been integrated in natural resource management and to a smaller extent in livelihood enhancement.

12.2. Methodology

The data collection period spanned 10 days where interviews and focus group discussions were conducted with project staff, and representatives from the women's collectives in six project villages. In addition, two visits were conducted to two other comparable sites (BAIF, Surashettykoppa and Mahila Samakhya Karnataka, Nanjangud) along with project staff to examine other strategies that can be adopted to enhance women's participation and to better integrate them into the natural resource management strategies undertaken in the peri urban project site. The data transcription and editing spanned a phase of three weeks in addition to the actual data collection phase.

12.3. Organizational approach

UAS is a research institution that develops new agricultural methods. They develop improved varieties of seeds, new methods for pest management, farming strategies, new fodder varieties and fodder management techniques, livestock management and improved breeds of livestock, soil and water conservation projects, and other technical inputs related to natural resources. Since their focus is on agricultural research, they do not have a gender dimension. Their inputs were only possible on farmland, so their efforts were focused on the landed. According to the present system, land is handed down from father to son and women typically do not inherit land nor do they have decision making powers regarding land. Therefore, men have more control over the land and typically make the decisions. Because UAS's efforts were largely land-based interventions, the UAS team focused their efforts on landed men.

BAIF focuses on natural resource management, particularly on land and livestock. It has a family approach, so the entire family can develop sustainable natural resources based livelihoods. Their holistic approach to NR issues does not focus on men or women, but instead focuses on the family as a unit.

Although they have directed programs and interventions for women, (such as Shakti in the EU project for destitute women) it is incidental to their family-based approach. Therefore, BAIF does not have a specific engendered perspective either.

IDS has a community-based approach. Their efforts are concentrated on the poor, assetless, landless, and especially women. According to Meera, *In IDS we mainly*

involve the women. The process of development is from bottom to top. Benefits will not percolate downwards, from men to women, rich to poor, literate to illiterate. If the work begins with the women, men will automatically do it.

Thus each organization's approach to women was different. The NGOs too have a different approach to women than say all women's organizations like Mahila Samakhya Karnataka does. All three organizations focus on sanghas but BAIF's interventions are more family based. IDS have a stronger focus on sanghas than on individual families and they emphasize capacity building of the sanghas to build their confidence to take on other issues. IDS emphasizes working with women and have more women's sanghas. Mahila Samakhya on the other hand focuses more on women's social and political empowerment than on economic development (IDS's strength) or on environment (BAIF's strength). MSK emphasizes women's leadership and gender justice creating support structures for the same. An exposure visit was arranged for the team to MSK so that some of the strategies could be explored.

12.4. Activities where women are involved

Women are involved in all activities relevant to natural resources and livelihoods, although their contributions are not always visible. In agriculture women participate in weeding, harvesting and to some extent decision-making but are not necessarily involved in the most important aspects, namely the financial aspects. According to Pawadshetty, *The farmer discusses activities with the women at home and the decisions are made after they come to some consensus.* Therefore while women may be consulted about decisions, often since it is the men who own the land, it is they who make the decisions. In terms of interventions since most of these interventions took place through the sanghas and as women sanghas constitute two thirds of all sanghas, they were thus involved.

Water Conservation: Women participated in water conservation efforts such as tank restoration and canal construction because they are dependent on the water for domestic use (washing clothes and drinking water for their livestock). According to women from Daddikamalapur, *The women helped with the tank construction and went to the bunds to pour water for the curing. They did this because they wanted to make sure that there was enough water for the animals.*

Savings and Credit: By promoting savings and credit and creating access to flexible credit, women could easily get loans from the sangha that they used either for consumption or production. Consumption needs included medical, education, and expenditures on social occasions such as weddings and festivals. Income generating activities included the purchase of livestock and capital investments in business ventures such as petty shops and trading activities.

Fodder Initiatives: In the fodder initiatives women from Channapur grew fodder in their fields making them self reliant in terms of fodder for their livestock. They now have easy access to fodder unlike in the past where they had to travel long distances to collect fodder, thus saving time and energy.

Livestock: Livestock was one intervention where women's participation was visible especially in poultry rearing. Except in Daddikamalapur and Gabbur where men sell the milk and had control over the money, in all other villages women had control over livestock rearing including the monetary aspects. In Gabbur men traditionally sold milk and were involved in grazing of cattle and the women were involved into activities like cleaning the shed and milking the cows. The men from Gabbur only sold milk and not curds, as they did not find selling curds profitable enough. On the other hand in Channapur traditionally men are involved in other activities like agriculture or some job in Hubli, and women completely control the dairy business. Historically the women from Channapur have been selling butter and curds in Hubli and not milk because selling fresh milk was practically impossible due to frictional distance of Channapur from the city.

Women reared chickens, sold it and retained the money. Sometimes the women sold the chickens directly and many a time would sell it through the men who would come to the city for some other purpose. In Gabbur as a sangha activity, women reared goats and sold it for a profit. The money was in the control of their sanghas and therefore stayed with women. For details refer to Chapter 8 on livestock.

Nursery and kitchen garden: Apart from these other natural resources interventions like nursery and kitchen garden were also encouraged among women as income generating activities. According to the sangha women from Daddikamalapur, *We went to the forest department, where they gave us free seedlings. Only the tempo cost for transporting the seedlings was borne by us. We sold it to the people in the village and made some profit from that.* Another sangha from Kotur decided that they would also start a nursery. The community organizers from IDS said that with this activity the sangha would grow and that money would remain in the control of women. They have planted 14,000 seedlings of guava, curry leaves, lemon, papaya. The sangha plans to sell them locally and in the neighboring villages.

Vermi-composting: Poor women with small land holdings were involved in vermi-composting. The sangha from Kotur went for an exposure visit where they learnt of its benefits. According to the sangha members, *The exposure visit opened our minds and the farmers we met told us that it would benefit us a lot. The cotton crop was very good this year when we used the compost.* Women used the vermicompost for their own land instead of chemical fertilizers.

Income Generation: Among the livelihood interventions, women were given loans through their savings and from revolving funds. Most sanghas have also been linked to banks who have provided loans for income generating activities. With the loans women have either started new income generating activities or have developed their existing activities. To quote several examples, through loans women are involved into activities like vegetable selling, flower selling, food packing, petty shops, tea stalls, kirana shops, bangle selling among others.
The most significant impact seen is with respect to the number of loans taken by women through revolving funds, linkages to banks and through their collective savings.

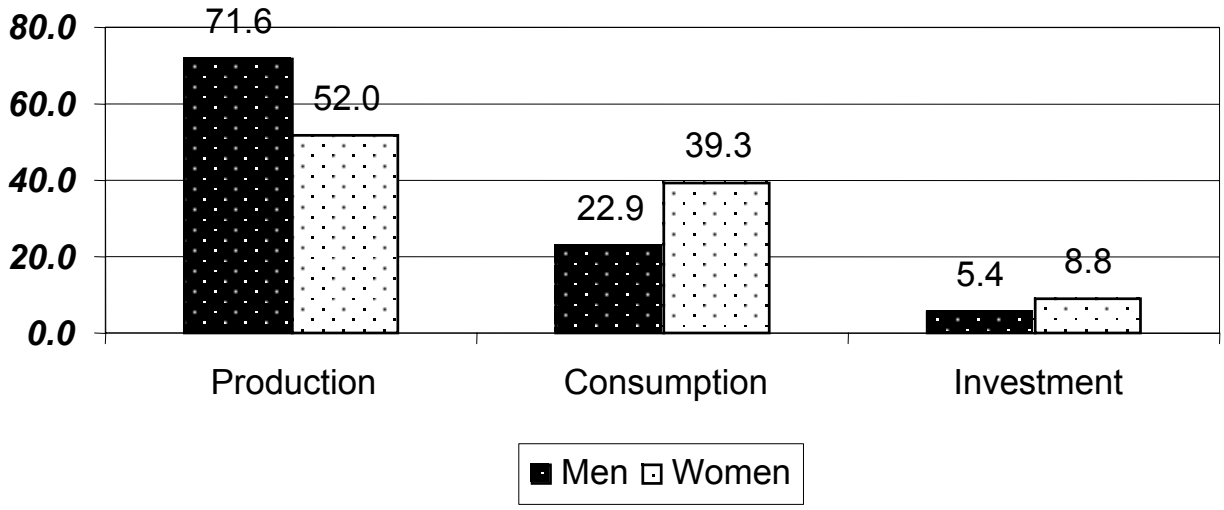
12.5: Access to Credit for Income Generation, Investment and Consumption

From a sample of 18 sanghas women's access to credit came from three sources starting with their collective savings (1,239,321 rupees), followed by bank loans (235,000 rupees) and then by revolving funds (1,70,000 rupees).

Sangha Savings

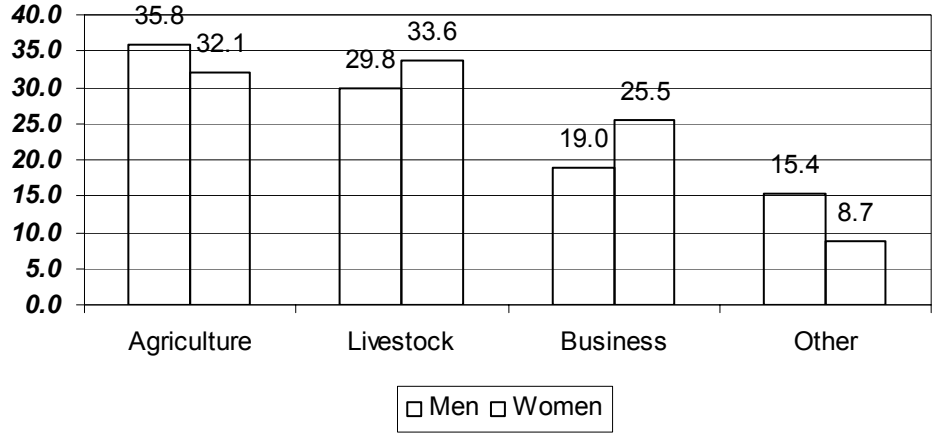
Table 12.1 shows details of the loans given to the sangha members through sangha savings. Looking at a sample of 18 sanghas only, the loans totaled 1.23 million rupees. Out of the Rs. 1.23 million, women sanghas took loans worth Rs 785,900 (55.6 percent of total sangha loans) and men sanghas took loans worth Rs. 453,421 (44.4 percent). Refer to Tables 12.1, 12.2 and 12.3. This implies that men despite constituting only a third of the sample of sanghas and a third of the population of sanghas still had access to larger amounts of loans due to greater savings. This is possibly due to greater control over incomes on the part of men.

Figure 12.1: Proportion of Sangha Savings Sanctioned for Production, Consumption and Investment Loans: Men Vs Women



Women have taken more loans for consumption and less for production relative to men (Table A12.4) and Figure 12.1. However women have taken more loans for investment purposes than men.

Figure 12.2: Type and Proportion of Production Loans from Sangha Savings: Men vs Women (%)

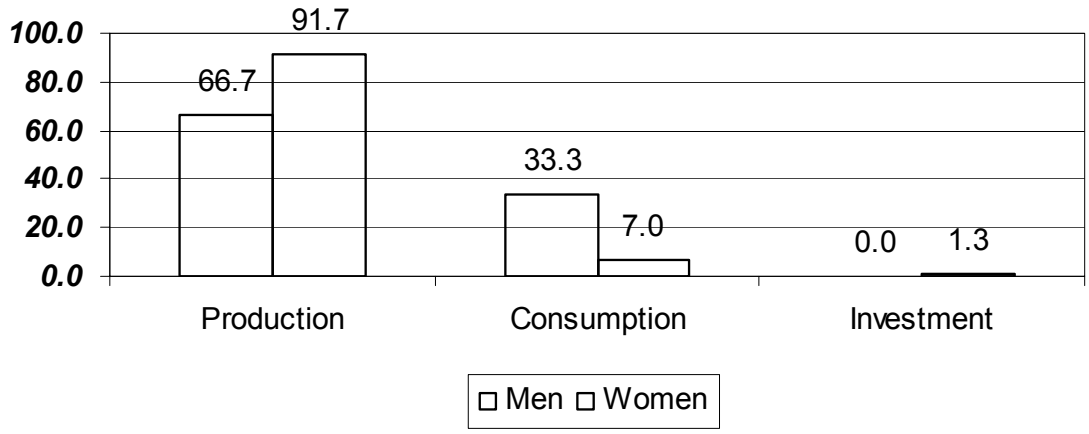


Of the sangha loans taken by women for production purposes, Table A12.5 and Figure 12.1, the maximum amount of loans taken were for livestock rearing (33.6 percent) which also implies women have chosen to take loans to build up their asset base. The second largest amount is spent on agriculture (32.1 percent) followed by business (22.5 percent) investments in petty shops, vegetable and flower business, among other types of businesses. A higher amount and proportion of loans were taken by women for businesses than men (Table A12.5). Men on the other hand took loans more for agriculture (35.8 percent) followed by livestock (29.8 percent).

Revolving Funds:

Table A12.6 gives the details of the loans given to the 18 men and women's sanghas through the revolving funds. A total of Rs .170,000 was given to the sanghas. Of this 82.4 percent (Rs. 140,000) was given to the women sanghas and only a 17.6 percent (Rs. 30,000) was given to the men sanghas. Refer to Table 12.4, 12.5 and 12.6. The total loans given by the revolving fund was Rs. 170,000, of which the maximum amount of loans, Rs. 109,500, was given for livestock

Figure 12.3: Percentage of Revolving Fund Sanctioned for Production, Consumption and Investment Loans: Women vs Men



Comparing the proportion of funds taken for production vs consumption purposes by men and women from the revolving funds, women have been sanctioned a far higher proportion of funds for production (91.7 percent) than men have (66.7 percent). Revolving funds came from the project and reflects how the team and the Mahasanghas prioritized the type of loans compared to sangha savings where the decisions are internal to sanghas alone.

Figure 12.4: Type and Proportion of Production Loans from Sangha Savings: Women (%)

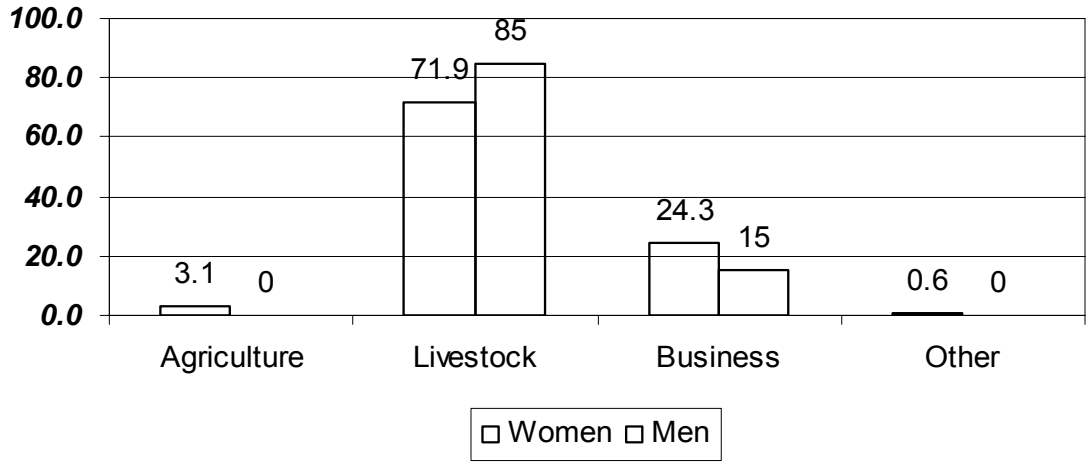


Figure 12.4 compares the proportion of production loans spent on different types of economic activities. Here both men and women have invested the maximum on livestock, although men have invested a greater proportion of monies in livestock (85.0 percent) compared to women (71.9 percent). The second most important

investment for women in terms of proportion of funds invested is business (24.3 percent).

Other loans taken were used to repay old debts, which are important because other options available to women include loans at exploitative rates of interest while this low interest option becomes far more attractive.

Bank Loans

In terms of bank loans, only the 15 women's sanghas have got bank linkages of the sample of 18. Of the total 62.1 percent of loans have been for production while 30.9 percent have been used for consumption purposes (Figure 12.5). Of the production loans again (Figure 12.6) the maximum taken was for livestock (63.4 percent) followed by businesses (22.9 percent).

Figure 12.5: Proportion of Bank Loans Sanctioned for Production, Consumption and Investment (%)

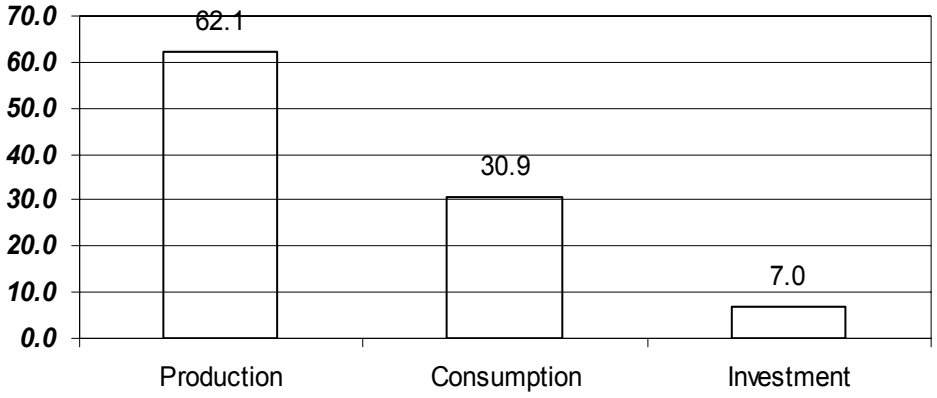
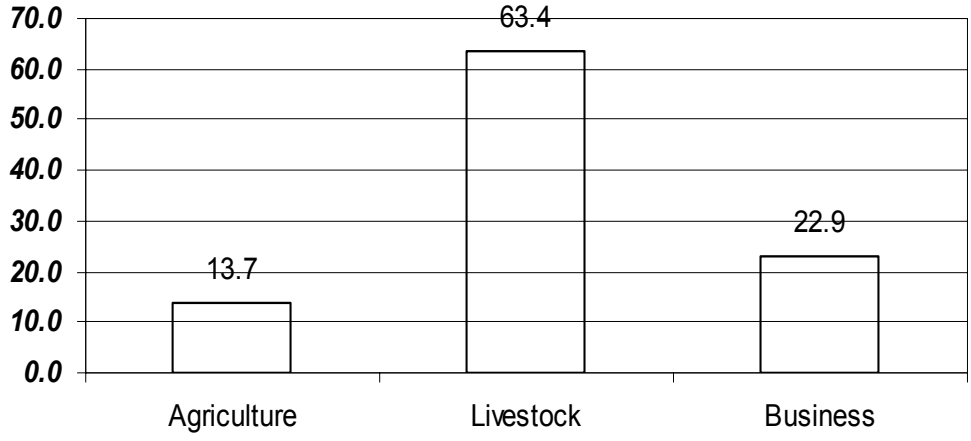


Figure 12.6: Type and Proportion of Production Loans from Banks: Women (%)



Loans for consumption needs are no less important than productive loans. Before sangha loans were available, women still had to meet their domestic and emergency needs. During emergencies options were to take loans from moneylenders at high rates of interest or through other equally exploitative methods of bonded or child labour.

In addition to income generating activities and creation of asset base, with the project intervention, the awareness among the women with respect to social and economical aspects has increased. Women now participate in the decision making in the areas of their education of their children and marriage. Women now go to the banks and to the market to either sell or buy which earlier was a constraint for them. According to the sangha members from Daddikamalapur, *The women had never gone to a bank before. They were not brave enough to go to the bank, and their husbands would not let them go out of the house. Now they do not seem to have such a problem with going out of the house anymore.* Also awareness about different government agencies has increased and women participate in these areas too.

With the available resources and funds the project tried to build an asset base for poor women in the peri urban. Through the SHG, women have been given loans and other assistance to create some assets for themselves. The details of the loans given through SHG, revolving fund and from the bank can be seen in the appendices.

The most important intervention designed for women was MOVE which was to help women access markets and produce goods tailored to the market. See chapter and annex on MOVE.

12.6 Project Limitations with Respect to Women

While the project did try to create an asset base for poor women, especially for the landless women in the peri urban, the project could have done more for women. There were various reasons for this.

To begin with research institutions in India such as the UAS are biased more towards the landed and therefore towards men who tend to own the land. Therefore the FLDs like their extension activities tend to be with what they term as progressive farmers (implying farmers with a certain minimum amount of land). As far as the landless and women, the UAS believes in a trickle down approach where employment resulting from improved farming practices would be for these groups.

In their research as well, they tend to work with the landed and with heads of households who they typically identify as male. Again, women's voices here do not come out. For instance the households surveys conducted were with men often losing women's voices and perspectives.

BAIF's approach of addressing natural resources considering the entire family as a unit again does not emphasize women's separate participation, only her participation as part of the family unit. IDS is more sympathetic towards women as can be seen by the higher number of women's sanghas in IDS villages.

Apart from these approaches none of which specifically empowered women, it took a very long time for the team to start to address the issue of gender. The first exposure visit to Mahila Samakhya was conducted in the last year of the project, which ideally should have taken place at the beginning of the project. While several attempts were made in the second year to conduct the MSK exposure visit it never took place. When it finally did take place, the heads from IDS and BAIf were absent. The lower level officers who were not decision makers went for the exposure visit. To a limited extent however, project officers who visited Mahila Samakhya did import at least one feature namely the committee structures into the village level federations in IDS villages.

However through the sanghas women have been empowered in a number of different ways best articulated through a story captured with a sangha woman leader (Box 12.1)

Box 12.1: Empowerment through Sanghas

Forming a sangha: All the 12 members of our sangha members meet every Monday. Sali [the IDS community organizer] gave us information regarding the sangha and how to start deposit money and so on. We started saving Rs.5 each. One woman was ready to deposit 10 rupees, but the idea was put off as it has been drought years and people cannot afford to deposit so much, and we had to think about each and every one in the group. The sangha was formed on 7th January 2002. In the first meeting we discussed the advantages of being a member of a sangha, like increase in our knowledge, etc. Everyone was ready to join a sangha then. Nobody had a problem in forming one.

We have got enough exposure to banks and their procedures. We were very scared of our men and also to talk to them before forming the sangha. Now we have gained enough courage to face them too.

Credit: Our sangha is a poor women's sangha. And through our sangha many such women have been helped with their financial problems. The other day we lent Rs.5,000 to a woman, who bought a cow. Next time one of us will borrow money. We, all the members of the sangha give permission to one member to take a loan. Sometimes it gets difficult when we have to spend for a function at home, for which we have to pay an interest of 10% per month. After the sangha has formed it has become very easy for the poor women like us to borrow money from it with a lower interest rate of 3%. We levy a fine of Re.1/- if one is absent for the meetings. This has been made a rule. If one is busy on the meeting day for a certain work, she should inform the sangha beforehand, so she isn't fined. The same amount is charged to those who do not repay the loan in time. Therefore, women see that the money is repaid in time. We lend to those who want to start income generation, like buying cattle or goats. Who ever wants money may ask for it without any hesitation and those who are in more need are given priority. Another woman had borrowed money about 9 months back from the sangha to buy mango saplings for her farm. She borrowed Rs.600, to which she added another Rs.400 and bought 50 Alphonso saplings worth Rs.1,000 from Kelageri. Once we saved Rs.400-500, and we asked everyone in the meeting, if anybody wanted to take a loan. If none needed loans we deposit the savings in the bank.

We wish that through our sangha activities everyone possesses cattle and utilises the milk and milk products. And all the sangha members can share work in the fields, or at least arrange for labour through our sanghas. And our lives could be easier if the members benefit from the increased yield. Only one member has bought a cow as well as the fodder for the cow with the sangha loan. Fodder was also bought with the loan amount. Only the land owners would get fodder from their fields and do not need to buy fodder, while those who do not own lands have to buy it.

We intend to ensure each and every one owns cattle, for members who want to buy. I am thinking of buying one for myself, but it doesn't look nice for the sangha head to take money before the rest have.

Group Purchase: Another activity in our sangha is that we buy ration like Jaggery, oil, sugar, soap cake, etc at whole sale rates, and distribute them amongst us, which costs us less than usual.

Exposure Visits: If IDS arranged training or exposure visits, then we used to discuss among us who would attend, and send those who wished to go. Exposure visits were arranged for us to get additional information regarding the functioning of sanghas elsewhere, and the IG activities they are involved in.

Within a month of the sangha formation, in February ten of our sangha members went to Mugad Koppa. There we were shown the plantation of medicinal plants. We learnt how to take care of medicinal plants, how the sanghas can take Government help and so on. We also went to Tiptur and learnt about the medicinal plants, tree plantation, uses of a check dam and water conservation with the involvement of the community. The farmers in Tiptur had done vermi culture, and were producing vermi-compost. They had planted trees all around the pits, like coconut and forest trees.
We all were taken to Eksamba, a place near Belgaum, in January 2003. We visited an institute for the handicapped children started by the sangha members there for their children. We saw sewing machines in about 5 rooms, one-two in each room. There were teaching classes going on for children when we had been. We got to see all the activities going on there, like stitching, finishing and packing etc. We stayed there over night, and visited sugar cane fields in Kittur and in Chickkodi we saw a paper mill and also a sugar factory in which we saw sugar lying like sand that was weighed and packed. We were allowed to have as much as possible by us, but we couldn't take it home. All of us ate, and further ahead there was sugarcane juice in large pits and we were allowed to drink as much as we wanted. We were all checked and let out of the factory. We learnt from Eksamba, how a sangha had flourished and was developing, by providing education and tailoring training to the handicapped children and marketing of the final products as well as profiting from the business.

Solving Water Problems: We had a major water problem and we used to fight with each other for water at night, and cases on this have been registered in the courts. One person has also lost a tola (ten grams) of gold during such a fight for a chance to get water. Therefore we, all the members of all the sanghas in the village wrote a request letter to the Gram Panchayat for the water problem to be resolved, through our sangha. Then onwards, we do not have water problem at all. The GP had a meeting in Dharwad, upon our request and after about 4-5 months of our request we had got water supply though pipelines connected to a bore well. Thereafter, we have not faced any water problem as yet.

There are two tanks in our village. Now in one of them, the Hoskeri tank desilting work has been going on as it has dried up entirely due to drought since two years. Another tank is situated at the main cross of the village. The desilting has started since 17th April. Today is the 6th day ever since the desilting began. The community wants another week of work so that the desilting is completed. The GP is funding the work and IDS is also helping. We are happy that if the work is completed then the tank will hold more water and we can use the water for washing clothes, for our animals to drink, for bathing and swimming and to irrigate our fields and tree plantations.

Solving Community Problems: We also wrote another letter for getting the street lights fixed as many people have been bitten by street dogs and few others met with accidents falling in the dark. The KEB officials were careless and were postponing light repairs and bulb replacements. We all benefited from writing a letter from the sangha as they responded within two days. We had asked Sali how to write a letter and did so through our sangha. The GP office secretary responded to our written request and in turn asked us to deposit the amount for house tax. We brought this issue up in the sangha meeting and decided to pay the tax owed little by little.

Decision Making: We have not fought about anything in our sangha meetings as we ask for everyone's opinion on a certain problem and come to consensus. Everyone agrees to it, and if they do not want to solve it, then we just let it go. All the members listen to the chair person of the sangha.

Linkages to the Panchayat: We have all decided to ask the GP for a building for our meetings. All the sangha members have one or the other concern or problem in attending a meeting at a particular place. Therefore we would like the Gram Sevak to allow the sangha to use the building provided to the anganwadi teacher. The teacher has also been given a plot by the government on which she has built a house and rented it out for rupees 50/-. We are about to sign a letter asking for this space and give it to the GP. All the sanghas want to meet at that common place which would be convenient for everybody. The maintenance of the sangha house will be ours.

Linkages to Government Departments: We have been given mango and curry leaves saplings as well as Champaka tree saplings, by the forest department which provided saplings to the entire village 8 months back. This June IDS are going to supply us more saplings. Now we cut the fodder from the farms where we have planted these trees. And we work on daily wages in other farms and our children work in the quarries to feed the family. We take water from the bore well that is in the village to our fields in a trolleys rented for rupees 50/- per month. Now I have my own trolley that I bought for 1000/- rupees. Earlier we irrigated our fields with the tank water, but now they are dry. We have to wait for another four years to reap the rewards from the trees planted, but have to take care of the tress till then and spend on insecticides especially when the trees will flower.

Our sangha is a small one, but we have aspired to grow and achieve something through our sangha. If we too do something for our community, our sangha would gain fame and our desire is to develop.

Kamalavva Kalappa Badiger, Kalikadevi sangha, Mandihal, 22/04/03

12.7: Conclusions

In general women and men in the PUI experience a shortage of land and a shrinking of the natural resource base. The project being non capital intensive did not provide the means for either men or women to build their capital assets in the form of land. However it did provide the means through sangha formation, revolving funds and bank linkages for men and women to build up their asset base in the form of livestock and businesses. Keeping in mind the peri urban features of these communities, initiatives like MOVE and building businesses were geared for these groups to take advantage of urban opportunities.

Overall, more loans were taken by women than by men and more women invested in livestock in general especially in poultry and small livestock where women in fact did have control over this income. Second, when women did use credit for family businesses or purposes it changes the decision-making powers she has as she is now viewed differently now that she has access to these funds. Since most of the initiatives took place via the sanghas women have participated heavily in all project interventions.

Overall the sanghas have been the means through which women have been empowered. In one story on the sanghas (Box 12.1) it becomes clear that the number of ways women are empowered through sanghas are numerous and not easily quantifiable or captured through the research as many of these ways are not articulated except through process documentation methodologies where the stories of empowerment come out in their entirety.

Chapter 13: Target Institutions

Also see Annexes I and J. Government has been involved at various levels in the peri urban projects starting with raising awareness of environmental planning management in the peri urban, to planning and in implementation of the action plans.

A workshop held in 1999, brought together government, NGO and community representatives to raise awareness on natural resource management in the periurban interface (PUI). This workshop opened the discussion on Environmental Planning and Management (EPM) guidelines for the PUI, which were designed to include a multi faceted strategy aimed at disseminating information on natural resource management and livelihood issues for villages in the peri urban areas.

The second major attempt to involve local government institutions was through an initiative called Participatory Action Planning Project (PAPP) in 2000. Here local government officials were involved first in a diagnostic workshop where peri-urban community representatives presented their issues and prioritized them and working groups jointly examined problem and solution trees which led to the creation of action plans. The communities then refined these action plans, which were again presented to the government at different stages of PAPP. This was followed up with interviews with government to understand their perspectives on participatory planning and participatory processes.

In the implementation phase of the community action plans 2001-2005, attempts to involve government were several, with varying degrees of success. These spanned from informing them at district, state and national levels about the project and the action plans, to engaging them in funding of the action plans to involving government in workshops to disseminate findings at different stages of the project. However frequent transfers and differing attitudes among officials led to wide variations in the degree of commitment on the part of officials to then project.

13.1. Involvement of Government in Preparation for R8084 (1999-2000)

In the initial stages government was involved in workshops around raising awareness on the PUI, with particular emphasis on environmental planning and management. After this government was

13.1.1. Environmental and Planning Management Guidelines Dissemination

The objectives of the dissemination strategy of the Environmental and Planning Management (EPM) Dissemination strategy included:

- To reach the poor affected by changes in the PUI with knowledge that empowers them to become involved in issues and actions that relate to their own lives.
- To raise awareness among and support other relevant actors to increase their capacities to participate in EPM of the PUI.

These objectives would help to build the capacities of all actors to better understand issues affecting the peri urban communities, to improve the livelihoods of the poor

and enhance the sustainability of the natural resource base. The initial assumptions of the guidelines were that changes taking place at the peri-urban interface are linked to urban and rural interactions that involve flows of people, goods, income, capital, natural resources and wastes.

These flows are driven at three interconnected, yet different levels:

- At the first level, change is driven by local conditions including, for instance, the competition between urban development and agriculture for land, or increasing pressure of extractive activities as a response to the city demand for building materials.
- At the second level, change is driven by regional and national trends and policies, such as the promotion of industrialisation.
- At the third level, change is driven by international conditions, such as falling prices of export crops that increase the migration of impoverished farmers to the peri-urban interface in search of alternative livelihood strategies.

The peri-urban interface is where many of the bottlenecks in urban and rural flows take place, leading to problems and opportunities not only for peri-urban communities but also for the sustainable development of adjacent urban and rural systems. Most environmental and livelihoods related changes occur in three ways:

- Changes in land use: for example, from agricultural to industrial or residential land uses.
- Changes in the use of natural resources: for example, de-forestation, water depletion and soil erosion.
- Changes in the generation of waste: for example increased solid or liquid waste resulting in water and soil pollution and health related problems.

Following the above considerations, the central contention of the guidelines was that, given the characteristics of the PUI, a particular management system needs to be put in place. The process of EPM is of defining objectives, implementing activities that improve the environment and monitor their effectiveness. Since the flows between rural and urban areas happen through the PUI, a management system has to be created to:

- Benefit all peri-urban dwellers (women and men) equally, whilst paying particular attention to the reality and experience of the poor, traditionally disenfranchised from rural and urban decision making systems.
- Ensure that negative impacts on the environment are addressed and that environmental changes are also utilized as opportunities to improve the livelihoods of peri-urban dwellers and the sustainable management of natural resources.

The actors involved in EPM for the PUI can be broadly categorized as:

- Poor communities (women and men) in the PUI and their representative groups.
- People and organisations whose interventions could have positive effects on the poor and the natural resource base. (local government agencies and NGOs)
- National government agencies, plus donor agencies working in a country.
- Groups who could provide financial or technical support (such as external support agencies, including donors, international development organisations, research and academic institutions).

The EPM guidelines were the outcome of a three year project conducted not only in India but also in Colombia and Ghana, which involved all the stakeholders listed above. The dissemination strategy in Hubli-Dharwad was carried out through a series of communication means aimed at different audiences, including street drama, posters, leaflets and a set of three volumes presenting more detail guidelines for government institutions and external support agencies.[61]

Overall the concept of peri-urban areas and its associated problems were found to be illuminating for all constituencies. It put into context many of the problems being experienced by practitioners and the community as well who are living and working in the peri-urban areas. The guidelines provided an initial platform for discussion among government officials about the issues related to natural resource management in the PUI and the overall concept of the PUI itself was found to be valid and useful by government.
Useful recommendations from TI officials included the need to made more explicit gender differences to ensure that women's perspectives are taken into account, the need to clarify the definition of who are the poor and also to indicate clear ways to involve the poor in planning, developing solutions and in defining indicators.

The next phase involved participatory planning with government officials. In the future separate meetings were indeed held with women to engender the process and wealth ranking techniques were used to identify who are the poor in the PUI. Furthermore a range of methods were used to involve the poor and a clear pro poor, pro women perspective directed the initiatives thereafter.

The Participatory Planning Process

At a preliminary diagnostic workshop working groups were formed with a combination of government, NGO, university and village representatives to begin work on the action plans.

In the week prior to the workshop NGOs worked with the community to surface issues faced by them which community representatives were to present to the workshop (Appendix 2). Here each group conducted a problem tree analysis where problems and their causes and effects were traced. A parallel solution tree was also drawn up to identify the possible interventions and their impacts (Appendices 3 and 4). This was the first time in the project that the village representatives were interacting with officials.

A second event brought together district officials and NGO representatives where the Mugad Action Plan was presented and two other tentative action plans were discussed.[62] Here officials discussed potential linkages with programmes in their departments.

The CEO of the district, Mr. Vastrad led this process. Prior to this meeting, separate meetings were held with this CEO who had recently been transferred into this post. Mr. Vastrad had some history of interaction with some team members on previous

[61] The EPM Guidelines (Allen et al, 2000) can be downloaded from: www.ucl.ac.uk/dpu/pui/publications.
[62] Meeting with Key Institutions, ZP Office, Dharwad, August, 2001.

peri urban projects and was thus supportive of the PAPP project and the team. The Chief Executive Officer (CEO) made a commitment to involve all department heads in this project and one outcome has been his active participation in all major events.

A third major event was village visits conducted by district officials and the team. Here, the Mugad action plan was presented for finalization. Gabbur and Channapur representatives also presented their plans to government. Preparatory meetings were held in two villages Gabbur and Channapur on creation of a log frame through participatory techniques to be presented the following day to government. Men and women separately worked on log frames and presented issues relevant to them separately to the government to demonstrate different gender perspectives. Here in front of the entire community, officials made a series of commitments to help the community on issues related to water, forests, livelihoods, dairy and so on. The CEO too committed to supporting the project and told the community to follow up on commitments made by his officials by either directly contacting officials or via NGOs. The overall purpose of the meeting with government institutions was to create a dialogue forum between village community representatives and district officials on the action plans being designed by the village. It was hoped in this process that officials could react to the plans and provide information on possible schemes that could be linked to the plans.

The team held meetings with government officials in state departments such as Watershed Development, Rural Development and Panchayati Raj, Industries and Commerce, National Bank for Agriculture and Rural Development (NABARD), and Forestry to facilitate state interest in the planning initiative, which turned out to be useful for the implementation phases of the action plans that followed. This interest was demonstrated by an official state visit of the Watershed Department to Mugad where village representatives presented the action plan to a team of state and district officials. In the state department visit, the State Commissioner expressing his interest said that the main purpose of the visit was to understand the participatory planning process and have his officials learn from the process and learn the techniques used. This interest also was reflected in directives from state departments to district agencies towards the support of the institutional mechanisms created within the district led by district government officials such as a District Steering Committee and an Urban Rural Task force described in more detail later on in the paper. Issues have been raised with both state government agencies and NGOs to provide visibility and support to the project and to fill possible gaps in knowledge and training that may be required particularly with respect to livelihood issues and enterprise development. (see Appendix on The minutes of the rural urban task force).

13.2. TI Involvement in R8084

Two informal mechanisms were created at district levels namely

- The District Steering Committee
- Urban Rural Task Force

In R8084 the project started the District Steering Committee with the help of the then Chief Executive Officer Mr. Vastraad who was both known to the project as well as to the district project coordinator and was supportive of the project. Under his aegis, the DSC meetings were held for about 10 months till he got transferred to another

district. However being head of the ZP the main officials attending the meetings were those agencies that fell under the ZP. The officials from HDUDA and HDMC barely attended.

These officials were asked about their perspectives about the DSC later on. Many found it useful except for the HDMC and HDUDA who said that the issues raised were not relevant for them with the exception of the issues raised by the one village that fell under the HDMC boundary, namely Gabbur. Thus having only six project villages of which only one was under the urban jurisdiction was a limiting factor in the interest generated in the urban agencies. Furthermore the CEO of the ZP and the Commissioner of the HDMC are of the same stature in the administrative hierarchy. Therefore the CEO did not find it appropriate to summon the Commissioner nor would the latter attend a meeting called by the CEO. Thus the only time both would attend would be if the Deputy Commissioner (DC) were to call a meeting who is senior to both officials and the head of the district.

The DSC meetings were extremely useful for the villagers and for the team as it created a forum where community representatives could directly interact with the officials and problems could be solved on the spot. These meetings were instrumental in getting the action plans of the ground where officials and agencies provided some resources towards the action plans. Furthermore since progress on the action plans were reviewed in these meetings it gave the communities, the NGOs, the team and the officials some incentive to move forward. The contact with the officials in these meetings built the confidence and capacity of the communities to approach other officials as well. Describing the entire process (Box 1) one community representative pointed out the advantages of the DSC meetings.

Box 13.1: The Process of Community Engagement with Government

First UAS came here along with Adrianna (in the EPM project) and discussed life in the peri-urban interface. There were discussions on the difference between the city and village life. They discussed the resources that go from the city to the village and vice versa. In those meetings we realized that we do not use the natural resources that we have here. Instead we buy the same goods from the city at more expensive rates, than what we would pay for them here. We have been looking at and analyzing information from the village on peri-urban issues about village problems, forests and what we need to solve the problems.

After this there was a diagnostic workshop scheduled at CEDOK where it was left to me to choose community representatives. Issues were prioritized there. For Mugad the forest is an important issue. Through the discussions it was decided that Mugad needs aforestation. For water and fodder and food for us and our animals we need to plant a lot of trees. First came the forests and then water and crops improvement the third priority and the how to produce things here which could be retained and used here itself.

So once we did this, the NGOs decided that the dialogue should extend itself to the government and there should be a joint meeting. This resulted in the district steering committee meetings. Therefore the DSC started so there was a lot of communication between the village community and the officials.

Even if there are five tanks in the village, the people here are poor and cannot afford to handle it. The poor do not have much money and the old CEO used to help by linking to government programmes. When issues were raised in the DSC meetings, immediate action was taken. The new CEO said he did not have the proper project documents and also asked for a letter from the state. As long as the old CEO was there he used to help us. The new CEO came for only one meeting and in the next meeting said that he did not have proper documents about the project. The project partners said they would provide him the information. I do not know if all this has happened and perhaps the project partners have not given the proper documents. (he was then told what had happened).

Village Narration, Shivariappa, GP member, Mugad

The new CEO objected strongly to the meetings as he felt that the formal procedure on paper was not in place. This procedure was the put in place by BPF by getting the State Secretary Mr. Raghunandan to provide a letter to the CEO instructing him to hold these meetings. In the meantime this CEO too was transferred and a new one came in his place who was willing to host the meetings but the team decided that this was not a sustainable mechanism and the action plans were being implemented regardless and it thus seemed pointless to start up the meetings only to end them at the end of the project. However the team decided to find out what government thought of these meetings and several officials from various departments who attended the meetings were called to interview them on their opinions of the usefulness of the DSC meetings.

One finding from this review was that at least 50 percent of the original government staff who had originally participated in the DSC meetings had been transferred and consequently one was interviewing many new officials. Some of the officials also had participated only in a couple of meetings. Nonetheless the views of those who had participated are presented here. Overall the finding was positive where many officials found these meetings to be useful but for different reasons.

According to Dr. Rakesh Bangle, Deputy Director, Department Of Veterinary Sciences, Dharwad, the positive aspect of the DSC meetings was that *we had a media to explain our departmental activities and people had a media to extract some work from our department and co-relate with us. The negative aspect is complaining on somebody that he or she has not done this or not done that and is not working etc. If a village representative generalises the problem saying the official has not come to our village or so, it is alright and we are ready to extend our help, but if he pin points certain officials saying he has not come to my house then it is not good. We have certain hindrances and other resource crunches, because there won't be any staff in this area, when we have a camp we have to mobilise some of the doctors from some other area, and medicines could be a problem, as financially we do not get any help. Whatever we have in the department we send it or minimum facilities and medicines we have we extend, and try to fulfil their needs. In all these DSC meetings one thing I felt bad was that of the complaining.*

He recommended that if continued DSC meetings could be carried out once in 2 months. *Let me extend my full co-operation from my side and once those people are*

convinced that this scheme is really working on something all will go well. If the CEO does not want us to meet then its gone. The CEO must be aiding our department and get convinced that we are working. Other people who are to be convinced are the Commissioner and the Mayor, who work under the Urban Development Secretary.

Dr. B.F. Appannavar, District Health Officer,[63] attended only 1-2 meetings and like the Mines and Geology department found the issues discussed not relevant to their department's area of work. *In the DSC meetings there were no health problems discussed at all. It will be useful to coordinate and solve health problems. Yes the DSC meetings can help solve many a health problems. Apart from that awareness can be raised on health issues. Who is to provide the gum boots and gloves if we say such gears are to be used? In the case that no budget is available it may take some time.* Mr. P. S. Bhende, Senior Geologist said, *The DSC meetings seemed to be basically held for discussing issues of agriculture, horticulture and forest departments, according to me, because most of the problems that were discussed were related to agriculture.* There was one issue where the Department of Mines and Geology was useful --- on the issue of Panchayat tax payment of the mine owners. Commenting on this issue he said *the owners have not paid it as yet, since the tax per year as charged by Panchayat is 1000/- to 500/- rupees. For this purpose alone I attended the DSC meeting last year and we had collected about 20 to 25,000/- rupees from the owners and given to the GP. It is the only village where 20 to 25 quarries are found.*

A. S. Burli, C.E.O., Fish Farmers Development Agency said I found DSC meetings very good. They should be restarted as public is given a chance to participate in it. It was started with a good intention. If the DSC meetings were still going on many people would have come to know about the fish farm development. It would train the PU people to get ready to compete with people. I have heard of PU through this project. And I feel the need of National policies for the PU issues. These are also called as 'Middle class cities'. Government through participatory planning should further the planned expansion of the cities. This PU project may help as you are trying to get urban and rural to work together. *Thus several officials found the DSC meetings to be a useful forum to inform other departments of their own work. Another point raised was that it would be a way to deal with peri-urban issues relevant to their department.*

According to R.S. Choukimath, Deputy Director and A.P. Kulkarni, Senior Assistant Director, Department Of Horticulture, *the district steering committee meeting enables us to have direct conversation with the villagers. It is a good platform for them to bring up the issues in their villages.* When asked about their perception of the usefulness of community representatives presenting their own plans and problems in the DSC meetings he said *such a procedure is more effective. There all departments will be present and we can solve the problems immediately.* He also felt that this method could be adopted elsewhere and that it was a replicable strategy.

For Mr. S.L. Koshti, Executive Engineer, HDMC[64], *the DSC meetings were certainly useful. But one thing, unless we bring them into practice, none will benefit. We should see that they really materialize or implemented. If one PU area gets benefit, looking*

[63] Interview, 5th May 2003
[64] Interview, 30th May 2003

at that the neighbouring area will also come forward. Then Government can concentrate on those areas also.

Mr. S. H. Kulkarni, Assistant General Manager, District Development (Dharwad & Gadag), NABARD said, *I have attended about 3-4 DSC meetings till date, it was good and there is a need to restart them hereafter. We used to sort out the difficulties amongst the linkages between banks and other institutes. Other than this there can be a (SLB) state level bankers committee meeting, during which issues of co-ordination can be taken up and solved. Earlier there were HDMC and town municipal schemes were there, but due to shortage of funds those schemes are also not coming any more. As there are no subsidies from the Central Government, the banks do not want to give any loans although they are ready to give. SJSRY Gadag also do not have any funds so does not give any subsidies. PMRY gives commercial and city based programs can be given, no restrictions. Unless the Government also comes forward to help in terms of subsidy, they cannot be revived. As the funds were not fully utilized, we had given the loans till last year in Dharwad and this year in Gadag also we have not received any subsidy under SJSRY therefore the loans are not given. So there are no urban programs now. Normally PMRY is for city based programs and for commercial banks and we are giving them. It can be given as there is no problem. If in these PU areas any commercial bank is operating such loans can be given and there is no restriction.* Thus while he saw the meetings to be a useful forum the lack of urban schemes and budgets were seen as a limiting factor for collaboration between urban and rural departments attending these meetings.

According to the Environmental Officer, *The meetings were quite interesting. One or two problems related to us were raised there, one of which was the sewage and problems due to its usage. Because of some emergencies in our work, we keep moving; during that time I would not be able to attend them. Some other officers attend them, when I won't be able to attend. The issues in the DSC meetings come from the local people only, with a kind of a suggestion also from their level. Then it will move better, instead of asking somebody else to give a solution, for a particular problem. If we have the solutions in terms of options, we need to choose one of them.* Thus a valid criticism made by him was the lack of solutions coming forth from the community. This was however primarily because the community was unaware of the schemes and services available with the government.

Mr. A. M. Shiva Kumar, M.D. Dharwad Milk Union Ltd, KMF, on the other hand did not find the meetings very useful pointing out various constraints to collaboration between departments as the main reason. DSC meeting is a common type of a meeting. We did have the plans made in common, but they were not exactly result oriented, because if we have a common goal, everybody has to join hands. All the departments are of course linked to each other, like the horticulture is linked to the dairying and dairy is linked to agriculture, but the activities and resolutions we conclude upon in these meetings do not materialise. Thus, after a month if we meet again, the things wouldn't have moved at all. That is why I called it a common type of meeting. It is fine if there is at least 5-10% perceptible change before the next meeting. You cannot get any results, due to the many hurdles in the way. Officers concerned, should be made aware of, particularly the nodal officers who are really interested in such things, should be nominated for such meetings. I being a nodal officer, send a lower grade clerk or someone, then simply attending the meeting is of

no use. There should be commitment on the part of the officers who are there, because we are more engrossed in the targets given by our own institutes. The pressure for us is particularly more here, because we work 365 days a year, without even an off on Sundays.

Some officials stated having an interest in such meetings but claimed they were not invited. Mrs. Kamala Belgaonkar, Senior Manager, PHRDD & Women Development Cell, M.G. Bank said, *If it is required of us, we shall participate in the DSC meetings, because once we are expected to be a partner in the development involving credit then it becomes necessary for us to attend such meetings. For instance, we attend Block Level Bankers meetings, BLBC and District and State level Bankers meetings. Here, the difficulty faced by the bankers, in lending or recovering the loans is discussed with the Government officials in detail. The participants consist of the C.E.O., the Tahsildars, D.C.'s, different DIC officials, Government agencies. These various agencies are needed to participate, as they tend to pressurize the Banks for the financing under various schemes. The loans thus being given, becomes overdue and none wants to take up the responsibility except the bankers. But due to financial reforms, we need to solicit the active help of the Government agencies to go with us and if need be, take certain actions for the recovery of such loans. Thus Fisheries, DIC and so many other department heads come together in these meetings. So far we have not been invited to attend these DSC meetings. It is a good idea to restart them, as decision making amongst various departments is eased and matters may be settled then and there itself. I am in favour of these meetings as they are advantageous to everyone.*

Officials like Mr. P.S. Hegde, Geologist, Mines and Geology Department, Dharwad were willing to continue to attend such meetings but questioned their usefulness. *I have no problem attending the DSC meetings. When I am there to render service, I'd be contributing my knowledge to the people as far as my allows as a Government authority. Certainly I am happy to participate in them. There is also a possibility of learning more things. Interaction should be there, so co-ordination would be better. We can also develop better relationships with the others. I don't know how successful it could be made possible for all the departments to work together through these meetings, as they will all be busy in their own departmental activities. if we are part of it, we can attend it, and that's fine. We have our own limitations also sometimes, being in the framework of the Governmental organisations, where there is a lot of bureaucracy. You have come all the way to solve such problems here, but there are such many problems in Bangalore itself, which also has PU problems.*

The team had to make a decision after these meetings whether or not to continue the DSC meetings given that both officials and the communities had positive feedback about it. However by this time the action plans were well underway and the project personnel decided to initiate the DSCs again since it would not be sustainable beyond the life of the project. Also it was decided that if any new process were to be initiated it had to be done through the government taking the initiative itself.

Interviews with government also helped to assess what exactly their awareness was of the PUI and it assess if they thought there was a difference in the issues faced by communities in the PUI and what kind of collaboration they envisaged in the PUI.

Finally at the state level, interviews with government resulted in discussions between state and the head of the district to initiate a process for collaboration across rural urban boundaries. A meeting took place with the DC on rural-urban collaboration.

13.2.1. The Rural Urban Task Force

Additionally after the implementation of the action plans were well underway, the CEO was transferred and the new CEO refused to continue the process unless a letter from the state was provided to officially sanction the DSC. The letter was obtained several months later but by that time, the team decided that a new mechanism was needed to take the process on scale and that the DSC was unsustainable, although it was seen as important to have jump started the action plans. The DSC was thus dismantled and a new task force was set up to take on urban rural collaboration this time under the Deputy Commissioner who heads the district and is above the CEO of the ZP and the Commissioner of the Municipality, both.

This *'urban rural taskforce'* represents a second instance of cooperative governance (the DSC being the first) through which government agencies could plan to work on scale in the PUI to deal with problems specific to periurban communities. Some of the issues identified by the task force included

- Creating mechanisms to treat the urban side of a watershed.
- Providing training on the comprehensive development plan (CDP) from the HDUDA to the Zilla Parishad, which is unprecedented thus far in planning practices of the government.
- Improving the linkages to urban markets through the farmers markets in a decentralized manner for the peri-urban producers to facilitate direct sale to urban consumers.

Unfortunately the Deputy Commissioner who headed the taskforce was transferred after its first meeting and the new DC did not see it fit to continue with this task force as he had no ownership over the process.

Both these informal mechanisms experienced problems of continuity once the official concerned leading these mechanisms were transferred. This reflects on two problems in government a. personality driven processes which failed to get institutionalized and frequent transfers within government which officials themselves saw as a problem for sustainability of collaboration between departments.

13.3. Scaling Up

Several attempts were made to scale up the impact on TIs. These included

- Creation of a rural urban task force at the district level
- Workshops at state and national levels
- Preparation and dissemination of outputs for TIs

The rural urban task force could have represented precedence in the country of government working across rural urban lines at the district level. However even if it were continued, there was no guarantee that its existence would have changed state or national policy. It would at best have served as a good practice and precedent for national and state government to use as a model for replication or as a basis for policy formation. However it also still represents an informal mechanism which is an

alternative to the DPC. Feedback at national levels from the national workshop and dissemination initiatives on the part of the team with the EU institutional partners provided feedback on these informal mechanisms, stressed the importance of getting formal mechanisms like the DPC to function and could not see the relevance of informal mechanisms. Yet there are examples of such informal mechanisms such Hubli Dharwad Action Task Force (HDACTF) and Bangalore Action Task Force (BATF) which are not constitutionally or legally mandated but have operated effectively, though with government sanction. As such there needs to be a shift in attitude both in academia as well as in government to entertain the notion of informality in the operations of formal institutions as a way to introduce flexibility in the bureaucracy. This is especially important when formal mechanisms are defunct and ineffective like the DPC which is an advisory body with no decision making powers, no budget and yet it is THE body given the crucial mandate of rural urban collaboration.

13.4. Lessons Learnt

Many barriers that condition and limit uptake and institutionalisation of rural-urban collaboration were found within policy shortcomings as well as in the organizational sphere of where responsibility for rural urban collaboration (RUC) is located. As the team found that the existing formal mechanisms of the DPC were unable to carry out its mandate of RUC it resorted to the creation of informal mechanisms.

In terms of policy, a cross-cutting rural-urban perspective is not integrated into national policies. As highlighted earlier, the two Constitutional Amendments introduced in India in 1992 established in fact the need for rural-urban collaboration but in reality by strengthening both structures separately the divide has only deepened on paper and in practice. The DPC itself as mechanisms has not been fully implemented in the State of Karnataka in all districts and where it exists it is a political body very often existing only on paper.

In addition, separate resources do not exist for the peri urban nor are officials willing to share resources towards rural- urban collaboration. Whilst many officials recognize lack of funds a constraint for future plans and programmes, some also feel that fund distribution is biased in favour of the rural and fewer funds are available for the urban. They see this as a constraint for rural-urban collaboration.

As a result, peri-urban initiatives in Hubli-Dharwad have been sustained either through donor-funded programmes or projects such as R8084 or the EU funded peri urban project, or through the allocation of resources from existing local government programmes for the above projects.

One of the main findings of R8084 important for future projects was to get state level ownership and buy in prior to the project's initiation. State officials although kept informed of R8084 and its progress were not part of the planning of R8084 and did not feel any ownership over it. State officials despite this provided directions to the district officials to continue the initiatives but did not institutionalize the process. Thus any future projects in Hubli Dharwad to create policy change would first have to approach the state during the planning phase itself to get them involved and to create

contractual agreements to build ownership over the institutionalisation process and thus to counter the problems discussed above.

A second major problem identified was that of frequent transfers of officials. Just when a process, which had taken months to establish would take off, the official concerned would be transferred. One recommendation to dealing with transfers has been to create contracts which write in a clause preventing the transfer of officials within the project period. However this has not been known to work even in the World Bank funded projects where heads of projects have been transferred. However what may work is getting the buy in at state level and getting a written agreement at this level prior to the commencement of the project. Getting state buy in on a small scale however is difficult and while attempts were made the scale was not considered sufficient enough for the state to enter into such an agreement. The scale in this case translates into more than a single district, more sites, bigger budgets and sharing resources with the state.

Chapter 14 Impact Analysis

Also see Annex D. The methodology used to measure impact changed over time as described in Chapter 3. Impact was measured for all the interventions on the community and on the team a few select community groups themselves also measured the impact of a set of issues. In the section below impact has been assessed against the log frame outputs.

14.1. Achievements vs. Log Frame Output 1

Output 1: Increased capacity of the communities to achieve sustainable changes in the management of peri-urban interface natural resources that are likely to enhance livelihood strategies of the poor.

Examining the objectively verifiable indicators (OVI) in each output evidence has been provided for each OVI.

1.1 By end of first year of project in each village, alternative livelihood options identified in the 5 initial project villages.
1.2 In at least 6 villages, by end of project 30% of households in primary beneficiary groups adopt sustainable alternative livelihoods options with measurable increases in livelihood outcomes.

Majority of the population in project villages have been mobilized into SHGs, which was the primary strategy used by the NGOs. Several of these SHG members have taken loans from the sanghas using their sangha savings for productive and consumption purposes.

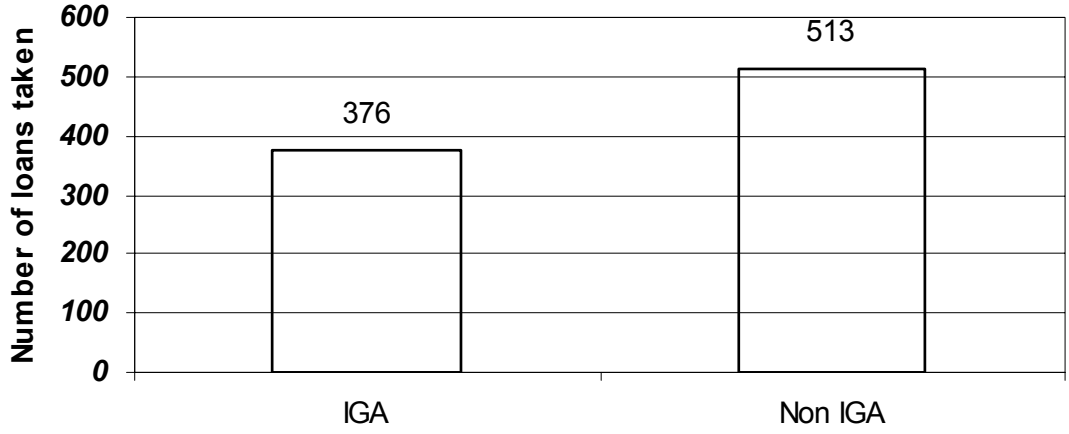
Data from 18 sanghas was analysed for the following information:

- Loans taken by sangha members from sangha savings and purpose of these loans
- Loans taken by sangha members from banks and purpose of these loans
- Additional occupations started by sangha members

14.1.2. Loans taken by sangha members from sangha savings and purpose of these loans

Data showed that 42.2 percent of these loans were taken for production purposes (Figure 14.1).

Figure 14.1: Purpose of Loans Taken by Sangha Members from Sangha Savings



These production loans were taken to enhance or expand existing livelihoods and some were taken for new livelihood options. The new livelihood options provided supplemental incomes to existing livelihood options.

Examples of the types of livelihood options for which loans were taken are presented here. Overall 17.7 percent of loans taken were for non natural resource based livelihoods (Figure 14.2) while the bulk of loans 82.3 percent were for natural resource based livelihoods (Figure 14.3).

Figure 14.2: Loans Taken for Non-NR Livelihoods

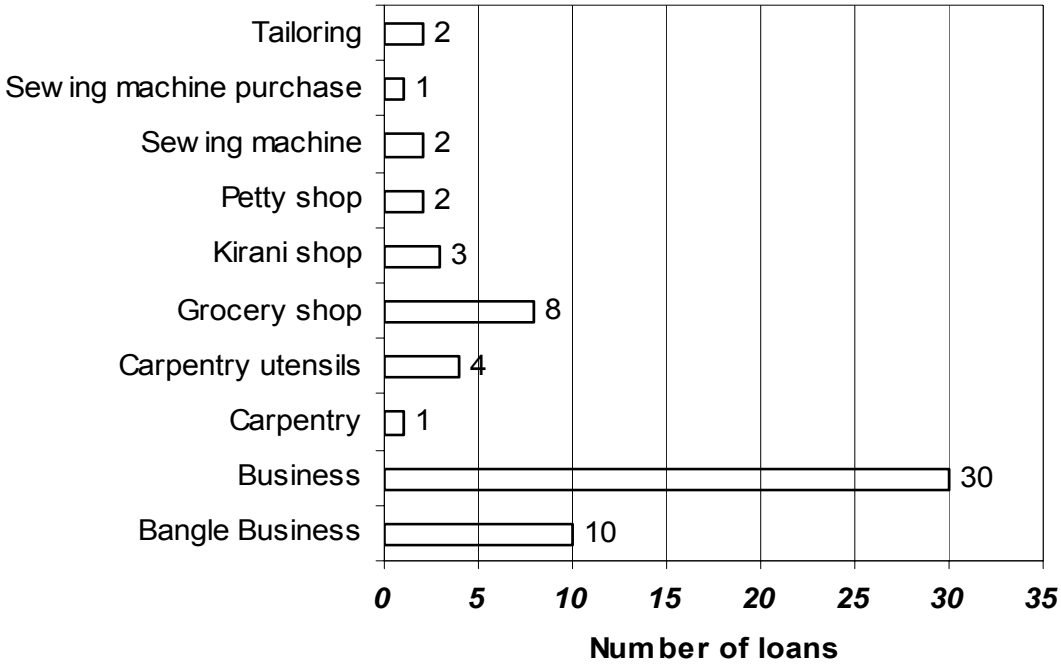
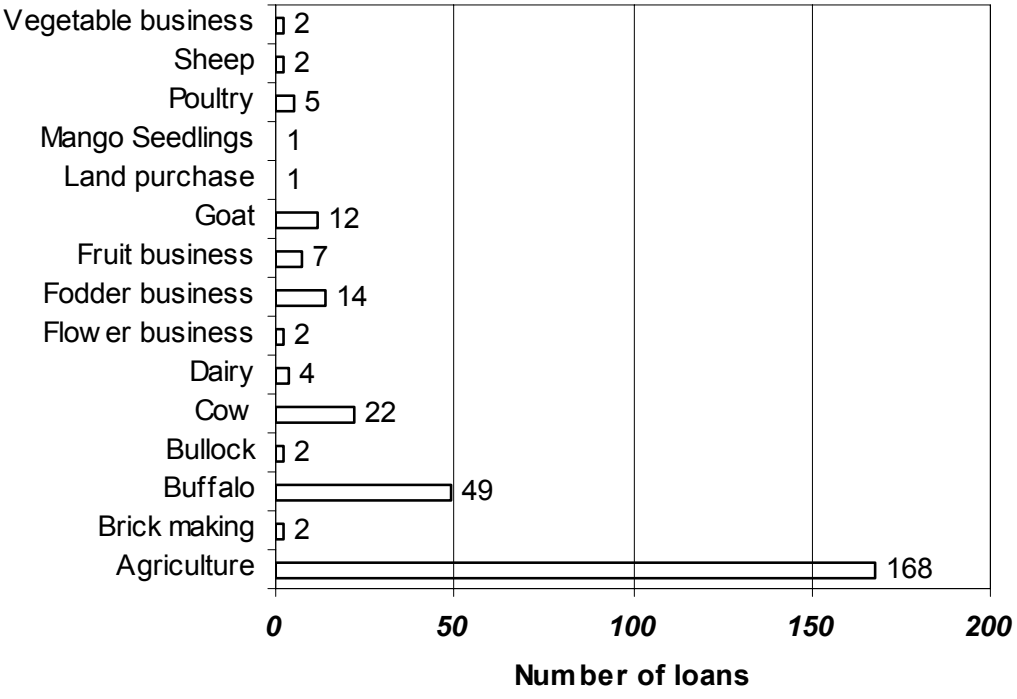


Figure 14.3: Loans Taken for Natural Resource Based Livelihoods



Income generation Loans

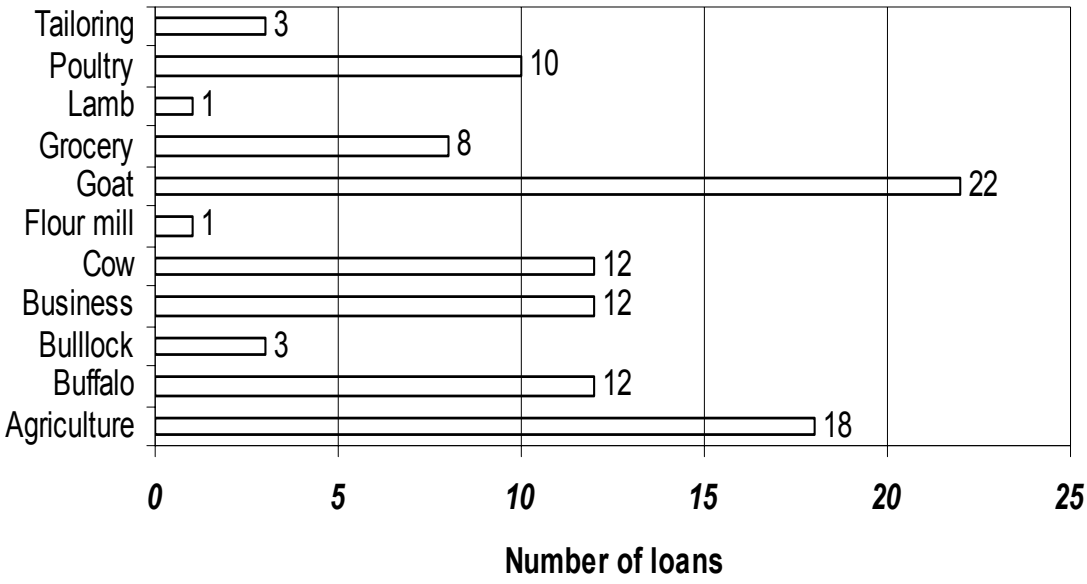
Of the 63 loans taken for income generating activities most women cited these as needed for running businesses (40) while the second major livelihood option was the operation of shops (13).

Natural Resource Based Livelihoods

Most loans taken for natural resource based livelihoods (293 loans) were for agriculture (57.3 percent). The second major option was livestock related livelihoods (32.8 percent). Other significant options included the fodder, fruit, vegetables and flower businesses (8.5 percent), which are clearly more lucrative options for the peri urban communities.

14.1.3. Loans taken by sangha members from banks and purpose of these loans

Table 14.4: Purpose ofLoans from Banks



14.1.4. Additional occupations started by sangha members

Among the new occupations added by sangha members, (Figure 14.5) the largest category of new occupations initiated included poultry, goat rearing, dairy and then soap powder manufacture.

Figure 14.5: New Occupations Added by Sangha Members

These occupations were a direct result of the project interventions.

Other occupations added included quarry or factory work, goundi work (labour in cities), among others, all of which were mainly undertaken individually by sangha members.

14.1.5. Changes in Occupations Analysed by Project Intervention

It was found (Table 14.1) that 60.3 percent experienced no changes in occupations. Of the remaining 40 percent, 32.6 percent added new occupations and 7.1 percent dropped occupations.

Table 14.1: Number of Families with Changes in Occupations

Number of Occupational Changes	*Number of Families*
-2	2
-1	20
0	187
1	71
2	24
3	5
4	1
Total	310

Overall 30.7 percent of families had no interventions. Or 69.3 percent received at least one intervention. Interventions were categorized into livelihood interventions (such as soap making), NR based livelihood interventions (such as wadis, FLDs and livestock), natural resource management interventions (such as tank desiltation, and bunding), and capacity building of the community (included mobilization of the community, exposure visits, awareness building and training, and interaction with government and other major institutions). Other interventions included nutritional demonstrations and installation of smokeless chulas.

Table 14.2: Type of Intervention	
Livelihood	28
Natural Resource Based Livelihoods	148
Natural Resource Management	176
Capacity Building of Community	265
Other	13

Change in occupation was juxtaposed against type of project interventions to analyse which interventions resulted in the maximum change (Table 14.2. and 14.3). Based on this classification, capacity building of the community was reported the highest number of times wherein 265 families were involved (Note: some families could have received multiple interventions within this category). The NRM interventions were the second most frequent (176 families benefited), followed by NR based livelihood interventions (poultry and other livestock initiatives, wadis and so on). Livelihood based interventions that were not NR based were not as popular.

The highest additions in occupations were experienced among families where natural resource based livelihood interventions were employed (Table 14.4).

Table 14.3: Type of Project Intervention: Change in Occupations

Change in Occupations	Livelihood	Natural Resource Based Livelihood	Natural Resource Management	Capacity Building of Community	Other
-2	2	1	0	6	0
-1	0	4	8	15	0
0	13	68	111	140	5
1	10	47	37	64	5
2	1	24	18	32	1
3	1	2	1	5	1
4	1	2	1	3	1
	28	148	176	265	13

Table 14. 4: Percent Change in Occupation: Type of Intervention

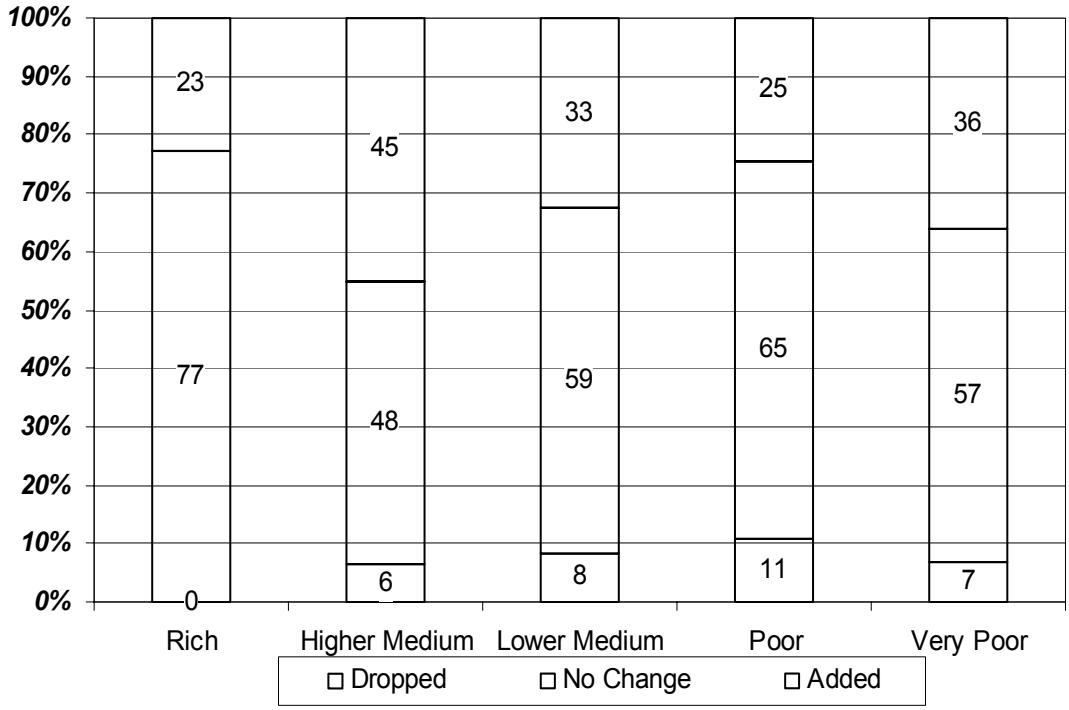
	Livelihood	Natural Resource Based Livelihood	Natural Resource Management	Capacity Building of Community	Other
Dropped occupations	7	3	5	8	0
No Change	46	46	63	53	38
Added occupations	46	51	32	39	62

The highest number of families that experienced no changes were those involved in capacity building of the community (140 families or 53 percent) followed by natural resource management strategies (111 families or 63 percent).

Tables 14.3. And 14.4 point to the importance of NR strategies and NR based livelihood strategies in the peri urban.

Chart 14.6 and Table A14.6 (Appendix) analyse which wealth categories experienced more additions in their occupations. Close to 36 percent of the very poor experienced increases in the number of occupations and close to a quarter of the poor also experienced additions in their occupations.

Figure 14.6: Proportion of Change in Occupations by Wealth Categories



14.1.5. Reported Reasons for Changes in Occupations

With respect to reported reasons for changes, at least half the families reported no change (48.1 percent). See Table 14.5. Ten families (3.3. percent) attributed their additional occupations directly due to project interventions and the resultant access to credit. A range of other reasons were reported for changes in occupations including drought, sickness or old age, or occupations becoming unviable or family members who had held occupations earlier having left or new members working because they were no longer students or had acquired a job for the first time.

About 16 families (5.2 percent) were forced to change occupations due to drought. Forty three families reported started to work for the first time as earlier they were students.

A number of family members (26 or 8.4 percent) stopped working because of old age or pregnancy or sickness. Several families (13) reported starting additional businesses or diversifying their livelihoods such as petty shops and shifting occupations from agriculture to factory work due to drought (4 families) or uncertainty in agricultural work (4 families).

Table 14.5: Reasons for Change in Occupation		
Reason	**Number of Families**	**Percent of Total**
No Change	149	48.1
Additional business	15	4.8
No occupation due to draught	16	5.2
Member expired	6	1.9
Members left	9	2.9
New members added	5	1.6
Started working	43	13.9
Not working	26	8.4
Started business with loans	3	1.0
Decline in income	12	3.9
Increase in income	13	4.2
Uncertainty of agricultural work	4	1.3
Additional business due to project intervention and sangha	7	2.3
Negative impact on female education	4	1.3
Drought	4	1.3
Others	38	12.3
Total	354	

Note: The percentages are calculated with 310 as the base therefore the total adds up to more than 100 percent because of multiple reasons given by each family.

1.3 By end of project the poor in at least 6 villages are sufficiently confident to interact with TIs to meet the needs they have identified for themselves.

Participatory indicators provided information on the number of sangha members from 18 sanghas who visited banks, gram Panchayats, taluk Panchayats and zilla Panchayats. Sanghas constitute mainly the poor and therefore these PIs provide evidence of confidence in interacting with TIs. The indicators were collected for two years (2003 and 2004) and Table A14.1 in the Appendix shows the numbers of sangha members who are visiting banks in these two years. Overall 91 percent of all sangha members visited banks in 2003 and 92 percent visited in 2004. This shows a high degree of familiarity on the part of most members in dealing with bank transactions. When looking at the government institutions, the proportions of sangha members visiting government is highest at the village level as expected and decreases as it goes to taluk and zilla levels. Over the two years at least 50 percent up to 77 percent of sangha members have visited the GP. Less than 10 percent visit the taluk panchayat and between 1-3 percent have visited the ZP. A higher proportion (34 percent) has participated in the Gram Sabha (Table A14.1).

Other data substantiating increased interaction was provided by IDS and BAIF (Table 14.6 below).

Table 14.6: Number of Institutional Visits made by Sangha Members					
Village	**Bank**	**Gram Panchayat**	**Taluk Panchayat**	**Zilla Panchayat**	**Gram Sabha**
Kotur	60	35	20	0	60
Mandihal	100	30	10	4	50
Daddikamalapur	46	24	4	3	20
Mugad	120	50	10	10	30

In the IDS villages for example banks were visited 326 times by women, GPs were visited 139 times, TPs were visited 44 times, ZPs 17 times, and the Gram Sabha was attended by 160 members.

Purpose for approaching Bank:

1. To open a Sangha Account
2. To deposit saving amount
3. To understand bank transactions
4. To get loan for Income Generating Programme
5. To know the different Government Schemes (SGSY, IRDP loan)

Purpose for approaching the Gram Panchayat:

- For getting minimum needs facilities like drinking water, street lights, road repairs, austra ole (smokeless chulas) green cards, Janata plots, ration cards.
- For getting proper mid day meals to the children (under akshaya yojana)
- Rectification of injustice in identifying beneficiaries for Government scheme like in getting green cards for the poor people, Janata plot house tax.

Purpose for approaching the Taluk Panchayat:

- To get Government Schemes like SGSY, Revolving Fund and Fish rearing
- Desilting of tank.

Purpose for approaching the Zilla Panchayat:

- For desilting of tank Fish rearing in the tank,
- For maintenance of the mini water tank.

Purpose for approaching the Gram Sabha:

- For getting minimum needs programme like Janata plot, ration cards, street lights, community hall, tank repairs, desilting of tank, drinking water, mini water tank.
- To understand different government programmes like Ashraya, SGSY, Adult education, house tax.
- Regarding the follow up of the work taken up by the panchayat members through Gram Panchayat.

Information from BAIF on increased interaction with TIs showed the following:

- All SHG members are visiting banks. Most of them particularly women visited banks and interacted with bankers for the first time in their lives.
- Officers of Vijaya Bank Hubli visited Gram Devi and Sidharudh SHGs in Gabbur. They verified the sangha records and expressed their willingness to link the sanghas to bank.

Annex D provides several quotes of sangha members visiting target institutions. To illustrate the change in confidence in approaching TIs levels a few such examples from Mugad village have been provided as evidence.

According to Laxmi sangha members, *we felt happy because the bank manager asked us to sit and have tea. We now have the courage to talk to officials and get things done. We all go to the bank and to the GP. We now know that if there is a problem we can go to the GP and they have to respond to us. We are happy going to the bank and to the GP*.

For Madina sangha, Mugad, *we never used to go anywhere. Now we will go. We have courage to go anywhere. We can talk to people and we have more information. If there is a mistake we can talk to the bank officials to get it changed. When there was some problem with our bank account and some mistake in records of interest paid. We went and talked to the bank manager and got it changed*.

The members of Suban Alla sangha needed to get some work done with the bank manager. But because they were unclear what paperwork the bank manager needed, they took the GP secretary with them to the bank to get their work done. According to women, *The GP secretary said he was happy to go with us and help us. People around said that the sangha women are now taking the GP secretary to get their work done. If there is any problem we know that we have to go to the GP and we can get it solved. If we sit at home nothing will get done. We are courageous. Earlier we used to be embarrassed. Once we went to a Gram Sabha meeting and we were the only ones and all the elders were there so we came back. The next time the elders were there and we went and told them our problem. We have more courage now. If we go alone people will make comments about us. But if we go in a group they say that the women have come forward now. We are happy going as a sangha. With IDS training we have improved at least 50 percent*.

BAIF provided a few other instances of increased confidence on the part of communities in Gabbur to interact with government. For instance, the members of Bhimambika SHG in Gabbur approached the corporators of that area residing in Bidnal for the installation of an electric pole to provide light in their street. All SHGs in Gabbur both men and women along with Sri Sai Mahasangha celebrated an annual day function. The function was inaugurated by corporator of that area to whom SHGs presented the progress and achievements of the sanghas. As the village elders objected to the sanghas conducting meetings in the temple all women SHG members approached the corporator of that area for a community hall to conduct the sangha meetings. They also negotiated with the village elders and got permission to conduct meetings in the temple in the interim.

1.4 By end of project, using indicators identified in Output 3, primary beneficiary groups in at least 6 villages report positive changes in management of NRs with consequent enhancement of their livelihoods

Annex D provides evidence of improved NRM in at least two instances namely for tank management in Kotur and wadi management in Channapur. Wadi owners continue to maintain their wadis and even monitor this maintenance through the use of participatory monitoring and evaluation. In Kotur people came together and repaired their tank bunds from which they got higher crop yields.

14.2. Achievements as per Logframe Output 2

Output 2: Village stakeholders, researchers, and target institutions gain new insights from the process of implementing action plans in peri-urban areas into: Factors which facilitate cooperation between different stakeholders; which solutions to identified issues are both effective and sustainable; what are the most appropriate ways of measuring change by all stakeholders.

2.1. By end of year 1 of the project, using indicators identified in output 3, village stakeholders in 6 villages, researchers and target institutions acknowledge and articulate increased cooperation in pursuing project objectives.

Overall there seemed to be increased cooperation between the village stakeholders, the researchers and NGOs. However while there was high evidence of cooperation between the team and TIs at the initial stages of the project this changed because of frequent transfers of officials.

Evidence of changes within the team: Dr. C.S. Hunshal talking about lessons from the project, discussed the differences of working with NGOs especially with NGOs who are more technical in nature such as BAIF and those that are less technical. *Another thing is working with NGOs. You never find many governmental organisations working with NGOs. They think that their way of doing things is the right way while NGOs have a totally different way of doings things. I would have to have an NGO with me because I cannot do community development and identifying the problems in the village. It is the NGO who does all this work. So they need to be involved in any kind of research project. Our people have learnt how to work with people who do not understand technicalities. We know now how to work with people who know about it and how to work with people who do not know about it. Yogesh and Goroji [UAS staff] get along with the NGOs. By and large the team has been quite homogeneous. That is what is required in a team.*

NGOs on the other hand also learnt the value of working with researchers in a large team. According to Prakash Bhatt, Chief Programme Coordinator BAIF, *In terms of thinking, I have not worked in any project that has so many partners. In the past we have been mainly the fonder, NGO and participants, maybe government and at the most consultants. This project is a pleasant surprise. Experiences of too many players have not always been sweet. Coming together in such a big groups of people and organisations has advantages and disadvantages. One is, you learn from each other and you adjust to each other. You cannot come to the table and say this is what I want. The advantage is that you learn to adapt.*

According to V.S. Pawadshetty (Project Officer, IDS), he expressed the advantages of working on a research project. He used to earlier see researchers come and go but here he was part of the research process and consequently he understood the importance of the research results and therefore of research. He also learnt to be more systematic in record keeping.

Evidence of Cooperation from the TIs: TIs did not cooperate in a sustained or consistent manner for the entire project period. However TIs who were interviewed did articulate the importance of working in the PUI, of working across rural urban lines and of working with NGOs. About 25 out of 29 officials saw the need for increased involvement of NGOs and government agencies to address peri-urban poverty and problems. Many said that NGOs were more likely to have the capacity to address peri urban poverty compared to their own agency (13 officials). About 13 officials said it was important to work across rural urban lines and that it was important to build officials capacities to do so.

In terms of the project objectives of dealing with periurban poverty and NRM, there has been cooperation on the part of some officials at state and national levels. There was some evidence of cooperation in interviews of TI officials on usefulness of the DSC meetings (See Annex on Target Institutions). Out of 32 officials, 18 attended the DSC meetings of which 12 found them to be useful. In the DSC meetings several departments such as Fisheries, Horticulture, and Forestry dovetailed some of their programmes on to the community action plans. The then CEO of the district led the process of hosting these meetings and has even taken a team of officials to a project village before he was transferred out. Towards the end of the project when he was transferred back, at the district workshop, he officiated the meeting and offered to help the village stakeholders access other TIs in the future. However the team saw the process as unsustainable over time and personality driven. For instance had the scale been large enough to include all peri urban villages, then having the entire ZP departments meet once a month might have made sense but for only 6 villages it was not cost effective.

At the state level, state officials heading the Rural and Panchayati Raj Department sent a letter asking the district government to cooperate with the project. Urban Development department officials called the DC for a meeting with the project team to request cooperation. The DC also attended a meeting in New Delhi where the book Changing Frontiers was launched and hosted the first rural urban taskforce meeting before he too was transferred. The Urban Department partially funded the state workshop where several officials attended the meeting as chairs, presenters or as participants. The Minister for Urban Development also attended the final state workshop and recommended a future event, which brought together all urban and rural officials to better understand the peri urban concept.

Evidence of increased cooperation with primary beneficiaries and TIs: At local levels there have been various examples of interaction between primary beneficiaries and government. For instance, fishermen Sangha members of Mugad village have approached Fishery Department Dharwad to get permission for fish rearing in Mugad tank. Now they have brought 75,000 fingerlings and they have been dropped in Mugad tank in the month of August 2004. They have also taken Hosakere tank of

Mandihal village on lease for one year for rearing of fishes in the tank and about 60,000 fingerlings have been dropped in the tank.

BAIF provided evidence of local cooperation on the part of district agencies (Table 14.7). This included the various inputs made by the government departments as well as those received by project participants from other target institutions such as the UAS and the European Union.

Table 14.7: Evidence of Local Collaboration

Department	Instances of Cooperation
Horticulture department	• During the year 2002-3 Horticulture department supplied sapota grafts to 4 wadis in Channapur. • Floriculture in 0.5 acre given by Horticulture department in Channapur
Agriculture department:	• Soil analysis of 25 soil samples from Gabbur was done. • Worms supplied to 4 participants in Gabbur to start vermicomposting. • Supplied chaff cutter to Basweshwar SHG in Gabbur on subsidised rates. • Gram Devi SHG members were given training conducted by agriculture department Dharwad under YTEP scheme.
Veterinary department	• Animal Health and vaccination camp conducted at Gabbur by veterinary department Hubli and Dharwad. • Training on improved livestock management conducted at the end of the camp. • Regular participation in vaccination camps conducted at Gabbur every year. • Weekly visit of Senior Livestock inspector from Bidnal to Gabbur on every Monday.

University of Agricultural sciences	• Department of agriculture entomology Government of India project on mass production of quality bio pesticides has helped to cover 25 acres of cotton fields to manage cotton bollworm by supplying NPV.
	• FLD in cotton:
	  o A IPM trial in "Abadhita" variety of cotton with inter-crop of 5 guntas castor and bhendi 5 guntas at Gabbur.
	  o Dry sowing trial in Cotton by sowing 5 guntas before monsoon and 5 guntas after monsoon at Channapur.
	  o FLD trial in Groundnut, sorghum, paddy, savi, soyabean, ragi given to farmers in Gabbur and Channapur.

BAIF EU project	The BAIF EU project supported for development of 15 wadis in Channapur

One women SHG member of Channapur has been elected as the president of executive committee formed by Sujala (World Bank) watershed project in the village.

2.2. By end of project, features common to successful interventions identified by peri-urban stakeholders, reported by research team and at least two of the target institutions involved with the project.

Two of many important features included the higher attention paid to *participatory processes* and thereby ownership of communities over the process and second, greater awareness of the *peri urban concept*. The team also identified *community mobilization* as an important basis for all other activities, a finding even identified at the planning stages. Being participatory helps creates the ownership and builds in sustainability and more effective because people want the intervention.

In interviews with government institutions a number of officials said participation is important (23 officials out of 32 officials) and 14 officials even felt that training on participatory planning is important. About half the (16) officials said they saw a distinction between peri urban and other areas and several saw the need for specific interventions in these areas.

In terms of mobilization, Table A14.4 in the appendix lists benefits received from the project as reported by families in the FIS 2. Only 23 (7.4. percent) families out of the 310 families said they did not benefit from SHGs. The rest mentioned some benefits in various contexts from the community being mobilized.

In terms of participation, as can be seen in the tank repairs, people contributed the lion's share of the resources (Chapter 6), and the effectiveness was most visible in the final outcome of crop yields this year and the potential for future sustenance. Participation also results in multiple outcomes. For example comparing the Channapur tanks desiltation process (which was completely government initiated and implemented with no participation whatsoever) to more participatory examples in the other villages, more uses came out of the process. These included the tank being desilted, silt application on farmer's fields, better crop yields from more water and fertile silt, more water for animals and domestic use, linkages with government, and creating awareness that led to the community coming together around the tank.

2.3.1. By end of project year 1, primary beneficiaries in 6 villages, researchers and target institutions agree on a set of indicators to measure initial state of and changes in livelihood strategies, NR base and degree of effective collaboration between stakeholders, that are simple and believable.

2.3.2. By end of year 2 of project, after critically reviewing indicators, primary beneficiaries, researchers and target institutions and produce amendments where necessary.

To arrive at these indicators, the team came up with seventeen questions that would need to be answered in order to monitor change resulting from implementing the plans of action. It was realised that this was too much to be undertaken within the time frame of the project, so these were condensed into six questions.

It was then decided to drop this format and start thinking afresh what the team and the village community thought was worth monitoring. The six questions that the team had come up were then divided into what would be covered through PM&E and what would be collected through the process documentation and reflection sessions.

As the project was participatory from the outset, it was then decided that the village community would define the indicators that they wanted to measure. The team was also interested to determine indicators from the other stakeholders such as the team itself and the government officials. Once the indicators were collected they were collated by the team and reduced to a more manageable number and those that would be easily measurable and applicable across all the villages. When government was interviewed on indicators they were only able to provide indicators on their agency as many were not involved in the project.

2.3.3. By end of project, primary beneficiaries, researchers and target institutions reach agreement on a set of those indicators which are suitable for continued use beyond the life of the project and for wider dissemination.

To be truly participatory people had to not only define the indicators but also had to decide what measures and methods they would use. Once the indicators had been collected it was decided that in each village the people would measure just one indicator. The team decided that to measure the remaining indicators. After a few months the participatory indicator exercise was revisited in each of the villages to do the first round of measuring. As the sanghas started revisiting the indicators they got more comfortable with it and are more confident of being able to measure it by themselves in the future (Annex D).

14.3. Achievements as per Logframe Output 3

Output 3: Acceptance of processes that have led to effective NR management strategies which benefit the PU poor, what interventions work, how changes can be measured and what constitutes an enabling environment, amongst interest groups in non-project localities.

3.1. During course of project, evidence of increased capacity in at least two local TIs in conducting participatory processes, data management and analysis & evaluation of processes.

About 30 women's federations (of 500-800 women each) from across seven districts in Karnataka state, from Mahila Samakhya Karnataka, a government programme were trained on the development of participatory indicators who then developed their own indicators to monitor the performance of their federations. Recently MSK informed BPF that the federations had decided to continue to use those indicators to monitor the federations' progress in the future. Thus between 15,000 to 24,000 women in these federations have been trained by the project team in PM&E methods and will use this process of developing participatory indicators to monitor their own progress. Through this process of identifying PIs, MSK federations were able to identify literacy, legal literacy, access to government programmes and IGAs as priorities. MSK too have expressed an interest in replication of MOVE with the federations.

3.2. By end of project, requests received by NGOs and TIs for replication of the project's Output 1 from interested parties in at least two non-project villages around Hubli-Dharwad.

ILO asked for the replication of MOVE and entered into a contract with Dr. Subhas M. who conducted a training of trainers for 5 organizations in Mangalore on MOVE.

Other evidence of requests for replication are from BAIF and IDS. BAIF claims that:

- Farmers from Giriyal village are willing to start wadis in their land and are requesting project staff to guide them.
- Dairy farmers in Bidnal have asked to help in formation of SHGs in their villages.
- Two big framers in Channapur have followed RTB method to their horticulture gardens.
- Farmers from other villages are visiting Channapur to learn vermicomposting. 2-3 farmers from Gangiwal have purchased worms from Channapur for starting vermicomposting.

According to IDS, the following village communities have requested an extension of services of the Peri Urban Project in their villages:

1.	*Belur*	*6.*	*V.Nagalavi*
2.	*Heggari*	*7.*	*Station Nagalavi*
3.	*Singanhalli*	*8.*	*Gavathan Nagalavi*
4.	*Neeralakatti*	*9.*	*Kyarkopp*
5.	*Kelgeri*	*10.*	*Hullikeri*

Also within the project villages, new SHGs have formed after seeing the work of the SHGs formed by the project staff. About 17 new SHGs formed in four IDS villages alone (Table 3)

In addition several visits were conducted to project villages by other organizations to learn from the project villages. These visits were made by bank officials, other SHG members and by other NGOs. According to IDS and BAIF

- About 20 officers from State Bank of India various Branches visited as part of their training on community organization.
- About 60 SHG members from Mandya (Vikasan NGO) visited MOVE group Mugad and observed Daddikamalapur tank work.
- Close to 30 SHG members of World Vision NGO visited Kotur SHG specially poultry activities.
- Managundi 3 SHG members visited Mugad soap making activity and have invited the MOVE group representation to give training to their group.
- Senior Assistant Director of Horticulture Hubli visited Wadis in Channapur.
- The Assistant Conservator of Forests Dharwad visited the Wadis and Hasiru Habba plot in Channapur.
- Professor S.B.Roy Indian Institute of Biosocial research and Development Kolkatta visited the Wadis and Hasiru Habba plot in Channapur.
- Officers from departments visited Gabbur to see vermicomposting activities in the village.

Finally the Unkal Sub Watershed from the Karnataka State Watershed Department funded by the World Bank insisted that the Unkal watershed, a peri urban watershed, be given to IDS to handle as they had some experience through this project in peri urban areas.

Box 14.1: The Unkal Sub Watershed: A Peri urban Watershed

This sub watershed falls between Hubli and Dharwad covers about 3600 hectors of land of 6 villages namely Unkal, Bharidevarkoppa, Amargol, Sutagatti, Gamangatti, and Sattur.

The land mostly is the catchments area, Unkal tank, since the area is within Hubli Dharwad corporation limits, nearly 1000 hectors of land has already been acquired by Government or private agencies for one or the other purpose and is lying fallow.

India Development Service had applied for Amblikoppa sub watershed project to Watershed Development Department as it was adjacent to Managundi watershed, when IDS was already involved in implementation.

But the DWDO Dharwad, who used to attend the steering committee meetings and watershed organized by Peri Urban Project insisted that IDS should take up Unkal Sub watershed as the area is peri urban and IDS has experience of working in the Peri urban villages and knows the problems of peri urban villages and can negotiable with both urban and rural authorities in getting the problems solved. Ultimately IDS had accepted the challenge and is working on the villages.

Already 83 SHGs have been formed and 23 of them have been linked MG Bank. Action Plan to treat 2747 hectors of land has been developed and is about to be implemented. The farmers are very happy to participate in the programmes and express that they want to continue working on their farms as they have better opportunities by being closer to both Hubli and Dharwad cities.

Submitted by India Development Service, February 2005

Thus the peri urban project has provided the project team with specialized knowledge to deal in this area, which has been recognized by other institutions, especially the watershed department in the government.

3.3. By end of project, statements drawn up by at least two District and State level TIs of what action is required and what policies and procedures need to change to create an enabling environment for bringing about processes that lead to effective NR management strategies.

In the final workshop held in Bangalore in February 2005 the Minister for Urban Development recommended a future workshop to bring together all urban and rural officials to better understand the peri urban concept. See Appendix on the Bangalore Workshop

The World Bank state watershed department visited the project and linked to UAS for an assessment of income generation. The final report of that assessment incorporated some of the findings of the project. These included the following:

- Accessing Urban Livelihood Opportunities for the Poor: Urbanization is changing livelihoods patterns drastically, especially for poor communities

surrounding cities. Here the very poor cannot access urban markets or get urban employment. Therefore, income generation programmes for the landless and the poor in all watershed areas near the city should train the poor in skills to utilize urban opportunities. In addition the poor also need credit, post harvest technology, infrastructure, pricing policies, price information, and access to markets to improve productivity of land based occupations. This will retain them in agriculture and prevent urban migration.

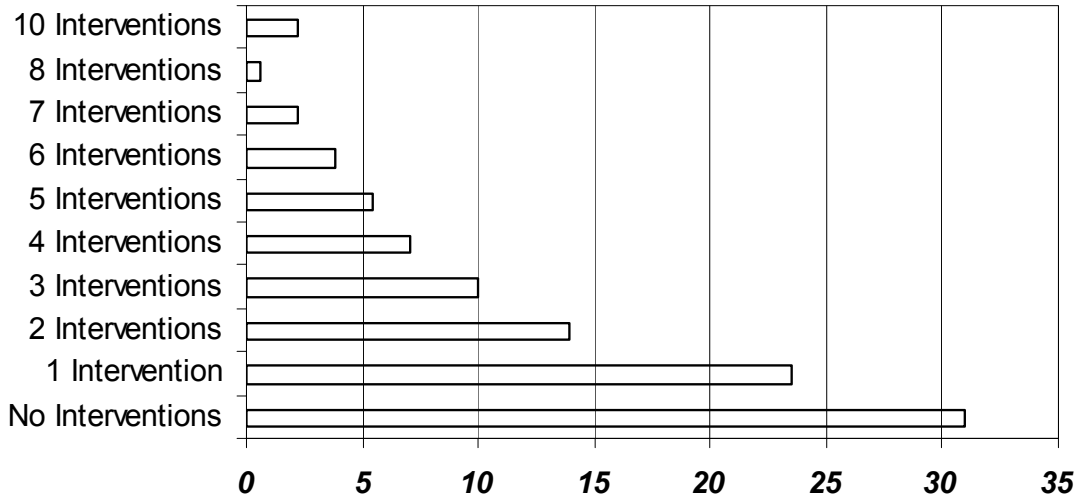
- Access to Markets for the Poor and Landless: In order to access urban markets, the landless and the poor need exposure and training on understanding the markets. To develop market resilience, and determine the income generation activities to be undertaken, the poor and the landless need to undergo motivational exercises, be trained in Participatory Market Appraisals to understand size and type of markets (urban, peri urban and rural markets), customer needs, price sensitivity, vale addition in combination with marketing skills. This requires a mechanism which integrates the strengths of business management professionals and NGOs who will undergo a training of trainers to demystify and communicate business management concepts and strategies to the poor.

These findings were submitted as policy recommendations by UAS to the Karnataka State Watershed Department (Directorate of Extensions, UAS, 2004). In fact according to BAIF the Sujala watershed project is following most of the project interventions where BAIF is involved.

14.4. Overall Impact of the Interventions

Overall 69 percent of the families experienced some form of intervention through the project while only 31 percent reported no project interventions whatsoever. (Figure 14.7)

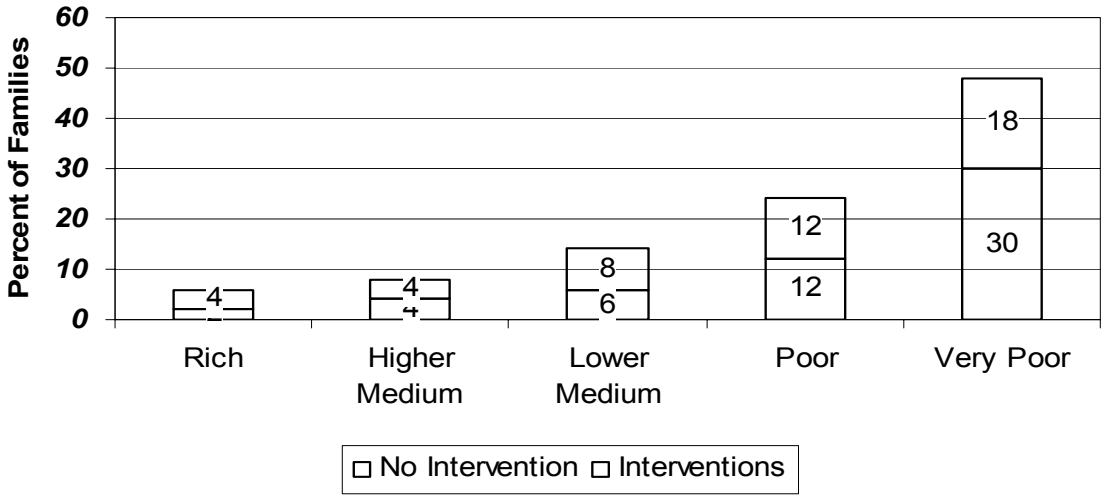
Figure 14.7: Proportion of Families with Interventions



14.4.1.Intervention by Wealth Category

Tables A14.5a and b in the Annexures analyse the interventions by wealth ranking categories to assess which groups were reached by the project.

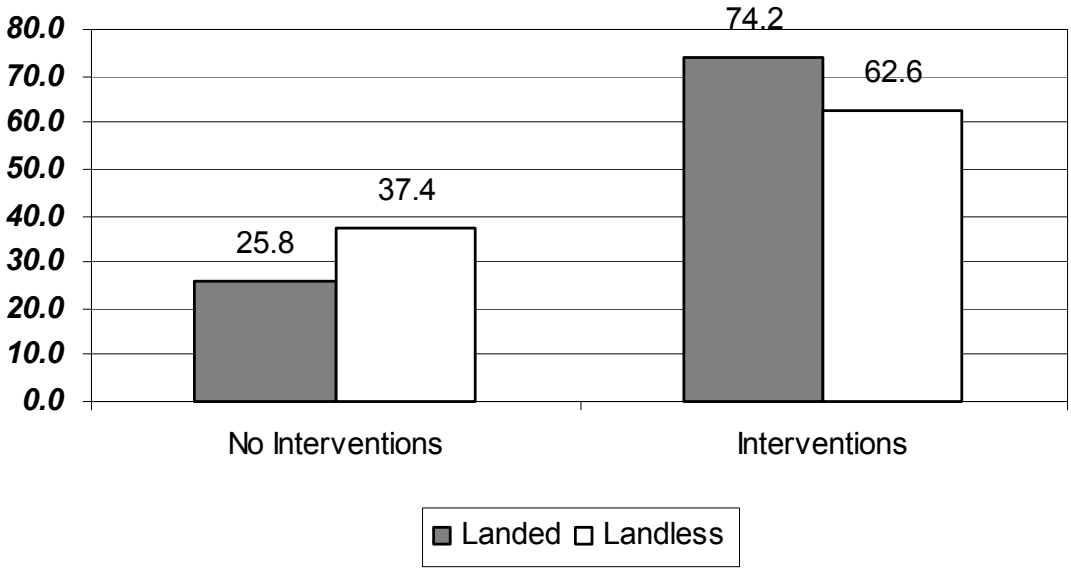
Figure 14.8: Interventions by Wealth Ranking: All Villages



Interventions managed to reach 18 percent of the very poor and 12 percent of the poor (30 percent poor in all) in the sample. The remaining 30 percent and 12 percent of the very poor and poor respectively were not reached (Figure 14.8).

Looking at whether interventions on not the interventions reached the landed or the landless (Figure 14.9) findings show that a higher proportion of the landed (74.2 percent) were reached than the landless (62.6 percent).

Figure 14.9: Interventions by Landed/Landless (%)



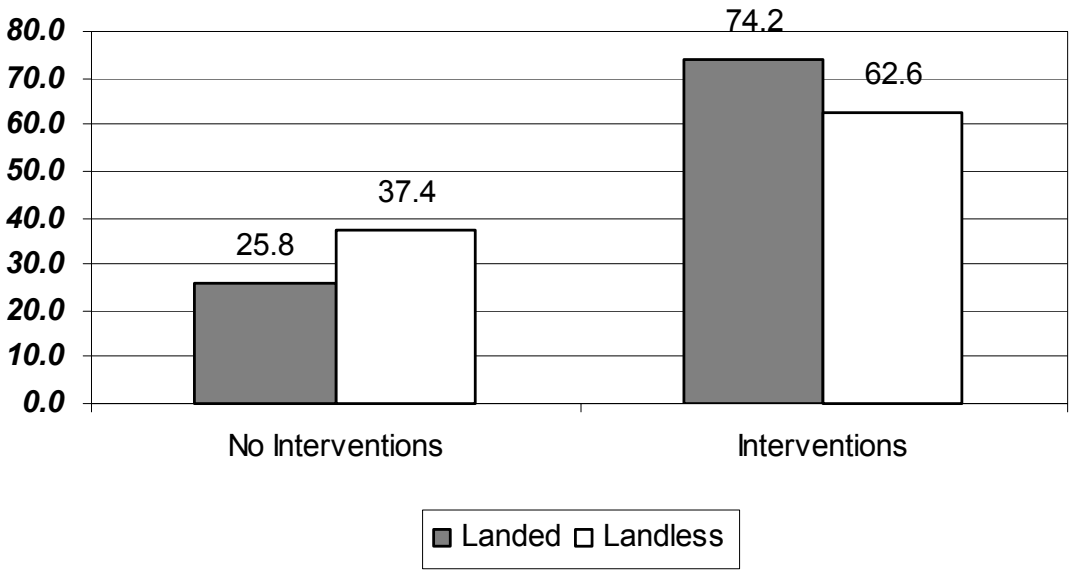
14.4.2. Benefits by Wealth Ranking Categories

Benefits as reported by 310 respondents were coded into the following categories:

- Economic benefits (mainly included additional or enhanced occupations and incomes
- Access to Credit (via sangha savings, revolving funds or bank loans)
- Increased awareness (increased knowledge, awareness or information about NRM or livelihoods or other issues such as government agencies, programmes, benefits)
- Free inputs by the project (in the form of saplings and so on)
- Other benefits

Overall Benefits:

Figure 14.9: Interventions by Landed/Landless (%)

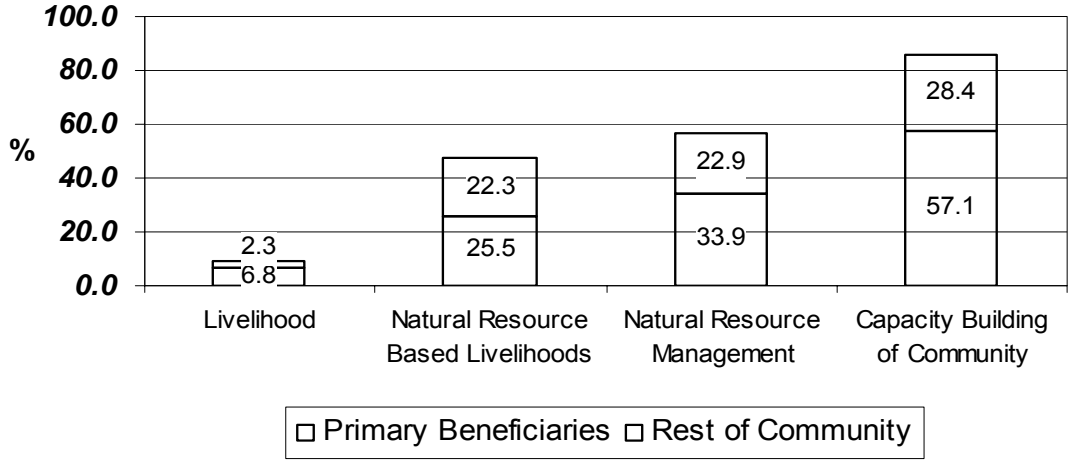


The project has benefited 54.6 percent of the very poor and 73.6 percent of the poor. Only 38.9 percent of the rich are benefited.

Type of Intervention: Poor and Very Poor vs Rest of the Community

In terms of the type of intervention looking at the primary beneficiary group namely the poor and very poor, 57.1 percent of this group benefited from capacity building initiatives, 33.9 percent from NRM and 25.5. percent from NR Based Livelihood interventions.

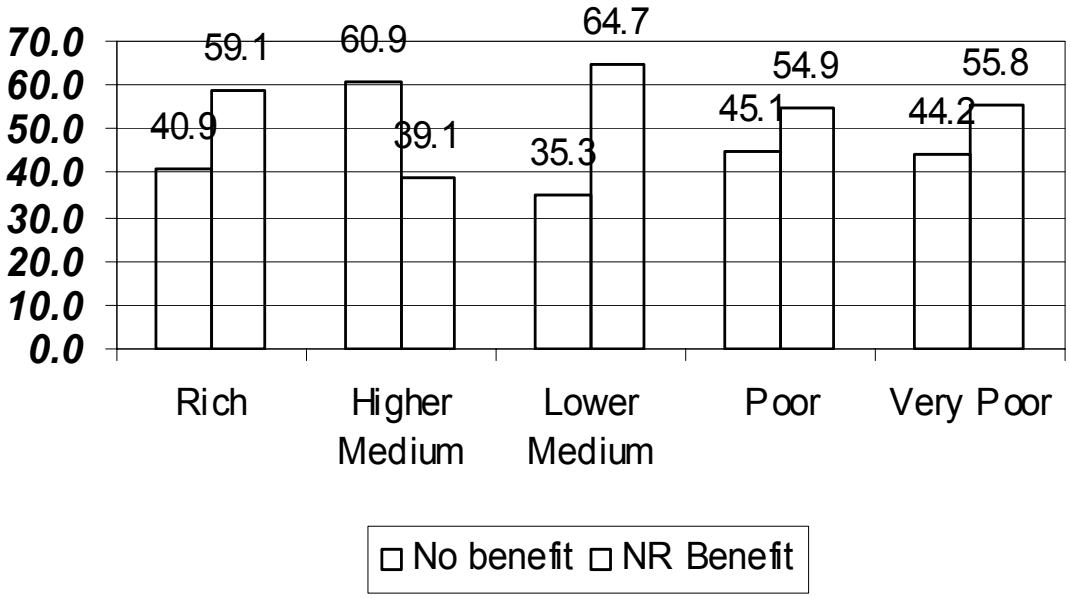
Figure 14.11: Proportion of Intervention Types: Primary Beneficary vs Rest of Community



Benefits by Intervention

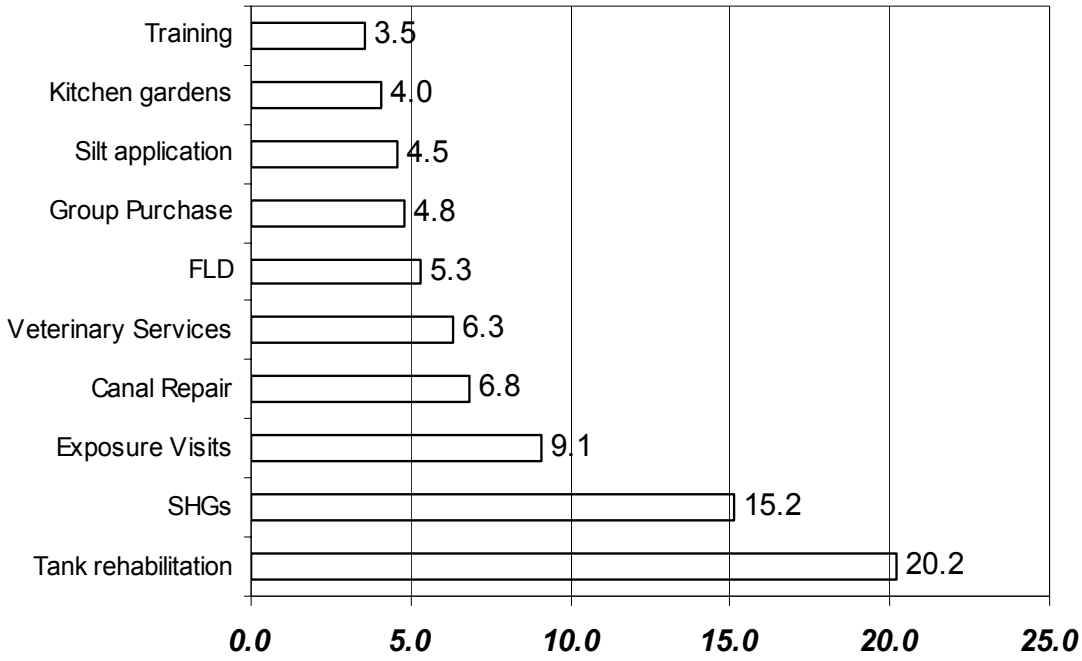
NRM Interventions: More than half of the poor and very poor experienced some environmental benefits.

Figure 14.12: Environmental Benefits Classified by Wealth Category (%)



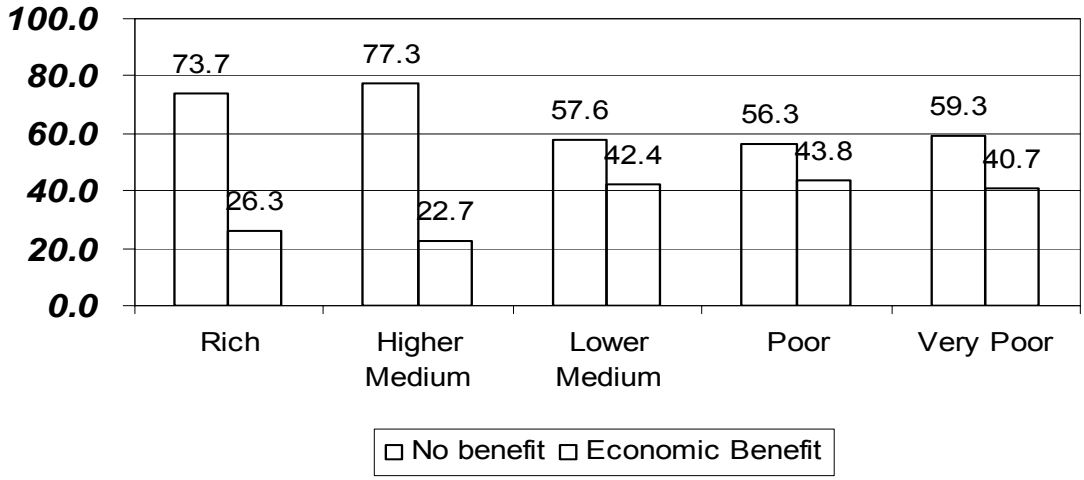
Among the NRM interventions, the maximum environmental benefits were due to tank rehabilitation (20 percent of 310 families), followed by canal repair (6.8 percent) and veterinary services (6.3 percent).

Figure14.13:Environmental benefits veterinary category

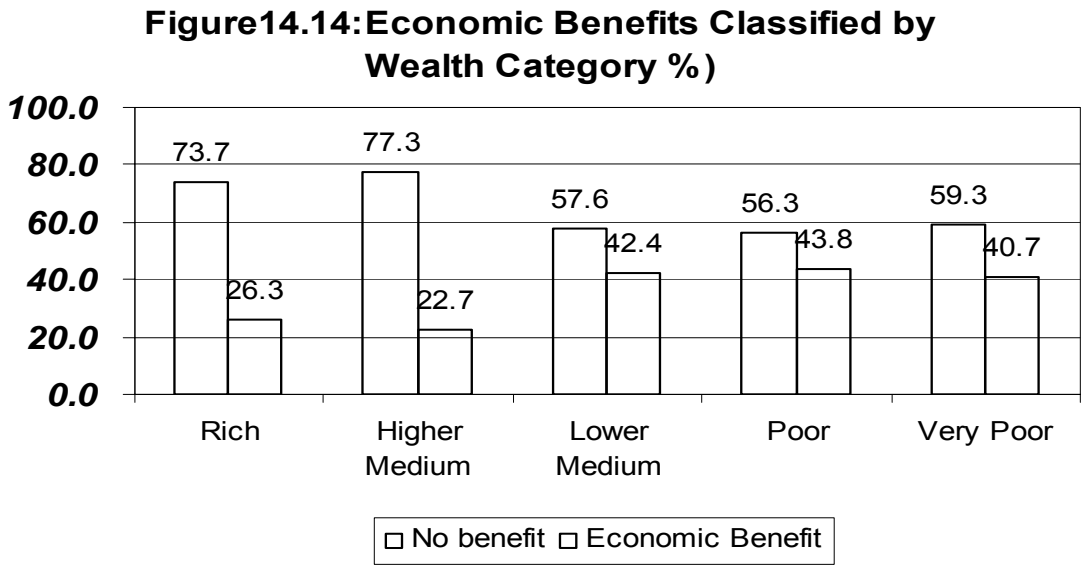


Economic Benefits: Two fifths of the very poor, the poor and medium categories (close to 40 percent) reported receiving economic benefits from the project interventions. On the other hand only a fifth to a fourth of the richer classes reported receiving economic benefits from the project interventions.

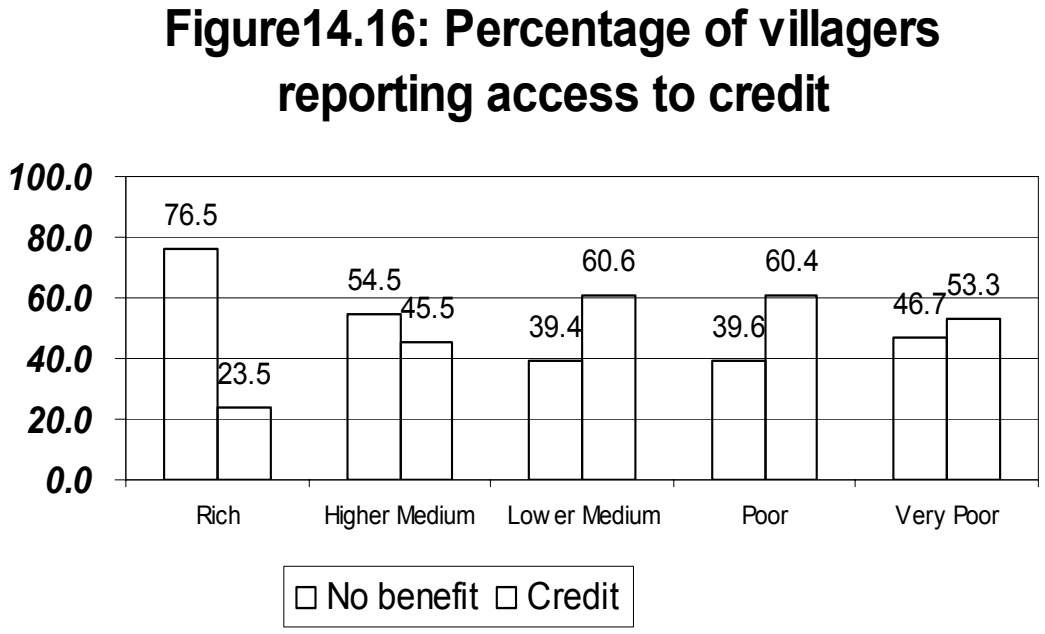
Figure14.14:Economic Benefits Classified by Wealth Category %)



Among the livelihood interventions, the maximum economic benefits were derived due to the sanghas and secondly due to exposure visits.

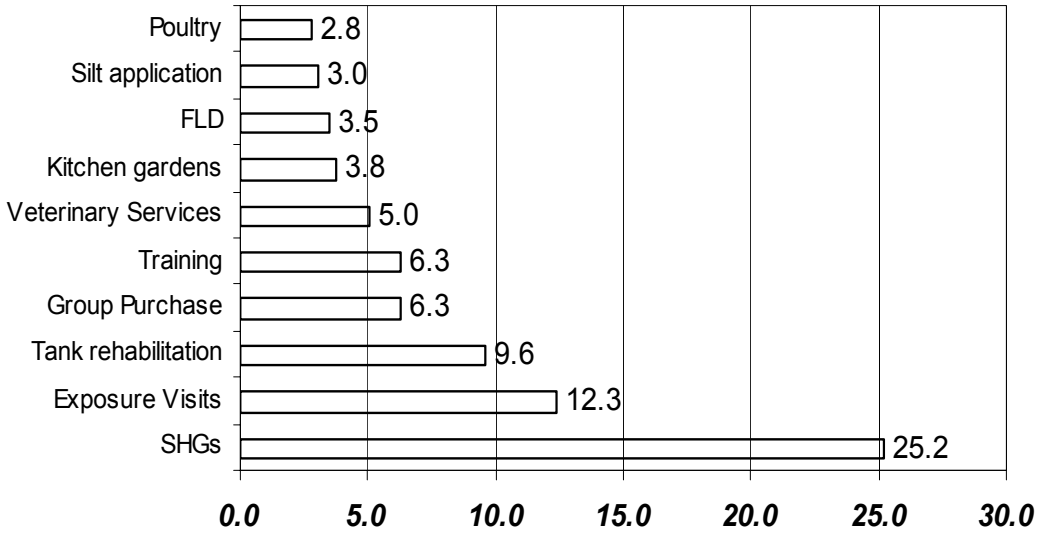


More than 50 percent of the very poor and close to two thirds of the poor and middle categories have got access to credit as a result of the project. On the other hand less than a fourth of the rich received this benefit.



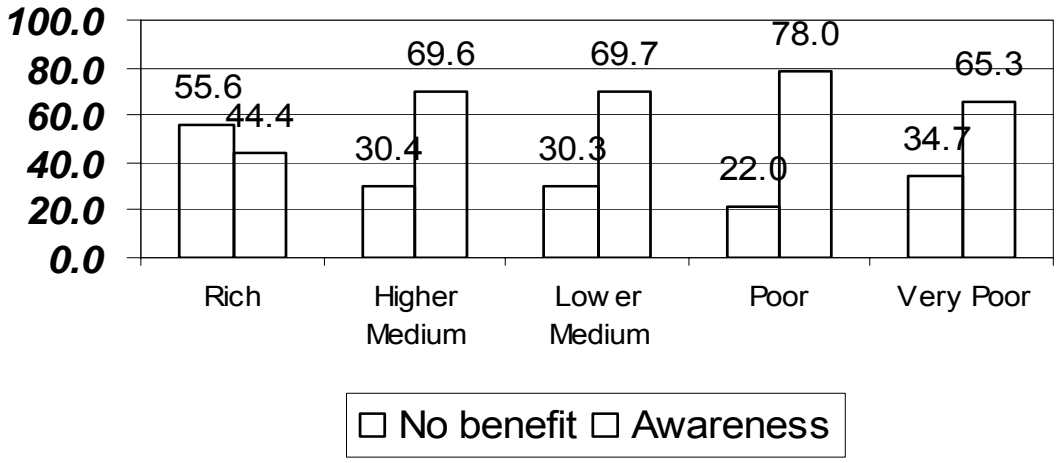
Also 25 percent of the sample who said they had increased access to credit were part of sanghas.

Figure14.17:Credit Access



Other benefits:

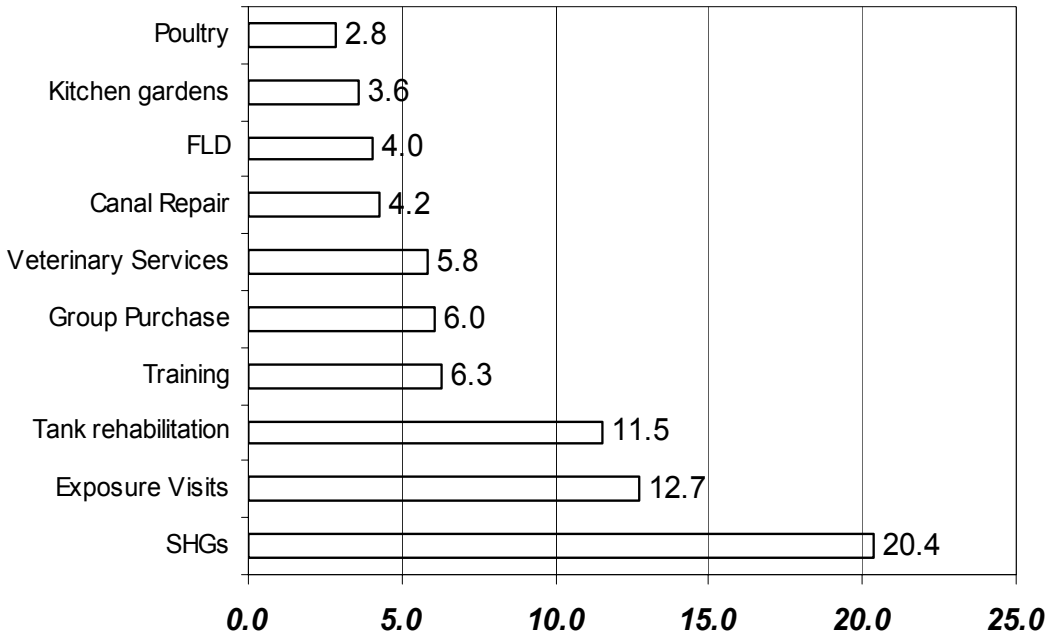
Figure14.18:Increased Awareness and Information: Classified by Wealth Category



Large proportions of the entire community benefitted in terms of increased awareness from the project. The awareness of close to two thirds of the very poor and more than three fourths of the poor was increased due to the project interventions. Even among the richer classes the increased in awareness was experienced by close to 50 percent.

A little more than a fifth of the sample reported an increase in awareness due to sanghas or community mobilization, followed by exposure visits (12.7 percent).

Figure14.19: Awareness



14.5. Peri Urban Effect

Table 14.7: Reported Impact of Living Near the City (N=310)	
Impact	**Percent**
Higher land sales	397
Easy access to markets	244
Neglect of land due to labour shortage	211
Negative impact on agriculture	97
Common land reduced	82
Employment Opportunity	35
Other	43

As can be seen in Table, the impact of the city on peri urban communities can be classified as both opportunities and constraints. The highest impact reported by respondents was on higher land sales which could in turn have impacted the availability of agricultural land and the agricultural production. Easy access to markets was another common response followed by the neglect of land due to the shortage of labour in the PUI. Other effects included the reduction of common land ad increased employment opportunities.

Table 14.8: Reported Impact of Living Near the City on Vices		
Impact		Percent
No Impact	131	42.3
Increased	41	13.2
Increasing Trend	7	2.3
No Family impact but increased in community	11	3.5
Continues due to nearness to city	19	6.1
Reduced by sangha formation	2	0.6
Possibilities	5	1.6
Other	5	1.6
Not applicable	89	28.7
Total	310	100

15. Withdrawal Strategy

A voluntary organization which professes to increase self reliance amongst the target groups cannot think of carving a permanent place for itself within a given geographical area: and any plan on the part of a catalyst organisation to remain permanently or for too long in a given area involves the risk of creating dependency in the people. At the same time, a premature withdrawal of the voluntary group before the primary organizations are adequately strengthened bring to a halt the process of development initiated by it in its chosen area.

In normal circumstances past experience has shown that a period of 5 years is normally required to develop a community / community groups to sustain itself and to take over the responsibility of continuing programmes and interventions.

This chapter looks at first the year by year plan of India Development Service as a representative model discussing the withdrawal strategy for IDS followed by BAIF. It discusses the role played by several other factors in withdrawal namely assessment of sanghas, the formation of the village level federation (otherwise known as Mahasangha or Village Development Sangha), the role of revolving funds managed by the federation, and other strategies used such as the training of Village Health Workers or Village Veterinary Workers.

15.1. Five Year Plan of IDS Projects

In the initial stages when the village is identified and studied the basic thing the NGO is looking for is to reach their target group. Who the target group is, that is very important because IDS works with the poorest or the poor in the village. For IDS the target group is landless laborers, the SC, STs, and then small and marginal farmers and specially women. IDS focuses on women. This is the target group in IDS. All this is available in writing for staff and everyone working in IDS knows about this. So when IDS understands the village they specifically understand their target group.

In the first 6 months the team spends time in identifying the place, the village, the people, resources everything and once this base line analysis is done then they start forming Sanghas, and getting people to talk in the communities and form the Sangha with all the basic trainings like why the sangha is needed, the concept of the sangha, the importance of savings then how they can save bank linkages, the trainings they get training in account maintenance, leadership qualities (Table 15.1).

So by the end of two years all the basic training is completed and the sangha is formed. After the sangha is formed, and the savings takes place then slowly they start initiating linkages with the banks, EDPs and income generating activities. First, all small activities includes group purchase so that the people understand money transactions, and how the money is transacted in terms of retail and wholesale, what is profit. After three years they are encouraged to initiate serious income generating activities and take loans for income generation to become economically self reliant, build up social awareness, awareness on gender and equal rights, this type of training normally happens in third year. In the fourth year they start initiating and encouraging VDS that is village development sangha it is like a federation this happens in the

fourth year. In the fourth once the VDS they encourage and the initial development in forming VDS sub federation and in that for the VDS lots of trainings they start giving like village development works like street light, water, what are problems, the responsibility of the VDS and how they should interact with the relay vent government official in the district level or it could be in Panchayat level go meet them, speak to them and get your task done for the village. So this thing is initiated in the and takes up in the fourth year.

Table 15.1: Five Year Plan: The IDS Model	
Year	**Strategy**
Year 1	Rapport Building: Collection of base line information and need identifications through PRAs. Formation of Self Help Groups (SHG) and initial trainings and exposures. Savings and internal lending activities.
Year 2	Capacity building of Self Help Groups through various trainings and exposures. Linking to banks. Initiation of Income Generating Activities.
Year 3	Linking Self Help Groups to other social activities. Strengthening the Income Generating activities Linking to Government schemes
Year 4	Initiation of formation of Village Development Sanghas. (VDS) Follow up of IGAs, Proper utilization of loans etc.
Year 5	Strengthening of VDS through training and exposures. Formation and training of VDS federation to take over the Project and linking it to District and Taluka level federation. Hand over project to peoples organizations like SHGs, VDS and VDS federation and NGO staff to be withdrawn.

15.2. BAIF Withdrawal Strategy

BAIF's process is similar but it is not fixed and is based on the project. There are projects that are related to service provision like cattle breeding and those that are about infrastrsucture.

15.2.1. Service Projects

Whatever the government provides as a service is given in a better way, an organized way and in scientific way by BAIF. In the past BAIF created centers with external funding and had to start the thinking of what had to be done once the funding ended. About 15 years back all this thinking started so BAIF tried to mobilize people into groups so that we could carry on this activity further if the funding stopped. But, in the process we also learnt that once you start the activity then try to mobilize people and hand it over to them it is not their child it is our child and tried to know it is you child we take over therefore there is certain amount of illegitimacy in it so it was always uncomfortable for us

In Sirsi an association of those who have benefitted from BAIF services who wanted to continue with BAIF has been formed. But this is not easy to continue to subsidize. In Surashettikoppa, a different strategy is being tried where a sustainability fund is

being set up as part of withdrawal. The interest from this fund will pay for a part of the services and people will pay for the rest. Each insemination for instance costs about 100 rupees where people can only afford to pay 50 Rupees. So the remaining is subsidized from the sustainability fund interest earning.

15.2.2. Physical Development Projects

Then BAIF has hard Physical Development projects like watershed development, development of silt pastures. These have tasks that may take 1 to 5 years, as long as the funder is ready to fund or till the project is over. That process will go on till it is over and after that it is only maintenance, which either the funder or the community takes care of and we hand over to them. But there are projects which take 5 to 7 years and projects that take only 3 years which are task oriented but if you are family oriented normally it is 5 to 7 years we have to work. It is family oriented project we are not working much with community organization we are working with each family individually then it is a big project and we normally overlap it with other projects which we bring to the same area by going to the other funders. For example if several thousands of orchards are developed mango processing can be another project which may come after this but this is difficult in place like Karnataka where funding is very rare. It is easier in tribal areas where there are a lot of funding opportunities like in Gujarat.

On withdrawal there are large scale projects where BAIF has brought other large scale projects to the area and retained large numbers of staff. However there have been smaller projects where they have worked with 50-100 families and have had to make them strong enough and prepare them to say good-bye at the end of the project. However the thinking has changed in the last few years. In the past in projects they left behind, when they went back to study those communities they found that some families continued to grow while others were in trouble. In some places BAIF found gaps. So now in the new projects we think of people's organizations from the very beginning and handing over them at the end of the project. Especially in Karnataka this is done very meticulously wherein now by the end of the project we have worked out a common fund across the structures of which there are three structures (Gamika samiti, sanghas, village development committees and the apex). There is common fund which is grown to a substantial amount of some 20 to 30 lakh rupees. We convince the funders that a sustainability fund is needed. That it is not only the sanghas or the organization that need to continue but also the activities like the Income generation activity or the community based activities or social security activities. These cannot end after 8 years or 10 years but need to continue and the people's organization which has become very strong can be given some sustainability fund to continue the critical activities that need to be continued. BAIF felt that there is very demand for it. They are building in some 10 to 50 lakh rupees for each peoples organization in Surashettykoppa through different funds and all our staff salary for the next one year is in place with the EU project though the official project ends by December 31st there is enough funds for three staff to continue work for one more year and some support needed from some other staff also can be brought if the funds are available.

In another two years we are looking for the people's organization to fund our salaries so that the services given by us will be good enough for the people organizations.

Coming to the peri urban project, in Gabbur and Channapur specifically BAIF will prepare the charge sheet on the same lines like in Surashettykoppa. The logic is same but the magnitude is very small. BAIF has 1.5 lakh as common fund via the revolving fund. The 65,000 rupees in Channapur and 85,000 rupees in Gabbur when put together become 1.5 lakhs.

With that fund we can work out some continuation of the work and to work out some support of these villages we can attach them to the Surashettykoppa project. At least Channapur can be tagged to the EU project but for Gabbur something else with have to be thought of.

BAIF has formed Mahasanghas in Gabbur which is providing loans from this common fund and recovering the loans through sanghas. The sangha activity continues with the maha sanghas. In Channapur the process is different. The revolving funds in other projects directly goes to the sanghas, and the common fund which is accumulating in the sanghas from the project interventions and other things, a part will go to the maha sanghas but here in Gabbur the whole revolving fund is with the maha sangha which it gives to the sanghas and again draws it back.

Withdrawal also has to be decided not in a meeting on the behalf of people but in discussion with them. What we have described above is the withdrawal strategy of the organization but it is importance for us regard to have a common understanding with the people as what would be our withdrawal strategy, and what are the difficulties we face and especially how do we close the project.

15.3. Formation of the Village Level Federation

In the final year the sanghas in each village have been federated into Village Development Sanghas or Mahasanghas to further strengthen the sanghas and to facilitate the withdrawal of the NGOs from the village. In IDS villages these federations are known as Village Development Sanghas (VDS) and in BAIF villages they are known as Mahasanghas. In each village all the sanghas would join the federation where they would discuss problems of village development and help each other out if any sangha has a problem. Two members in the federation represent each sangha.

Nitturkar explains the importance of having a mahasangha, a mahasangha is a federation of sanghas. It is like a central body for the sanghas. Two members from each sangha make a Mahasangha. Its importance is

- Each sangha saves some money in this.
- Sanghas can get loans from the Mahasangha.
- New up-coming sanghas can get inputs and trainings.
- Motivate people to form sanghas, encourage people to take-up small IGAs, market products like vermin-compost.
- Mahasangha resolves any conflicts, if any, between the sanghas and help them to find an easy possible solution. Conflicts like delay in loan repayment or a sangha/members demanding more loans.
- The Mahasangha channelize the revolving fund given by the project/organization.

- Identify the needs of the sanghas and accordingly be a catalyst between the sanghas and project.
- The Mahasangha at Gabbur is planning to have their own room.

Pawadshetty explains the importance of the VDS:

- VDS formation starts when the project decides to withdraw.
- The objective of VDS formation is that it should take the responsibility of the development activities in the village once the project withdraws.
- VDS also becomes a link between different sanghas within the village, between the sanghas and the project, and also between the sanghas in the village and taluka level federation.
- The VDS can take up village issues/problems like water, road, electricity, ration card. Healths like wise and find out possible solutions.
- The VDS resolves any internal problems in the sanghas too.

In Gabbur, a mahasangha has been formed where two members from each sangha form a mahasangha. BAIF gave the mahasangha a revolving fund, which was then given in turn to all the sanghas. This way the sanghas got loans for a higher amount that their sanghas could not provide.

IDS forms Village Development Sanghas (VDS), where again two members from each sangha are members. Here the focus is more on taking on village issues than economic issues. The similarity of both the VDS and the mahasangha is that all the sanghas come together to form one greater body and this is another platform where they are able to solve problems of the individual sanghas.

According to Nitturkar, *There are all sorts of income generating activities carried out in this village, like milk selling, petty shop, small businesses, carpenters, etc. People are also working on daily wages in and around the village. We'd like to help such people through the mahasangha, so as to upgrade their lives. We had invited, Mr. Deepak, Cluster leader for the village, Shursettykoppa. He had discussed and taught us about giving loans, loan repayment, and appropriate usage of money, etc. We'd like to invite him again as we have not been able to follow him properly.*

There have been other issues like that which arose due to the construction of pits in the neighbours land. A man had unknowingly constructed a vermicompost pit in the neighbouring land. This lead to a fight and as a result the pit was destroyed. The person who had made the pit illegally was asked to repay Rs.1000/-. He offered to rebuild the pit if the mahasangha obliges to take care of the material costs, with his own labour.

Issues such as these and certain other like non-repayment of loans are resolved with the help of 2 of the mahasangha members. If the problem goes out of hands, then the president of the mahasangha offers to resolve the problem.

Another issue arose when there were men who attended a meeting in a drunken state. After this scene the man was absent for the sangha meetings for a couple of weeks. He was reminded of the rules of the sangha that nobody must attend a meeting in such a state. Upon such advising only about 50% people listen to them. If people get

adamant and do not follow the rules, the mahasangha doesn't lend money to a sangha member as such.

There has not been much of a difference in the village as whole, but the formation of a mahasangha has definitely helped the village at individual level. The impact of the mahasangha on this village can be seen in the following changes and developments:

- Unity: The entire village seems to have come together. There is now a feeling to work together.
- Courage: We have gained a lot of courage to be and work together.
- Literacy: Initially in the SHG's only four people were educated. Now every member at least has learnt to sign. Time is a constraint for us to learn to read and write. But it is essential that everyone must learn to do so.

Niturkar, the project officer from BAIF has promised to reward a cash prize of Rs.1000 to any one of the sangha member who learns to sign, while Rs.5000 to those who learn to read and write. Ever since the SHG's have taken birth, certain activities are only in the form of plans, such as the inscence sticks business. It hasn't been a success as there is not enough time available for it. Also as the community always is busy due to one or the other function, it has not been possible to take up an additional work. Besides, not all the twenty people were able to attend the training provided by the inscence stick factory owner from Bankapur. Also the scent or perfume required for the sticks is very costly. We've therefore decided to distribute the inscence sticks that are yet to be marketed amongst the sangha members.

15.3.1. Some initiatives taken by the VDS/Mahasangha

One of the first activities the VDS took up was that of stopping the sale of alcohol in their village. The reason the VDS wanted to take up this issue was because men were spending a lot of money on alcohol and given the past three years of drought there was a severe shortage of money. Some men even resorted to stealing money so that they could drink. They also sold household goods such clothes, vessels and mangalsutras. Then men also created trouble in the village and even used to disturb sangha meetings. Therefore the VDS decided that they should do something to stop the sale of alcohol in the village.

They had meetings where they discussed this issue. They first identified the four vendors in the village who sold alcohol and asked them to stop selling. They did manage to convince them. The alcohol sellers asked for some time before they stopped so that they could finish the stock they had. After that they would stop selling. One day the government jeep came to the village with alcohol packets but the women ensured that none of the vendors replenished their supplies. They formed groups to spy on the vendors to ensure that they do not sell alcohol.

The people who were caught selling alcohol were fined Rs.101 but so far none of the people who were caught have actually paid the fine. The ban worked for some time after which people slowly started selling alcohol again. According to the VDS members the reason for the resale is because the whole village was not united in stopping the sale. While 75 percent of the villagers were for it there were still 25 percent who did not want the sale of alcohol stopped in the village. The youth have

not lost hope and feel that they need to spend a little more time to convince everyone in the village after which they can again reinforce a ban on the sale of alcohol.

One question that came up in Channapur when they sanghas wanted to ban the sale of alcohol was that of an income generating activity which would make up for the loss of income after they give up the sale of alcohol. In Mandihal the VDS members said that this was not a problem as most of the people who were selling alcohol had other IGAs such as a tea stall or a petty shop.

The other activities the VDS plan to take up are related to health, cleanliness and water. They have plans to begin with cleaning gutters The strategy designed was that every house will clean the gutter in front of their house and put the dirt aside which will then be collected and disposed off by a team. The actual implementation of the work has not yet begun. Thus the concept of Shramdan or volunteer labour has taken root in the minds of the people.

For water, also a priority for the VDS, a plan was made to channelise rainwater to the tank nearby. The water used to flow along the road away from the tank. Digging a canal diverted the water towards the tank. Now rainwater can collect in the tank and now can be used for the purpose of providing animals drinking water and washing clothes.

For drinking water the VDS supported Sridevi sangha to get a bore well drilled and now drinking water seems to be easily available compared to last year where the women walked miles to fetch drinking water. The VDS has also participated in activities like vaccination for cattle. On 21/06/04 a vaccination camp was conducted in Mandihal and as many as 45 cattle got vaccinated.

Sanghas save and lend money to their members for household needs and to improve or start a new IGA. As the sanghas are young the amount of savings they have is little and therefore there is a limit to how much they can lend to their members. To help all the sangha members get a bigger loan amount a revolving fund was created by the project which would be given to the VDS. The VDS in Mandihal was also given a revolving fund of Rs 20,000 which they would lend to the sanghas. The sanghas would then on lend this money to its members. The VDS created rules for the management of the revolving fund. It was decided that two sanghas would get Rs 10,000 each and these sanghas would have to return only Rs 5,000 to the VDS. This money would then be lent to the next sangha.

The VDS in the Mugad cluster has some long-term plans like the provision of good gutters, electricity, and roads for the village. They have plans to approach the panchayat to get these services sanctioned.

Box 15.1: The VDS in Mandihal

Mandihal has 6 sanghas (SHGs) which were started 2 years ago. The concept of a Village Development Sangha was introduced to them by IDS through which they could take on activities for the development of the village. It was decided that two members from each sangha would become members of the VDS. The members who attend the VDS meeting are rotated so that everyone gets a chance to attend the VDS. The main activity of the VDS is overall village development. The VDS meets once a month where each of the sanghas contributes Rs 10 to the VDS.

Fight Against Alcoholism: One of the first activities the VDS took up was that of stopping the sale of alcohol in their village. The reason the VDS wanted to take up this issue was because men were spending a lot of money on alcohol and given the past three years of drought there was a severe shortage of money. Some men even resorted to stealing money so that they could drink. They also sold household goods such clothes, vessels and mangalsutras.[65] Then men also created trouble in the village and even used to disturb sangha meetings. Therefore the VDS decided that they should do something to stop the sale of alcohol in the village. They had meetings where they discussed this issue. They first identified the four vendors in the village who sold alcohol and asked them to stop selling. They did manage to convince them. The alcohol sellers asked for some time before they stopped so that they could finish the stock they had. After that they would stop selling. One day the government jeep came to the village with alcohol packets but the women ensured that none of the vendors replenished their supplies. They formed groups to spy on the vendors to ensure that they do not sell alcohol. _The people who were caught selling alcohol were fined Rs.101 but so far none of the people who were caught have actually paid the fine. The ban worked for some time after which people slowly started selling alcohol again. According to the VDS members the reason for the resale is because the whole village was not united in stopping the sale. While 75 percent of the villagers were for it there were still 25 percent who did not want the sale of alcohol stopped in the village. The youth have not lost hope and feel that they need to spend a little more time to convince everyone in the village after which they can again reinforce a ban on the sale of alcohol. One question that came up in Channapur when they sanghas wanted to ban the sale of alcohol was that of an income generating activity which would make up for the loss of income after they give up the sale of alcohol. In Mandihal the VDS members said that this was not a problem as most of the people who were selling alcohol had other IGAs such as a tea stall or a petty shop.

Sanitation: The other activities the VDS plan to take up are related to health, cleanliness and water. They have plans to begin with cleaning gutters The strategy designed was that every house will clean the gutter in front of their house and put the dirt aside which will then be collected and disposed off by a team. The actual implementation of the work has not yet begun. Thus the concept of Shramdan or volunteer labour has taken root in the minds of the people.

[65] A mangalsutra is a chain that married women wear.

Box 15.1: The VDS in Mandihal continued…

Water: For water, also a priority for the VDS, a plan was made to channelise rainwater to the tank nearby. The water used to flow along the road away from the tank. Digging a canal diverted the water towards the tank. Now rain water can collect in the tank and now can be used for the purpose of providing animals drinking water and washing clothes.

For drinking water the VDS supported Sridevi sangha to get a bore well drilled and now drinking water seems to be easily available compared to last year where the women walked miles to fetch drinking water.
The VDS has also participated in activities like vaccination for cattle. On 21/06/04 a vaccination camp was conducted in Mandihal and as many as 45 cattle got vaccinated.

Future Plans: The VDS has some long term plans like the provision of good gutters, electricity, and roads for the village. They have plans to approach the panchayat to get these services sanctioned.

Impact of the sangha: Earlier there was only a youth club. All the young people of the village got together and voluntarily participated in small, multi-directional village development works. They also participated in the public affairs of the village.
Earlier they had no unity. So they could not take up any village development activity. But now after the formation of the sanghas and VDS, a strong moral unity has developed. Now they feel they can do and achieve result-oriented tasks in the future. Women have come forward socially and now their words stand strong. They have started saving through their sanghas.

The men (Youth club) on their other hand welcome these women. They are of the opinion that the youth club, the sanghas, the VDS and Stree Shakti sanghas should all co-ordinate with better understanding and support. One member said, *it is a good time and opportunity to unite. Together we can even motivate and educate uncooperative people to join our team*.

It was seen that only a few men and women take active roles. The opinion of the larger community was that every man and women should come forward to extend a dynamic contribution for the development of the village. In the villages gram sabhas are held which in the past no women attended. But now the women feel that they should start attending the gram sabhas. One reason that holds women back is poverty. These women need to work in the fields through out the day apart from fulfilling their household responsibilities. This has trapped them in a tiresome schedule.

Box 15.1: Mandihal VDS continued…

Sanghas save and lend money to members for household needs and to improve or start a new IGA. As the sanghas are young the amount of savings they have is little and therefore there is a limit to how much they can lend to their members. To help all the sangha members get a bigger loan amount a revolving fund was created by the project which would be operated through the VDS or Mahasangha. The VDS in Mandihal was also given a revolving fund of Rs 20,000, which they would on-lend to the sanghas who would apply for projects from the Mahasangha. The sanghas would then on lend this money to its members. The VDS created rules for the management of the revolving fund. It was decided that two sanghas would get Rs 10,000 each and these sanghas would have to return only Rs 5,000 to the VDS. This money would then be lent to the next sangha.

The VDS held a meeting where they discussed the revolving funds and decided the rules. One rule was that to be eligible for the loan the sangha must be at least a year old. And working actively (conducting meetings, savings and so on) Secondly the loan was to be repaid within 3 months. Therefore the sanghas which were confident in fulfilling all the set regulations became eligible. The fist two sanghas which were given the loans were Sridevi sangha and Kallamma's sangha.

Intergroup interaction: Unlike the Mugad SHG's, the sanghas of Mandihal has still not started discussing each other's problems. . When they were told they should discuss sanghas activities, village development, monitor the revolving fund, and so on the women welcomed the idea. They also thought that having a federation of VDSes with neighbouring villages such as Mugad and Daddikamalpur would help them to plan and work with better strategies. They also discussed the logistics of meetings where the women could go to the other villages once a quarter.

The women felt that if they were united they could get the right work done from the government at panchayat and taluka level. The women felt good about the VDS. They were introduced to new ideas. They could exchange ideas in a constructive manner and start innovate activities. Housewives used to feel alone and sidelined now they feel better and confident.

Finally they concluded saying *let us speak less and work more. We have more tasks to do in near and far future. Lets get into actions for what we have decided (like shramadaana in gutter cleaning, water management, anti-alcholol, tank-channel connection work and so on)*

15.3.2. Impact of the VDS or Mahasangha

Earlier there was only a youth club. All the young people of the village got together and voluntarily participated in small, multi-directional village development works. They also participated in the public affairs of the village. Earlier they had no unity. So they could not take up any village development activity. But now after the formation of the sanghas and VDS, a strong moral unity has developed. Now they feel they can do and achieve result-oriented tasks in the future. Women have come forward socially and now their words stand strong. They have started saving through their sanghas.

The men (Youth club) on their other hand welcome these women. They are of the opinion that the youth club, the sanghas, the VDS and Stree Shakti sanghas should all co-ordinate with better understanding and support. *One member said,* it is a good time and opportunity to unite. Together we can even motivate and educate uncooperative people to join our team.

The VDS held a meeting where they discussed the revolving funds and decided the rules. One rule was that to be eligible for the loan the sangha must be at least a year old and should be working actively (conducting meetings, savings and so on) secondly the loan has to be repaid within 3 months. Therefore the sanghas that were confident in fulfilling all the set regulations became eligible. The fist two sanghas which were given the loans were Sridevi sangha and Kallamma's sangha.

Unlike the Mugad SHGs, the sanghas of Mandihal have still not started discussing each other's problems. When they were told they should discuss sanghas activities, village development, monitor the revolving fund, and so on the women welcomed the idea. They also thought that having a federation of all the VDS with neighbouring villages such as Mugad and Daddikamalpur and Mandihal would help them to plan and work with better strategies. They also discussed the logistics of meetings where the women could go to the other villages once a quarter.

The women felt that if they were united and had a federation of VDS then they could get their work done from the government at panchayat and taluka level.

The women felt good about the VDS. They were introduced to new ideas. They could exchange ideas in a constructive manner and start innovate activities. Housewives used to feel alone and sidelined now they feel better and confident.

Finally they concluded saying *let us speak less and work more. We have more tasks to do in near and far future. Lets get into actions for what we have decided (like shramadaana in gutter cleaning, water management, anti-alcohol, tank-channel connection work and so on)*

Impact in Gabbur: There have been other issues like that which arose due to the construction of pits in the neighbours land. A man had unknowingly constructed a vermicompost pit in the neighbouring land. This lead to a fight and as a result the pit was destroyed. The person who had made the pit illegally was asked to repay Rs.1000/-. He offered to rebuild the pit if the mahasangha obliges to take care of the material costs, with his own labour.

Issues such as these and certain other like non-repayment of loans are resolved with the help of 2 of the mahasangha members. If the problem goes out of hands, then the president of the mahasangha offers to resolve the problem.

Another issue arose when there were men who attended a meeting in a drunken state. After this scene the man was absent for the sangha meetings for a couple of weeks. He was reminded of the rules of the sangha that nobody must attend a meeting in such a state. Upon such advising only about 50% people listen to them. If people get

adamant and do not follow the rules, the mahasangha doesn't lend money to a sangha member as such.

There has not been much of a difference in the village as whole, but the formation of a mahasangha has definitely helped the village at individual level. The impact of the mahasangha on Gabbur can be seen in the following changes and developments:

- **UNITY:** The entire village seems to have come together. There is now a feeling to work together.
- **COURAGE:** We have gained a lot of courage to be and work together.
- **LITERACY:** Initially in the SHG's only four people were educated. Now every member at least has learnt to sign. Time is a constraint for us to learn to read and write. But it is essential that everyone must learnt to do so.

15.4. Revolving Fund

Availability of credit was a major problem faced by the poor in these peri urban villages and many were being exploited by moneylenders. In the initial stages the sanghas did not have sufficient funds to meet the credit needs of members so most of internal lending was for family necessities and consumption. There was no sufficient balance for financing productive activities. To overcome this problem a scheme to provide revolving fund to SHGs was worked out.

For the revolving funds of the mahasangha, BAIF donated Rs. 20,000. This money would be given to the oldest sangha, based also on the performance, regularity of the meetings as well as the repayment of the loans and attendance. There must be 80% attendance, approximately the same meeting time (time maintenance), meetings starting with a welcome song and a speech. If a sangha wants to borrow money, it must fulfill all the above listed traits, which makes them suitable for the loans. At present BAUF has given Rs.10,000 to a sangha, which has repaid Rs.5000/- within 10 months. Another lumpsum would be paid four months later.

The sangha did not have so much money to lend so I took it from the maha sangha. I wrote an application to the maha sangha asking for the loan in December and I got the money after one week. The procedures are the same as those of our sangha. I have got the loan at a two percent interest rate[66].

There were several team discussions on the management of the revolving funds by the Mahasangha. Three models evolved through these discussions which will need future monitoring. The first model was where the revolving fund was managed by the Federation and most of it was distributed to the sanghas till very few funds except for a portion of the interest was left with the federation. The second model was what was seen in Gabbur where the funds are managed by the federation and returned to it by the sanghas so a large portion of these funds remain with the federation. A third model evolved as a consequence of the inability to clearly predict which of the above two models would really work in the long run. This model had the federation being given an asset to generate income to run and sustain its activities in the long run. This

[66] Drakshayani Someshekar Kotigouder, member, Gramadevi Sangha, Gabbur

model emerged because giving the federation monies was opposed by IDS as it felt that the federation was less accountable than the sangha.

15.5. Assessment as a Precursor to Withdrawal

At various stages it is necessary to assess the peoples organisation (SHGs, Federation) whether they have attained the capacity to sustain themselves and take up responsibility of running the programmes independently. IDS has developed criteria to assess each category of CBOs.

15.5.1. Assessment of SHGs:

IDS has a set of 21 criteria (Appendix 1) for assessing which Sanghas are eligible for withdrawal. These 21 criteria are divided into three parts. They are:

1. Essential criteria.
2. Desirable criteria.
3. Optional criteria.

The Self Help Groups are evaluated through a simple participatory appraisal method, conducted through SHGs. If any help is needed on a particular criterion, IDS will extend such help and the sangha will be reevaluated later, before IDS withdraws. These SHGs can also help other people below the poverty line to form SHGs and involve them in the development process.

15.5.2. Assessment of Village Development Sanghas:

VDS are the village level federations of SHGs. IDS had developed 25 criteria for evaluation of VDS. These criteria are set to assess how far these groups are able to become self-sustainable. This evaluation can be conducted in VDS meeting through participatory rural appraisal method. The same criteria are applicable to taluka level federation also.

15.5.3. Assessment of the villages:

IDS has its own system of assessing the villages and decide when to withdraw from that village, so as to enable the People's institutions in the village to manage the village developmental work in future.

In line with the philosophy of IDS, the assessment of work was mainly on how many People below the poverty line have been line people involved institutions for which Proforma-1 used for the purpose (Appendix 1)

At every step the assessment criteria for SHG for withdrawing helps IDS assess whether it is a good SHG and whether it can sustain itself. We have these formats of IDS which gives the assessment of SHG then name of the village and project, name of the sangha and who is the community organizer and when they started doing this and when did they complete the project.

15.6. Development of Local Human Capital

Adopt from organizing CBOs in all integrated projects the local resource persons like Village Health Workers, Village Veterinary Workers and Village Agriculture Assistants. Volunteers are identified and trained. These volunteers provide the necessary education and basic service to the needy people on a voluntary basis and also earn a small amount for the services. The system continues even after withdrawal of the NGO.

15.6.1. Village Health Workers

The local women with inclination to do some voluntary service, is selected as Village Health Worker (VHW), Then she gets trained in health education and basic health services. The VHWs also are trained in conducting asceptic deliveries. They are expected to visit at least 6 to 8 families a day for Health education. They get paid for deliveries and cost of medicines, a small amount may be in kind. The VHWs continue to provide these services even after withdrawal of the NGO.

15.6.2.Village Veterinary Workers (VVWs)

Local men and women interested in animal health are selected and trained in managing the health of the animals, which includes educating the livestock owner about cattle immunization, artificial insemination, fodder management etc. They also provide medicines for minor ailments get paid for it. The VVVs also continue to work in the village.

15.6.3.Village Agriculture Volunteers (VAVs)

The youths from Agriculture families are selected as VAVs and trained in organic farming systems like preparation and use of wormi compost, integrated cropping systems, preparation and use of organic pesticides, soil and water conservation methods etc. There are also local resource persons during voluntary service and continue to give information to needy farmer.

In all three cases the volunteers are linked to Government Departments or any other institute for back up services and for getting their knowledge up dated.

15.7. Linkages to Taluk and District Federations

In the fifth year at the cluster level the VDSs start forming federations. The VDSs are linked at the taluka or district level. Normally from the third year onwards they start observing the Sangha performance, their savings, their activities, how they are doing, what they are doing, how responsible they are, and how they can lead their own sangha. Gradually the COs start fading out by attending fewer meetings. In the fourth year onwards they attend sangha meetings only fortnightly or monthly instead of weekly especially if the sangha is strong. The COs concentrate more attention on sanghas that are weak. Slowly the COs start attending only the VDS and federation meetings and skip the sangha meetings. In the fifth year they slowly skip the regular VDS meetings and attend only federation meetings at the taluka and district level, where all the information is collected about what all happens in each villages.

Every thing is there in the withdrawal strategy write up and IDS has a VDS book which is maintained through out the year and once we also graded the VDS as they are doing in SHGs. The issue of if they are attending meetings regularly, attendance levels and whether they are taking part in discussion, have they taking decisions, are they meeting independently of IDS CO, are they taking responsibility, are they implementing the decision taken, are they solving the conflicts within themselves, how they interact with the outsiders and whether there is social leadership or not so this the essential thing and there are desirable criteria's that is are they attending the meetings on time, are the records properly maintained, are they helping others how are there relationship with others are they taking part in broader or village issues, are they thinking about the future of the sangha, have they developed self learning capacity are they evaluating themselves and then optional are they taking up new activities is there increase in their membership, have they registered the sangha, and these are the current criteria which can probably be further improved. It is very well organized. For IDS the focus has been basically on the community organization while the focus on BAIF is probably on natural resources.

15.8. Lessons

Overall withdrawal strategies have not received much attention in the literature. The phenomena is also difficult to study as the test of survival comes usually after the project is over which means insufficient attention is paid to it except towards the end of the project and that attention ends before the real litmus test begins. Therefore while some models have emerged in the PU project it is hard to predict which of these models is more sustainable and which one more effective. Therefore one major research gap identified by this project has been the lack of knowledge on withdrawal as a strategy, on the various models that may have been evolved, and on the effectiveness of these models to address development issues in the absence of the NGOs or the team.

Chapter 16: Conclusions

The two important factors identified by the team as enhancing livelihoods and natural resource management in the peri urban interface includes community mobilization and community participation at every stage.

16.1. Community Mobilization

Community mobilization is seen as a prerequisite for all other activities starting with planning. To prevent elite domination in the planning stages with local elites as well with government community mobilization and capacity building especially of the poor and of women had to precede planning. The working group concept (involving TIs and communities) was found to be difficult to implement due to this domination in planning stages and in the implementation stages again the project strategy was to deliberately choose to work mainly through the sanghas.

Community mobilization has been shown historically in the Indian context to result in more women being mobilized than men. This focus on women was found to be important in that it addressed the most marginalized of groups, namely poor women. Second for enhancing livelihoods as a whole, in the peri urban where alcoholism and other urban induced vices are found to be on the rise, not tackling alcoholism will decrease disposable incomes and affect people's standard of living as pointed out by women in Channapur. Thus an important strategy to counter alcoholism has been the mobilization of the community particularly the creation of women sanghas that played instrumental roles in the fight against alcoholism that ensued in Mandihal and Channapur.

All the decisions made and activities carried out took place through the sanghas. The lesson is that more equitable decisions are made since the sangha who better knows the community is in the best position to judge who is eligible and what the community's needs are compared to any outsider be it NGO or government.

The second lesson that emerged from individual interviews was that only through the sangha, can individual limitations be challenged and overcome. It is a more equitable and accountable form of decision making, compared to individual decision making which benefits individuals whereas the former maximizes the community benefits. The sangha itself creates processes that enhances unity and counters individualistic attitudes, more prevalent in the PUI.

The instance of the children's sangha is one example of this practice being replicated and sustained even after the project withdraws and has clearly demonstrated the advantages of a sangha. Here children who represent the future, learnt how to solve problems through watching their mothers and imitating the solution found by their parents of coming together to solve problems in a sangha.

Awareness of close to two thirds of the very poor and more than three fourths of the poor was increased due to project interventions. A little more than a fifth of the sample reported an increase in awareness due to sanghas or community mobilization, followed by exposure visits (12.7 percent).

16.2. Participation

Participation is important at every stage and goes hand in hand with community mobilization. This is because only through the sanghas can people's capacities be built, especially those of the poor and women, to participate effectively. Because of participation, use of resources was more efficient, be it human or monetary. It builds in ownership and therefore sustainability over the process. It leads to innovative solutions and multiple outcomes. It center stages the use of people's indigenous knowledge and increases the value they too assign to this knowledge and creativity. It simultaneously builds people's confidence in their own decision making capacities as their opinions are valued in this type of decision making mechanism.

This being a research project allowed the space for information and learning and decision making to flow in all directions not just from the top down. There was less focus on the outcomes as there was on the learning right through and therefore more attention paid to the process and what was going wrong and what was working rather than to just outcomes and outputs.

This being a participatory research project, the findings from the indicators were given back to community organizers and to the women themselves. When the PIs showed results that did not necessarily add up, both the researches and community organizers were forced to re visit their data and their assumptions. It forces more rigour into data collection as the project progressed where the research process was no longer left only to the researchers and community organizers were brought in to accompany researchers and bring more authenticity and depth to the quality of data collected.

Also in the participatory monitoring and evaluation process a team of representatives of all organizations came together to implement the research process. The community organizers played an instrumental role in leading the process and determining the methodology for the process. In part this is because two of the NGO project officers were trained in participatory monitoring and evaluation and one staff was trained in participatory data management, all of which proved useful in the PM&E.

The difficulty with being participatory is that it takes time and patience and may result in delays. Getting the entire team to understand the PM&E took an entire year and therefore baseline indicators were never available. Participatory planning also took a long time – close to a year. Implementation also requires the buy in of all sections of the community that can be affected by that decision or activity and it takes time to reach consensus on the activity.

The translation of participatory methods into an environment where literacy is a serious problem, requires visual methods and this took time for the entire team to practice as they had to learn to think visually and many members of the research team still cannot. The second problem with participatory exercises was the issue of honesty clashing with team spirit and unity of the sangha. Here to improve any process, members would first have to admit that it was not doing well. This was difficult for sangha members to do in front of their peers as it might have been seen as disloyalty.

So building in privacy into the evaluation process was one way to overcome this obstacle.

16.3. Target Institutions

Formal mechanisms like the DPC are not as suitable to the dynamism experienced in the peri urban. In fact more flexibility is needed to deal with constantly changing needs and the diversity witnessed in the PUI. Thus informal mechanisms created by formal governmental institutions might in fact be more appropriate to deal with the ever changing face of the peri urban interface.

There is no clear policy that directs integration of rural and urban planning and implementation processes. The 73rd and 74th Amendments designate this role to the DPC but not to the PRIs or to the Municipal bodies. Therefore the local bodies both rural and urban do not see integration as part of their daily practice but more as something being led by an advisory body like the DPC to which they are not accountable.

The DPC also does not exist in all states and even in states like Karnataka where it does exist it is not uniformly constituted in all districts. Where it is constituted like in Dharwad district it is a political body existing only on paper.

The project measured official attitudes in the initial years of the project when there was a lot of activity in the form of monthly meetings and so on. At that stage it was found that awareness on the peri urban concept and on importance of participatory processes was heightened as a result of the project. However follow up interviews a few years later could not be conducted with the same officials as most were transferred. Interviews with the new officials three years later found them unaware of the peri urban or the project as most had just started work in these positions.

Thus, frequent transfers of officials was identified as a serious constraint where the only solution identified by the team would be getting state buy in well before the project was commenced. Getting state buy in however requires a higher scale than that of the current project. The scale that would be required for future projects to get state buy in would span across several districts, more villages, and would require sharing resources with the state.

16.4. Livelihoods and MOVE

The nature of poverty is different in the PUI with urban opportunities creating the potential for the poor to improve their livelihoods. In fact diversification was found to be higher among the poor and very poor in the PUI. The skills of the peri urban poor are diverse. With the project interventions on poultry and livestock (Chapter 8), on farming systems (Chapter 9) and agro forestry (Chapter 7) these skills are enhanced as are their livelihoods. It was also found that natural resource based livelihoods were more popular than non natural resource based livelihoods in the PUI.

Participatory assessment is the poor through wealth ranking exercises were found to be useful since poverty is relative, multi dimensional and this methodology was able to capture these aspects. One limitation in the wealth ranking was that the number of

categories was limited and did not allow small movements to be captured among the poor and very poor who together constituted close to two thirds of the entire population. In fact some communities had come up with more than five categories. The research team needed uniform categories across the villages for the sake of comparison and simplified the categories to five, which ultimately lost the capacity to capture sensitivity of movement of the poor.

Credit is a key constraint for the PU. Savings and credit and the revolving funds strategies helped people access credit to improve or enhance existing livelihoods or add new ones.

Two fifths of the very poor and the poor reported receiving economic benefits from the project interventions. Among those families who derived economic benefits, the maximum numbers were also part of sanghas and participated in exposure visits. More than 50 percent of the very poor and close to two thirds of the poor have got access to credit as a result of the project. Also 25 percent of the sample who said they had increased access to credit were part of sanghas.

The action plans however were biased in favour of the landed and not very gender sensitive. Therefore the search began from the planning stages itself for interventions for the landless and women. This resulted in the creation of an intervention called MOVE (see Chapter and Annex on MOVE). In Gabbur and Channapur one strategy used was to give matching grants to people to start additional livelihoods or enhance existing new ones.

The concept of MOVE focused on enhancing livelihoods by helping illiterate and asset poor women access markets. To date all interventions, be it from government or NGOs, are production oriented and not market oriented. The first lesson of MOVE was to change the attitudes of women and NGOs to understand the importance of the market and tailor production to market demand.

Another lesson of MOVE was to prevent product fixation thereby developing market resilience. Thus if the market changes and their product no longer has a demand, women should be flexible enough to change with the market and not hold on to their product.

Illiteracy was a constraint but MOVE through participatory visual methods helped women understand their competitors and provided them the skills to understand a constantly changing market.

It took almost two years to fully develop and test MOVE since it was completely experimental in nature. However to replicate MOVE would probably not take more than six months. MOVE has been developed only for non natural resource based goods but needs to be refined and developed for four types of peri urban livelihoods: natural resource based goods (eg: milk), natural resource based services (eg: para-veterinarians), non natural resource based goods (eg: soap), and non natural resource based services (eg: midwives).

Since a priori we cannot determine what is to be produced as the market has to determine this, initiatives cannot be designed in advance to develop these four strands of MOVE. Thus developing MOVE will have to be situation based.

One issue was that women in Mugad were able to assess the Mugad market and it is unclear at this stage if they could have as easily assessed the urban markets of either Dharwad or Hubli. The reason Gabbur producers could do it is because there was an existing relationship with their clients and they only surveyed their clients. They were supposed to survey their previous clients as well which they did not. Thus using MOVE to penetrate the urban household might prove to be difficult.

To go on scale, one issue that needs to be faced is the marketing expertise is lacking both among women and the NGO staff who will ultimately have to be trained to replicate this model. One possibility is to partner with business management marketing experts for select portions of the MOVE module and for the NGO staff to conduct the other sessions especially the motivation modules and the PMA (which is an easy adaptation of PRA). A second potential solution is for information technology can be used as a means by which the NGO staff can constantly access marketing experts and those leading MOVE and constantly upgrade their skills.

The main lesson from MOVE and the livelihood intervention especially for landless women is that ignoring the market is not an option and instead a market component needs to be factored into all income generation and economic development training programmes.

16.5. Livestock

Livestock continues to be a major livelihood option in the PUI, especially dairy and poultry. Major factors that deter livestock activity in the peri urban are the scarcity of land, fodder, water and labour.

Tanks are the main source of drinking water for animals and tank rehabilitation can provide animals water especially in drought prone areas. Agro forestry was found by the project to help address fodder needs. Taking advantage of urban markets would help livestock rearers make their living more productive. Poultry and small livestock are important interventions for the landless as it requires less initial investment and maintenance is low cost.

Interviews with government officials also revealed the lack of vigilance in quality control especially of milk. If government were to test milk quality and then make the consumer aware of which milk products are safe, then large quantities of synthetic milk entering Dharwad market would decline and instead a niche would be created for fresh produce from peri urban producers around Hubli and Dharwad cities.

Among the livestock initiatives some were seen as particularly successful. For instance, the deworming and vaccination camps, in Gabbur alone this year 72 buffalo calves survived. Typically the survival rate of calves is extremely low 20 percent and this year almost all, 80 percent, survived. Just this intervention alone, added assets worth 350,000 rupees evaluating each calf at 5,000 rupees.

Poultry was also successful albeit not in the first year because people were not used to this new breed of poultry. It took a year for people and the team to evolve methods to deal with improving the survival rates through local knowledge and strategizing and build chicken houses partially supported by the project to help turn the intervention into a sustainable livelihood. Through the poultry interventions in a sample of 20 percent of the entire population it was found that chicken population had increased by 123. Extrapolating to the population this would mean at least 600 birds being added to the asset base of these villages or 60,000 rupees worth of assets being added to these village economies, all of which lie with women.

Vaccination camps saw better attendance over the years as awareness was created by the project team on the importance of vaccination. In the first year in some villages attendance was very low as people did not know or trust this technique and this resulted in the team changing strategies and raising awareness through the sanghas, which finally resulted in better attendance in the following years. The lesson learnt here was that extension activities traditionally are more focussed on providing the service and less on whether it is used or not. Thus awareness building as a precursor to the activity while necessary is not given due importance.

Goat rearing was successful among sangha women and among the landless. Now goats owned by the sanghas have reproduced and there is a herd of as many as 25 more goats in the villages which again has added assets worth 25,000 rupees to the sanghas all of whom are women.

The impact of the cattle feed trials was seen in the form of higher milk yields. However it was unsustainable because it was expensive compared to traditional fodder and the feed itself was not locally available in the villages but only in UAS or in the cities. Thus people did not continue to use this new feed as a result. Therefore the lesson here is that new interventions need to be more grounded in terms of affordability and local availability for future sustainability.

Fodder initiatives on the other hand were extremely useful and the fodder that yielded from planting of fodder species in fields, bunds and common lands resulted in the availability of more green fodder, despite drought.

An important intervention for sustainability of livestock that needs research after the project ends is the performance of Village Veterinary Workers and Village Poultry workers. As of now they have been trained to deal with the health of livestock. They have been given a kit of first aid with cheap ayurvedic and homeopathic which is more sustainable and affordable by the village community.

16.6. Natural Resource Management

Sewage irrigation and easy access to urban markets are features that mark peri urban agriculture. The basic NR interventions in the peri urban villages included tank restoration, agro forestry, FLDs, soil testing and livestock interventions. Of the sample interviewed over half (56.8 percent) were involved in natural resource management interventions and 47.7 percent in NR based livelihood interventions.

More than half of the poor and very poor experienced some environmental benefits. Among those who reported receiving environmental benefits, 20 percent were part of the tank rehabilitation initiatives, 6.8 percent participated in canal repair and 6.3 percent in veterinary services.

Peri urban communities due to urban opportunities and consequent livelihood alternatives have less investment in natural resources. This has two clear implications for the implementation of NRM strategies:

Urban Opportunities: Since their livelihoods are not dependent on the natural resources it is more difficult to mobilize the community to manage their own resources basically because the economic gains are relatively less for them.

Labour Costs: The scarcity and cost of labour being higher in the PUI also results in a lower level of willingness to contribute voluntary labour in these communities. The way in which the farm ponds had to be built is a clear illustration of this issue. Labour within Channapur was not available for constructing the farm ponds. Consequently BAIF actually paid for the labour costs. For BAIF staff, *the labour cost us about rupees 3400/-, as the labour was hired from the other villages to dig the ponds. The pond work was carried out in the months of January-March. There was a lack of labour in the village as they all headed off for work in their own lands when the rains began.*[xlii] They did appreciate the hard work of the other labourers as the lands were very hard before the rains. The daily wages for working in the brick kilns, as coolies etc., in the cities is higher than the work here in the farms, therefore they prefer to work in the cities, rather than here.

However despite these constraints, what is an important research finding is that NRM strategies can in fact be implemented in the PUI although with some modifications in approach from purely rural settings. Also NR based livelihood interventions were more frequent than pure livelihood interventions. This could be more lucrative in the PUI due proximity of urban markets. This was validated by the reported effects of being close to the city by the sample surveyed where 244 families reported easy access to markets as one benefit of being close to the city. This access to the city translates into easy access for inputs, to government agencies and to markets to sell their produce.

16.7. Impact of Strategies on Women

The impact of the strategies on women is strongest in their being mobilization into sanghas which has become the basis and the space to handle all problems.

16.7.1. Impact of sanghas:

The formation of sanghas has had an impact on most of the women and also others in the village. All women interviewed said one thing in common, that being a sangha member helped them to explore life out of their homes for the first time. They became more confident of themselves and were able to interact with agencies like banks and the Gram Panchayat, Forest Officials. Through training and exposure visits they were able to start new income generating activities or promote their existing ones. They became more self- reliant through the savings and credits and income generations

which they have started with the help of the sanghas. Savings and credit helped them be free of high interest loans from the moneylenders. They became more active and participated more in community work.

Through participatory methods they were able to identify their problems and were able to find possible solutions to these. Another impact is the common platform where the women can interact and discuss ideas and find a collective solution to any problems. The unity of the sangha for instance gave women the courage to fight against alcoholism, gambling in Channapur and Mandihal, among other issues.

16.7.2. Impact of NR based activities:

Exposure visits, training and technical inputs, and financial assistance from the sanghas helped the women take up many NR based activities like vermicomposting, chicken rearing, goat rearing, cattle rearing, agroforestry, kitchen gardens and nursery to name a few. Women have actively participated in community level activities like restoration of tanks. Since women are the ones that are most dependent on the forests, their membership in the VFC has enabled them to make themselves heard.

This improved various aspects of their rural lives like better use of land, better crop yield, fodder for their animals and supplied them with an alternate source of income. Because of their active participation they have a better stand in the community.

16.7.3. Impact of livelihood activities:

Most livelihood activities are structured to make women more financially independent. For example agarbatti making, tailoring, papad making to name a few have given the women an additional source of income. With the introduction of MOVE, the women in Mugad have become more aware about the market and plan their activities according to the demands of the market. Providing women access to credit and giving them the skills to understand the market have been two important strategies that have contributed to improving women's livelihoods.

Finally the project was not capital intensive and had small development funds (2000 pounds a year) all of which went to the sanghas to build up small assets. Most decision-making also happened via the sanghas. Given that women constituted most of the sanghas most asset building and decision-making took place with women being central to these processes. In the PUI where land is extremely short, the project did not invest in land for men or for women. Where it did invest in asset building it did so primarily for women.

16.7. The Peri Urban Effects

There are positive and negative effects of living near the city on peri urban communities as reported by respondents of the second survey. A large number of the effects reported could be classified as increased sale of land often due to urban dwellers buying up land in the PUI. A second effect opportunity identified was easy access to markets followed by employment opportunities. Other negative effects reported could be categorised under negative effects on agriculture due to acquisition of land by government and loss of land due to industrialization and quarries. The

quarry dust also effects agriculture and crops on surrounding lands. One more negative impact was the reduction of common land especially forests as in case of Mugad which has lost its forest land to Karnataka Forest Development Corporation (KFDC). Other positive effects included an increase in vegetable cultivation which could be linked to access to urban markets and access to sewage irrigation.

There has been an overall increase in vices as per the reporting of respondents which include alcoholism and gambling. Two families did however report the reduction in alcoholism due to the project.

16.8. Overview

It was assumed that mobilization of peri urban communities would be difficult due to individualistic attitudes and patron clientelistic experiences of these communities with outsiders particularly government. Since these communities are conveniently close to the government offices, universities, banks and to the city as a whole, institutions when they extend their activities tend to approach these communities more. Thus initial attitudes towards the project team from some peri urban dwellers were "what are you going to give us?" To the point where Kelgeri was dropped due to these urban attitudes. However in the course of implementation of the action plans, it was found that these communities were able to pick up and learn quickly. However the consistency of actions on the part of communities was less than NGOs experienced in rural areas.

In terms of livelihood interventions, the use of credit based strategies showed that these communities had a strong credit absorption capacity . This is probably because of easy access to urban markets. About 1,200,000 rupees worth of bank loans and close to 170,000 rupees of revolving funds were completely lent out to communities and utilized as loans. With sangha savings added to this, this shows a high capacity of these communities to use credit and also implies that credit is a major constraint for livelihood opportunities in the PUI.

Natural resource based livelihoods are still extremely important for peri urban communities. Among these livestock interventions were probably the most frequently accessed by the PUI communities particularly women. Natural resource based interventions such as tank rehabilitation were found to be extremely useful as seen in the number of benefits reported by respondents relating to environmental benefits especially access to water.

Non natural resource based livelihood were less frequent partly because the NGOs and women did not understand the market and were therefore not able to utilize opportunities provided by urban markets. The exception to this was MOVE where access to markets was an explicit goal and here women were able to produce without once making a loss.

Creating linkages of the community plans to the TIs was easier than upscaling the interventions of the project. The problems experienced in dovetailing government programmes onto the actions plans were that often government agencies could not work across jurisdictions, and sometimes the issues like sewage treatment or the de-

siltation of large tanks was too big an issue to be dealt with within district agency budgets.

Community mobilization was possibly the strongest contribution of R8084 in terms of the impact and in its ability to act as a basis for all interventions. Furthermore the mobilization of communities was an important factor facilitating participation which was found to be another significant contributing factor to success of project interventions.

References

Directorate of Extension, University of Agricultural Sciences (2005)
World Bank Aided Project, Policy Document on Income Generating Activities submitted to : Sujala Watershed Project, Watershed Development Department, KHB Complex, Cauvery Bhavan, Bangalore-9 By the Directorate of Extension, University of Agricultural Sciences, Dharwad, December.

Sangeetha Purushothaman and Sudha Menon (2004)
Strengthening Women's Federations: A Participatory Analysis, Report Submitted by Best Practices Foundation to Mahila Samakhya Karnataka, 23rd February, Bangalore.

Appendix 2.1

Table A2.1: Households in Each Village		
Village	*Number of Households*	*Percent*
Channapur	252	12.0
Gabbur	85	4.1
Daddikamalapur	91	4.3
Kotur	637	30.4
Mandihal	200	9.5
Mugad	834	39.8
Total	2099	100.0

Table A2.2: Households in Each Wealth Category		
Wealth Category	*Number of Households*	*Percent*
Rich	224	10.7
Higher Medium	213	10.2
Lower Medium	308	14.7
Poor	427	20.4
Very Poor	888	42.3
Not Available	40	0.3
Missing Data	33	1.6
Total	2099	100.0

Table A2.3: Households in Each Land Holding Size Category		
Land Holding Size	*Number of Households*	*Percent*
Less than Half an acre	31	0.3
Half to .99 acres	32	0.3
1 to 2.99 acres	312	3.1
3 to 4.99 acres	229	2.2
5 to 9.99 acres	223	2.2
10 to 19.99 acres	79	0.8
20-45 acres	16	0.2
Missing	9305	91.0
Total	10227	100.0

TableA2. 4: Households by Income Categories		
Annual Income in Rupees	*Number of Households*	*Percent*
<5,000	238	11.3
5,000 to 10,000	843	40.2
11,000 to 25,000	525	25.0
26,000 to 50,000	158	7.5
>50,000	99	4.7
Blank	236	11.2
Total	2099	100

Table A2.5: Households Categorized by Quality of House		
Quality of House	*Number of Households*	*Percent*
Average	1773	84.50906
High	1	0.047664
Pucca	51	2.430887
Very poor	158	7.530982
Poor	12	0.571973
Missing	104	4.9
Total	2099	100

Table A2.6: Households Categorized by Dwelling Size		
Dwelling Size	*Number of Households*	*Percent*
0-249 Sq feet	520	24.8
250-499 Sq feet	501	23.9
500-999 Sq feet	501	23.9
1000-1999 Sq feet	299	14.2
2000-8000 Sq feet	183	8.7
Missing Data	95	4.5
Total	2099	95.5

Table A2.7: Households Having Televisions, Transistors and Tape Recorders				
	Television		*Transistor/Tape recorder*	
	Number	*Percent*	*Number*	*Percent*
No	1116	53.2	1036	49.4
Yes	345	16.4	447	21.3
NR	638	30.4	616	29.3
Total	2099		2099	

Table A2.8: Households with Two and Four Wheelers				
	Two Wheeler		*Four Wheeler*	
	Number	*Percent*	*Number*	*Percent*
No	1345	64.1	1427	68.0
Yes	253	12.1	52	2.5
NR	501	23.8	620	29.5
Total	2099		2099	

TableA2.9: Households Categorized by Type of Land		
Type of Land	*Number of Households*	*Percent*
No Land	800	38.1
Unfit	9	0.4
Upland	400	19.1
Midland	225	10.7

Lowland	134	6.4
Mixed Types	356	17.0
Missing	175	8.3
Total	2099	100

Table A2.10: Households Categorized by Type of Cultivation		
Type of Cultivation	*Number of Households*	*Percent*
Share Crop	170	16.0
Own	814	76.6
Both	79	7.4
Total	1063	100.0

Table A2.11: Number of Households by Family Size		
Family Size	*Number of Households*	*Percent*
1	52	3.6
2	79	3.8
3	148	7.1
4	275	13.1
5	291	13.9
6	200	9.5
7	140	6.7
8 and above	277	18.9
Total	1462	100.0

Table A2 .12: Occupation 1			
		Frequency	Percent
Valid	Too young	926	11.0
	Agriculture	1259	15.0
	Agriculture labour	1505	17.9
	Periurban occupations	478	5.7
	Others	282	3.4
	Livestock rearing	107	1.3
	Pottery	55	0.7
	Basket making	51	0.6
	Fishing	41	0.5
	Stone cutter	139	1.7
	Carpenter	32	0.4
	Blacksmith	15	0.2
	Leafplate making	5	0.1
	Collection of NTFP	5	0.1
	Housewife	814	9.7
	Student	880	10.5
	Unemployed	58	0.7
	Kirani store	12	0.1
	Tailoring	27	0.3

	Blank	1700	20.1
	Total	8386	100.0

Table A2.13: Occupation 2			
		Frequency	Percent
Valid	No second option	7659	91.3
	Agriculture	143	19.7
	Agriculture labour	321	44.2
	Periurban occupations	40	5.5
	Others	33	4.5
	Livestock rearing	45	6.2
	Pottery	4	0.6
	Basket making	2	0.3
	Fishing	3	0.4
	Stone cutter	14	1.9
	Carpenter	5	0.7
	Leafplate making	56	7.7
	Collection of NTFP	6	0.8
	Housewife	36	5.0
	Tailoring	8	1.1
	Missing	11	1.5
	Total	727	100.0

Table A2. 14: Agri Inputs _ Cart/Bullock			
		Frequency	Percent
Valid	0	657	6.4
	No inputs	266	2.6
	Partly available and no capacity to borrow	41	0.4
	Partly available and capacity to borrow	112	1.1
	Self Reliant	229	2.2
	8888	28	0.3
	9999	95	0.9
	Total	1428	14.0
Missing	System	8799	86.0
Total		10227	100.0

Table A2.15: Agri Inputs _ Fertilisers/Pesticides			
		Frequency	Percent
Valid	0	647	6.3
	No inputs	136	1.3
	Partly available and no capacity to borrow	42	0.4
	Partly available and capacity to borrow	489	4.8
	Self Reliant	15	0.1
	8888	24	0.2

	9999	76	0.7
	Total	1429	14.0
Missing	System	8798	86.0
Total		10227	100.0

Table A2.16: Agri Inputs _ Implements			
		Frequency	Percent
Valid	0	642	6.3
	No inputs	258	2.5
	Partly available and no capacity to borrow	34	0.3
	Partly available and capacity to borrow	162	1.6
	Self Reliant	223	2.2
	8888	12	0.1
	9999	80	0.8
	Total	1411	13.8
Missing	System	8816	86.2
Total		10227	100.0

Appendix 3. 1: Format of the Family Information Survey 1

PERI-URBAN INTERFACE PROJECT

IMPLEMENTED BY I.D.S., BAIF & U.A.S., DHARWAD

FAMILY INFORMATION SHEET

1. Family No. _____ Village : _____ Caste : _____

2. Name of the head of the family :

3. Family background : (enclose additional sheet if necessary & take care to include the names of infants & very old)

Sl. No.	Name of the family member	Relation with HOF	Age	Education	Skills acquired	Occupation main	Occupation secondary	Income per Annum
MALE								
1								
2								
3								
4								
5								
6								
FEMALE								
1								
2								
3								
4								
5								
6								

4. Land ownership (Land available for cultivation - Acres and Guntas) :

Land (Total)	Irrigated			Rainfed		
	Own	Leased in	Leased out	Own	Leased in	Leased out

5. Type and number of livestock :	Buffalos	Calves	Bullocks	Goats	Sheeps	Poultry
Cross Bred						
Local						

6. Type of Labour :	Male	Female	Children
Family members working on the farm			
Do You hire labour to work on your farm (Yes/No)			

7. Work on others land (during one year)	Male	Female	Children
More than 6 months			
3-6 months			
Less than 3 months			
No need			

8. Agricultural inputs :	No Inputs	Partly available & No capacity to borrow	Partly available & capacity to borrow	Self reliant
Seeds				
Fertilisers/Pesticides				
Irrigation				
Labour				
Cart / Bullock				
Impliments				

9. *House type and number of houses owned*

Does not own (If rented, name of the owner ☐ | Very poor type (Hut thatched roof, mud walls) ☐

Average house (Brick walls in mud, tiled roof wooden doors / windows) ☐ | Pukka house (Brick walls built in cement and Plastered, RCC roof) ☐

House without toilets & bathrooms ☐ | Total dwelling space in square feet ☐

10. *Fuel :*

Type of Fuel	Gas	Bio-mass	Fire wood	Kerosene	Others (Spcify)
Source : 1. Purchased 2. Collected 3. Own					
Accesibility 1. Easy 2. Difficult 3. Very difficult					

11. *Water :*

Source of water	Tap	Tank	Open well	Other specify
Distance : a. <1/2 km b. > 1/2 km but < 1km c. > 1km				
Accessibility: a. Easy b. difficult c. very difficult				

12. *Clothing and household utensils:* Very Poor ☐ Average ☐ High ☐

13. *Radio, TV and other assets* None ☐ Transistor ☐ Transistor+Tape ☐ Television ☐ 2-wheeler ☐ 4-wheeler ☐

14. *Family skills*

Sl.No.	Type	Family members involved			Type of articles	Raw materials	Income per annum
		Male	Female	Children			

15. *Member of society / Panchayat / SHG :* Men ☐ Women ☐

16. *Pattern of cultivation* Share ☐ Own ☐ Both ☐

17. *Type of Land :* Unfit ☐ Upland ☐ Midland ☐ Lowland ☐

18. *Salaried Employed :* No one ☐ One or more ☐

19. *Dependents per Earning member :* >5 ☐ 3-4 ☐ 1-2 ☐ None ☐

20. *FAmily savings in the form of :* Gold ☐ Purchase of lands ☐ Lease in lands ☐ Bank A/c. ☐

21. *Crops grown :*

Kharif	Rice	Cotton	Maize	Redgram	Sorghum		
Rabi/Summer	Green gram	Fieldgram	Blackgram				
Plantation	Mango	Sapota	Coconut	Guava	Tamarind	Lemon	Amla
	Curry leaves						

Date : *Name & Signature of the Investigator*

Appendix 3.2: Format of the Family Information Survey 2

PERI-URBAN INTERFA
IMPLEMENTECE PROJECTD BY U.A.S, I.D.S & BAIF DHARWAD
FAMILY INFORMATION SHEET

1. **Family N**

2. Name of Head of the family:
3. Family background: (enclose additional sheet if necessary & take care to include the names of infants & very old)

Sl. No	Name of family member	Age (new members)	Education	Project intervention involved in	Benefits from intervention
Male					
1					
2					
3					
4					
5					
6					
New member					
1					
2					
3					
Female					
1					
2					
3					
4					
5					
New member					
1					
2					
3					

4. Occupation of Household

Occupation code			No. of members	*Now*				
		Sl No. of member		Number of days working	Months working	Gross income	Expend	Net income
	Male							
	Female							
	Children							
	Male							
	Female							
	Children							
	Male							
	Female							
	Children							
	Male							
	Female							
	Children							
Before								
Occupation code		Sl No. of member	No. of members	Number of days working	Months working	Gross income	Expend	Net income
	Male							
	Female							
	Children							
	Male							
	Female							
	Children							
	Male							
	Female							
	Children							
	Male							
	Female							
	Children							
	Female							
	Children							

5. Agricultural Inputs: Landed / Landless (Tick appropriate)

Now														
Season	Crop	Size (Ac)	**Inputs (Rs)**								**Production**		**Market price**	
			Seeds	Fert	Pest	Manure	Irrign	Labour	Cart / bullock	Implements	Crop	By-product	Crop	By-product
Total														

Before														
Season	Crop	Size (Ac)	**Inputs (Rs.)**								Production		Market price	
			Seeds	Fert	Pest	Manure	Irrign	Labour	Cart/ bullock	Implements	Crop	By-product	Crop	By-product
Total														

What are the reasons for change?

6. Assets- Land (Ac), Livestock (Numbers), Horticulture Plants (Numbers), Other Assets (numbers)

Assets	**Now**	**Before**	**Reasons for change**

7. What is the impact of living close to city?

Landuse pattern:
Livestock
Livelihood:
Environmental hazard:
Vices/ habits (social):
Social (health, education):
Others (Specify):

8. Commuting to the City (in Numbers)

	No of members	Frequency (codes)	Reasons for commuting	What is the impact
Male				
Female				
Children				

9. Family Saving in the form of: ☐ d Purcha ☐ f land Leas ☐ lands ☐

Bank A/c. SHG A/c ☐ Other

Has there been increase in savings when compared to earlier? Yes/ No
If yes why?

10. Whether household expenditure increased now compared to before? – Yes/No
If yes why?
For what?

11. Has your livelihood improved when compared to earlier?

Now	**Before**	**Reasons**
100 paise	100 paise	
75 paise	75 paise	
50 paise	50 paise	
25 paise	25 paise	
20 paise	20 paise	
10 paise	10 paise	

Appendix 3.3: Research Questions

1. Livelihoods

What are the existing livelihood options?

What strategies will help improve existing livelihoods and create new livelihoods at group or individual levels?

What is the impact of these strategies on livelihoods on different categories of the poor at group or individual levels?

Which strategies work and did not work out and why?

2. Natural Resources

2.1. What are the existing natural resources?
2.2. What NRM strategies in the project resulted in improving existing NRs, and livelihoods? Which ones have succeeded and which ones failed and why?
2.3. What are the changes in NR, What is the impact of the changes?
2.4. What capacity building measures have been taken and what is their impact?

3. Human Capital

3.1. What are the changes in Human Capital (attitudes, skills, knowledge) at the village level?
3.2. What capacity building measures have been taken?

4. Target Institutions

4.1. What methods could achieve greater involvement of TI s and what is the impact?
4.2. What are the changes in attitudes and capacity?

5. What PM&E methods are useful and sustainable beyond the life of the project?

What activities facilitate cooperation among stakeholders? What factors help or hinder cooperation among stakeholders?

Appendix 3.4: Detailed Research Design

1. Livelihoods

1.1 What are the existing livelihoods and changes in livelihoods?

What do we measure?

- Existing Livelihoods and changes in livelihoods
- Identifying Natural Resource based and non-NR based livelihoods.

Existing livelihoods can be estimated using baseline study. At the end of the project, we will use the same format and find out the changes in livelihoods.

Sample size

A minimum of two and maximum of five sanghas in each village would be interviewed. The sample includes sanghas formed till January 2003. *Criteria for selection* – Sangha with more poor members and as far as possible sangha with diversified activities. COs will select the sanghas. If the CO comes up with 6 sanghas then the team will have to go for random selection. The justification for selection of all sanghas will be written down. IDS decided to take two sanghas from Daddikamalapur, three from Mandihal, four from Kotur and five sanghas from Mugad. The number of sanghas to be selected from Gabbur and Channapur are yet decided. If some sangha or villager other than sample sanghas takes up some special activity then the team decided that we can do a case study.[67] This is the sample size for Tables 1.1 and 1.2

Table No 1. 1

Name of the SHG:Dyammavva Sangha			Family code: 2008			
Livelihoods			Present Status (Baseline)	Change in status of present livelihood	New added	Remarks (Reason)
Main	Occupation	Season				
	1					
	2					
Sub	1					
	2					

Who will measure: RAs

Frequency: Once in a year

[67] This will again have to be discussed with the team. Sample choice has been very difficult and much debated upon.

Note: the main and sub occupations are there only to ensure that the diversity of occupations is reflected. It will also be interesting to see if there are changes in this. For example if a sub occupation later becomes a main occupation.

1.2 What strategies will help improve existing livelihoods or create new livelihoods at a group or individual level?

How do we measure:

- By survey* and focus group discussion
- After each event (activity) a survey will be conducted.
- Focus group discussion will be at a later stage. (Once in six months.)

***Livelihood options/ changes considered**

Table No 1. 2

Name of the SHG _____ Village_____ Month_____							
Date	Reference Event	Options discussed	Feasibility		Reasons		Follow up action required
			No. of Members				
			Yes	No	Yes	No	
11/12/2002	*Exposure visit*	*Tree planting*	*4*	*12*	*Fruits, Assured yield, wood*	*No land, No water*	*Supply of seedlings, Land preparation*
		Vermicompost	*12*	*4*	*Income Increased yield*	*Number of space*	*Training, Worms supply*

Frequency: Immediately after every event.

Who: COs will collect the data

Note: This question traces the reasons and methods people choose an option and will also reflect which activity motivated people to choose a strategy.

1.3 What is the impact of these strategies on livelihoods of different categories of the poor at group or individual levels?

What to measure:

- Financial Gain/Loss
- Assets increase/decrease
- Change in credit use
- Social activity
- Change in wealth rank (Participatory wealth ranking)

Table No 1.3

Name of the SHG _____ Village_____ Month_____

House hold code	Livelihood options considered	What motivated them	Did it work			Effects/Impact	Follow up Actions taken up
			Yes	No	Reasons		
2008	*Vermi composting*	*Exposure visit*	*Yes*		*Good demand*		

Frequency: Once in a quarter

Sample size: Maximum 5 (from the selected sanghas) per activity per village.

Who: RAs will pool the data

Note: This question is only for the people who actually take up an activity. It will be interesting to see how many decided to take up an activity (from the previous question) and how many actually did take it up and the reasons for taking it up or dropping it.

1.4 Which strategies work and which did not work and why?

What to measure:
- Strategies for livelihoods

How to measure:
- By analysing Table No.1.2 and 1.3 once in three months.
- Focus group discussions with POs, COs, RAs and sanghas. At the sangha level and at the team level.

When to measure: Every six months

Who will measure: BPF

Note: When BPF goes in it would have the previous tables with them and will also talk to the COs before FGDs with the sanghas.

1.5 What capacity building measures have been taken?

What do we measure:
- Various capacity building activities that have been carried out.
- Problem solving ability of people*
- Ability to handle various related issues*
- Negotiating capacity with T.I for development activities of village*
- Ability to take care of the natural resources available*

When do we measure:

Once a year

How do we measure:

- (Some of the data can be collected from table 1.2)
  - Compiling reports of COs
  - Feed back immediately after each event– Immediately to assess effectiveness – Can be taken from the reports of COs
  - Feed back – A year later – To see how it is used
  - *FGD/Interviews - Impact

Who has to measure: Through reports and BPF

2. Natural Resources

2.1 What are the existing natural resources?

What to measure: Existing natural resources
How to measure: Using baseline study
Who will measure: UAS RAs
When do we measure: In the beginning of the project

2.2 What NRM strategies in the project resulted in improving existing NRs, and livelihoods? Which ones have succeeded and which ones failed and why?

NRM Strategies

- **Soil and Water Management**
- **Tree cover**
- **Livestock**

What to measure:

- The impact of various activities under these three strategies.
- Reasons for the success/failure of a strategy/activity.

Activities under Soil and Water Management Cover	*Activities under Tree*
Water storage period Changes in crop yield Water table study Soil fertility	Tree planting – contour and bund planting Agro and farm forestry

Livestock activity:
Credit linkages to buy the livestock Fodder development Health, vaccination and de worming camps

<u>Soil and Water Management:</u>

How do we measure:

- Result can be measured with respect to water availability, soil fertility, crop productivity, de silting, and water level in water sources.

- Water storage period of the tanks can be measured by participatory monitoring.
- Changes in crop yield can be found by talking to farmers/ beneficiaries – can be participatory.
- Soil fertility evaluation – by testing the soil.
- Water level in different sources of water – can be participatory and using survey formats.

a. ***Water storage period***

Table 2.1

Village_____ CO name _____
Month_____

S.No	Water sources	Location	Details (eg drinking, community, temple etc)	Months of water storage period	Water level		Area irrigated (acres)	Remarks
					Summer (May)	Monsoon (November)		
1.	Tank	1 2 3						
2.	Open wells							

S.N	Water sources	No	Details	Months of water flow	Area irrigated (acres)	Remarks
3	Water stream					

S.N	Water sources	No		Details(No)		Months of water availability period	Quantity of discharge				Area irrigated (acres)	Remarks
		Dry	In use	Drinking	Irrigation		Summer (May)		Monsoon (November)			
							Study area	Non study area	Study area	Non study area		
4	Bore well											

5	Hand pump		Drinking					

*** This data is also to be collected at the beginning (baseline)**

All these tables can be combined but prefer to keep them as it is since the columns are not the exactly the same in all the three tables.

b. Field Crops

Table 2.2

Village_____ CO name _____ TO name_____ Kharif/Rabi/Summer_____								
S.N	Crop	Yield in previous year	Yield this year	Reasons for the change in productivity				Remarks
				Quality seeds	Pesticides	Fertilizer	What improved management practices	

* The data to be collected in the treated area for 5 farmers

c. Soil Fertility

Village: TO name: CO name: Year:							
S.No	Soil sample	EC	pH	N	P	K	Others

EC & pH are to be recorded in Gabbur
The data has to be collected at the beginning of the treatment and at the end of the project (5 farmers). A soil fertility map of the village could also be generated at the beginning of the project

In Gabbur measurement of bulk density, porosity have to be made apart from the above parameters. A separate study has to be set up for Gabbur to tackle the problems of poor germination of seeds and infestation of weeds.

Tree Cover

- Number of trees per acre, species
- Enhancement of fodder and firewood

Table 2.4

Village_____ Individual/Community_____							
S.N	Planted Area		No of trees		Fodder availability	Impact	Remarks
	Forest	Horticulture	Forest	Horticulture			

Sample size 5

Baseline study: 1. No. of trees per acre and species present in study and community Lands

2.

When: The statistics should be collected in the beginning and at the end of the project.

Who: The TOs and COs in the presence of the farmers

Livestock:

What to do we measure?

1. Livestock as a livelihood
   1.1 How many families are involved in livestock?
   1.2 How many are continuing or discarding.
2. What type of livestock – e.g. Cows, buffaloes, sheep, poultry, bullocks

These two we get from baseline study.

Yardsticks for change

Change from local cow to hybrid or increase in number of animals.
Improved management system – Reduce the rate of mortality of lambs, calves.

Sample size: Maximum 5 families in each activity (Milch animals, sheep and goat, poultry) per village (minimum 2). Though it is random sampling try to include one or two from sanghas to keep up continuation with livelihoods.

Milch animals

Village										
Date	Household code	Member Name	Type of livestock	No. of animals	Number of litres produced that day	Number of days after calving	Reasons		Disease outbreaks	Remarks
							Increase	Decrease		

	2010	xyz	1.Cow 2. Buffalo	2	6 ltrs	100	Good fodder			

Sheep and goat

Village										
Date	HH code	Name	Type of livestock	No. of Sheep and goat	No. of animals sold	Amount received	Reasons		Disease outbreaks	Remarks
							Increase	Decrease		
	2010	Xyz	Sheep Goat	2 1	1 nil	1000	Good management	Mortality	Less frequent	Vaccination

Poultry

Village										
Date	Household cde	Member Name	Type of poultry	No. Of birds	Number of eggs produced	Number of birds sold	Reasons		Disease outbreaks	Remarks
							Increase	Decrease		
	2010	xyz	Local Hybrid	10 50	40 100	5 25	Improved management			

Who will measure: RAs
When to measure: Once in six months

2.3 What are the changes in NR, What is the impact of the changes?

What do we measure:

Here we should monitor the changes in the livelihoods of different category of people based on accessibility to Natural Resources.

How do we measure:

- This can be analysed using the data collected for the first question.
- Using participatory and external study.

Table 2.6

Name of the SHG _____ Village_____ Year_____	
Different groups of people	Livelihood on natural resources
Women	
Artisans	
Farmers	
With dairy activity	
Labour	

When to measure:

- At the beginning and the end of the project.

3. Human Capital

3.1 What capacity building measures have been taken and what is their impact? NR based livelihoods:

What do we measure?

- Skills and knowledge*
  - Record keeping
  - Accounting and money handling skills
  - Negotiation skills
  - Leadership skills
  - Travelling skills
  - Legal knowledge
  - IG skills
  - Health and nutrition

- Change in attitudes
  - i. Attitude towards community based organisations
  - ii. Attitude towards NR
  - iii. Children's education
  - iv. Attitude towards girl child
  - v. Behavioural changes.

How do we measure?

This can only be assessed through FGDs with sanghas and Community Organisers.

Skills and knowledge

Name of the SHG:
Name of the activity:
Skills/knowledge expected to be developed:

Who will measure?

- Initially COs will keep a record. Later the responsibility will be handed over to the respective SHG.
- Follow up will be done by BPF through FGDs.

Note: it was decided that the COs would make a list of all their training, what is taken up in each training and what they expect from that training. Keeping this in mind BPF will have focus group discussions with the group to understand what they have learnt.

Change in attitudes

How do we measure?

- With the help of Cos' reports and through focus group discussions.

When do we measure?

- Once in a year

Who will measure?

- CO and BPF

What to measure:

- No. of activities on capacity building and skills
- Training and exposure

How to measure:

- With the help of reports by the COs

When to measure:

- Once in six months

Who will measure?

Note: this is already covered in the COs reports

What do we measure?

Different capacity building activities and their impact.

Frequency: Once in six months.

How to measure:

- From reports of COs.
- Using survey format.
- Through participatory discussion.
- New initiatives taken
- Focus group discussions

Data collection – data entry – analysis – putting in front of the entire team.

Note: This again will come from the reports (the activities) from focus group discussions.

4. Target Institutions

4.1 What methods could achieve greater involvement of TI s and what is the impact?

What do we measure?

- Attendance to steering committee meeting both in number and involvement
- Developing linkage – Dissemination of information both horizontal and vertical
- Involvement in project activities.

How do we measure?

- Through questionnaire.
- From proceedings of the meetings.
- Here we are not measuring the activity, but the effect of that activity.
- Discussion with CBO members, sangha members and GP members who attend DSC. Also discuss with villagers about TIs participation.
- Discussion in the team and discussion at different levels.
- Once in a while have interviews with TIs.

Questionnaire:

1. Attendance of steering committee meetings: Regular/irregular
2. Whether steering committee was useful: Yes/No
3. Whether attending the steering committee helped in planning and implementing
4. your programme: Yes/No
5. No. of training programmes attended:
6. No. of exposure visits attended:
7. Opinion about your association with the PUI team.

4.2 What are the changes in their attitudes and capacity?

What do we measure?

- Changes in their views and behaviour towards Peri Urban areas.
- Their ability to understand and involve in Peri Urban issues.
- Special programmes for PUI planned and implemented.

How do we measure?

- Through Meetings and interviews with TIs

5. What PM&E methods are useful and sustainable beyond the life of the project?

Different PM &E methods are being tested to monitor changes due to implementation of the project.

R.B Hiremath explained in detail the meaning and purpose of PM&E.
The purpose of participatory monitoring and Evaluation is to know whether the project is moving forward properly or not.

In PUI we have an objective. Fulfilling that objective is our goal.

Where do we want to go ⟶

How do we reach there ⟶

What are the factors involved ⟶

Goal

In our project

P	**M**	**E**	
Community NGO TIs PRIs University BPF UK team		Internal/Outsider(II)	

PM&E is a continuous process. If we involve this from the beginning, we can know whether the project is on the right track. Here we should involve the community and make it more participatory.

There was a prolonged discussion as to when Monitoring starts. Finally the team came to a consensus that monitoring is not just supervising the activity but this process starts from initial preparation itself. There was confusion over monitoring and evaluation too. R.B compared M and E taking tank de silting as an example.

	M	W
Tank de silting	Continuous process Internal observation	Periodic External judging

Activity	Monitoring
Tank de silting	Budget Fro where? Involvement of TIs Community Survey

	Involvement of PRIs NGO

What do we measure?

- The utility of various PM&E methods that are used in the implementation of the project.

How and when do we measure?

- The methods will be ***analysed*** periodically ***(yearly)*** to assess their utility and sustainability.
- If felt necessary the methods may be altered.

Who will measure?

- The entire team will sit and analyse the performance of different methods of PM & E.

Example worked out

Project objective	M&E question	Indicators	Measurement	Method/tool	Frequency of data collection	Task in charge
To increase rice productivity through improved variety seeds	***Which variety***	***Pattern of variety used*** *Eg: NB-13*	***Improved variety***	***Participatory record keeping***	***Planting time of every cropping season***	

Period for collecting the data has to be mentioned.

6. What activities facilitate cooperation among stakeholders? What factors help or hinder cooperation among stakeholders?

What do we measure?

The impact of -

- SHG, steering committee meeting.
- Community activities done.
- Programmes supported by the Government/TI/NGO
- Problems solved

How do we measure?

- Reports, steering committee proceeding, interviews, regular meetings.
- Audio/video documentation
- SHG records

One example was worked out

Activity	No. of times conducted	Participants	Response		Cooperation among stakeholders	Reason
			Positive	Negative		
Hasiru Habba	One	Community, NGO, Religious leader, GP, UAS	Positive response		Cooperation among community Between NGO and GP, Ngo and religious person, Community and religious person And Community and NGO	Participation of religious leader in the activity

How to measure: Discuss with each participant
How often: Every year through FGD

Appendix 3.5: Participatory Indicators

Table A3.1: Participatory Indicators: Channapur	
Activity	Indicator
Agro forestry	Irrigate the fields less often Do not have to buy or hunt for firewood Can make their own wooden instruments Leaves from the trees can be used as manure and for mulching Soil erosion reduces Soil fertility increases Enjoy the shade of the trees in their fields Get fodder for animals and with the money saved from not have to buy fodder they can buy more animals More fodder means more milk and dung from the animals. The milk can be sold and the dung used for the fields which in turn means better soil fertility Do not have to go and work in anyone else's fields
Digging of Trenches around the fields	Increased relative humidity of the soil
Bunds	Collect more water
Improvement of the catchment area around the tanks	More water to wash clothes and animals
Planting Bhindi (okhra?) around cotton crops	Reduces the number of pests
Farm ponds	Increased relative humidity of the soil Less labour needed to fetch water from the tanks Increase the water table and therefore more water in the bore wells

Table A3.2: Daddikamalapur	
Activity	Indicator
Sangha	More confident Getting out of the house Feeling to togetherness Talking to strangers Gone to the bank Been on exposure visits
Bank loans	Start an income generating activity and with the money saved educate children
De-silting of tank	Water storage period is more in tanks because every year the water is usually far 8 m but if the tank is desilted the water can stand for 12 m. Quality of the water is pure Decrease in infection of diseases to animals as they get pure water for drinking. Bore well located adjacent to tank will not dry Increase in Irrigation area Increase in the area under horticulture crops Increase in yield level which is indicated by improved fertility due to application of silt Reduced application of chemical fertilizers. Milk yielding is more as they get more water facility for animals
Agro-forestry	Soil erosion is controlled Fuel problem is solved instead of going to forest they can use their own wood Increase in fertility of land due to leaf fall from the tree Proper distribution of rainfall is also one of the indication of Agro forestry Increase in number of livestock due to increase in grasses beneath the tree Increase in employment for women
Livestock	Increase in the number of livestock Reduced disease infection to animals due to vaccination Programme

Table A3.3: Participatory Indicators: Gabbur	
Activity	Indicator
Any Income generating activity leading to increased income	Live without a loan Educate children and pay the school fee regularly Conduct marriages (marriages are postponed because there is no money) Build our own houses Take care of our children properly Wealth level of all becomes the same leading to more cooperation and the village can become economically and socially stronger Have a radio, TV and electricity
Improved dairy	Availability of water and fodder More milk for home consumption Increase in income Increase in livestock population Increase in Milk Yield No disease incidence to animals Construction of good houses
Improving health of animals	Healthy animals give good manure which can be used for the fields
Vermi-compost	Do not need to buy chemical fertilisers Saves money Amount of pesticides used will be reduced Will be more healthy Get good non toxic fodder Increase in fertility of soil Less cost of cultivation Increase in Yield.
A good sangha	Everyone is equal No partiality Members should speak well to other members despite bad family relationships outside the sangha Everyone should be able to go to the bank Loans taken should be repaid on time Loans taken for IG activities should yield profit
Fodder development	Increase in Livestock Increase in milk yield

Table A3.4: Participatory Indicators: Kotur	
Activity	Indicator
Sangha	Take loans from the sangha to buy livestock, conduct marriages, and so on Come out of the house Better communication with others Problem solving More confident Have learnt to sign names Save regularly Start other sanghas Started income generating activities
Improved Livelihoods	Children wearing good clothes and are neat Children go to schools in the cities Work their own land Do business or have jobs that are better paying Live in houses with tiled roofs Better entertainment (?) Take loans form banks than from landlords or moneylenders Have less children
Improved Livestock	Do not have to buy fodder More goat milk for children More goat manure to use in own fields or to sell High / good milk yield Better management of Animals Animal number is increased Diseases reduced Selling of animals to butcher reduced
Agro forestry	Fuels wood, wood for implements and wood for construction of house are the benefits from Agroforestry. Instead of fetching fuel wood and wood for other purposes from forest they said we can use fuel wood from our fields only. Soil erosion gets reduced as root system hold the soil together. Moisture holding capacity increased. (Due to litter fall) Ground water table increased.
De-silting of tanks	Water problem solved (for animals and domestic purpose) Area around tank improved Fertility of the soil increases by addition of silt. Water holding capacity / water storage period increases. by desiltation. In some of the tank desilted soil can also be used for plastering of roofs of houses

Table A3.5: Participatory Indicators: Mandihal	
Activity	Indicator
De-silting and silt application	Increased soil fertility Increased yield If the tank is full can survive a drought year Tank can irrigate 400 acres of land Water in the tank keeps the area moist so more crops can be grown With enough water enjoy being in the field and will not feel like come back home Applying silt saves money, increases yield and keeps the soil healthy Water for livestock Fertility of land increased by use of desilted soil Water storage period increased Water for washing clothes To carry out fishing activity To grow different crops –like wheat, green gram, bengalgram, fruit trees etc., Water table increases To take bath in tank during religious fares/festivals
Sangha	Saving money Get along with each other Can multiply money saved by taking up activities Confident to speak in public Not dependent on husbands A good sangha: Maintains records properly Holds regular meetings Good attendance Good understanding among the members Timely repayment of the loans
Livelihood	Are independent (stand on their own feet) Stop working in other's farms and start own business Always have money in hand so don't have to take a loan No one should go hungry

Table A3.6: Participatory Indicators: Mugad	
Activity	Indicator
Sangha	To be able to resolve personal and village problems Saving regularly Getting bank loans Able to reply loans and no defaulters Maintaining accounts Courage to question others and fight for basic needs Convince their husbands Share information with other sanghas Lives have improved though the loans got from the sanghas Eat better Wear better clothes Know about healthy food Ambitions and plans for their village (convert it into and tourist place!) Aforestation
De-silting	Fertility of the soil increases by addition of silt. Some farmers opined that if they spread the silt in their fields for about 3-4 feet they said that no chemical fertilizers / FYM be used next for 2-3 years. Water holding capacity / water storage period increases by desiltation. Water will not overflow from the border of tank.
Agro forestry	Fuel wood, wood for implements and wood for construction of house are the benefits from Agroforestry. Instead of fetching fuel wood and wood for other purposes from forest they said we can use fuel wood from our fields only. Soil erosion reduces as root system holds the soil together. Moisture holding capacity increased. (Due to litter fall) Ground water table increased.

De-silting	Fertility of the soil increases by addition of silt. Some farmers opined that if they spread the silt in their fields for about 3-4 feet they said that no chemical fertilizers / FYM be used next for 2-3 years. Water holding capacity / water storage period increases by desiltation. Water will not overflow from the border of tank.
Agro forestry	Fuel wood, wood for implements and wood for construction of house are the benefits from Agroforestry. Instead of fetching fuel wood and wood for other purposes from forest they said we can use fuel wood from our fields only. Soil erosion reduces as root system holds the soil together. Moisture holding capacity increased. (Due to litter fall) Ground water table increased.

Table A3.7: Participatory Indicators by Activity

Indicators of the impact of the sangha on their lives	More confident, to speak in public, to question others and fight for basic needs Getting out of the house Feeling to togetherness and getting along with each other Talking to strangers Gone to the bank Been on exposure visits Live without a loan Educate children and pay the school fee regularly Conduct marriages (marriages are postponed because there is no money) Build our own houses Take care of our children properly Wealth level of all becomes the same leading to more cooperation and the village can become economically and socially stronger Have a radio, TV and electricity Take loans from the sangha for income generating activities and for consumption needs and therefore their lives improved Better communication with others Problem solving Have learnt to sign names Can multiply money saved by taking up activities Not dependent on husbands and can convince their husbands Able to reply loans and no defaulters Eat better Wear better clothes Know about healthy food Ambitions and plans for their village (convert it into and tourist place!) Aforestation
Indicators of a good Sangha	Save regularly Start other sanghas Started income generating activities Maintains records properly Holds regular meetings Good attendance Share information with other sanghas Good understanding among the members Timely repayment of the loans To be able to resolve personal and village problems Everyone is equal and no partiality Members should speak well to other members despite bad family relationships outside the sangha Everyone should be able to go to the bank Loans taken for IG activities should yield profit

De-silting of tank	Water storage period is more in tanks. Quality of the water is pure Decrease in infection of diseases to animals as they get pure water for drinking. Bore well located adjacent to tank will not dry Increase in Irrigation area Increase in the area under horticulture crops Increase in yield level which is indicated by improved fertility due to application of silt Reduced application of chemical fertilizers. Milk yielding is more as they get more water facility for animals Fertility of the soil increases by addition of silt. Water will not overflow from the border of tank. Water in the tank keeps the area moist so more crops can be grown With enough water enjoy being in the field and will not feel like come back home Water for washing clothes To carry out fishing activity To grow different crops –like wheat, green gram, Bengal gram, fruit trees Water table increases To take bath in tank during religious fares/festivals Area around tank improved In some of the tank desilted soil can also be used for plastering of roofs of houses Ground water table increased.
Livestock	Increase in the number of livestock Reduced disease infection to animals due to vaccination Programme Do not have to buy fodder More manure to use in own fields or to sell High / good milk yield Better management of Animals Animal number is increased Selling of animals to butcher reduced Availability of water and fodder More milk for home consumption Increase in income Construction of good houses
Agro Forestry	Irrigate the fields less often Do not have to buy or hunt for firewood Can make their own wooden instruments Leaves from the trees can be used as manure and for mulching Soil erosion reduces Soil fertility increases Enjoy the shade of the trees in their fields Get fodder for animals and with the money saved from not have to buy fodder they can buy more animals

	More fodder means more milk and dung from the animals. The milk can be sold and the dung used for the fields which in turn means better soil fertility Do not have to go and work in anyone else's fields Proper distribution of rainfall is also one of the indication of Agro forestry Increase in number of livestock due to increase in grasses beneath the tree Increase in employment for women Moisture holding capacity increased. (Due to litter fall) Ground water table increased.
Digging of Trenches around the fields	Increased relative humidity of the soil
Bunds	Collect more water
Improvement of the catchment area around the tanks	More water to wash clothes and animals
Planting Bhindi (okhra) around cotton crops	Reduces the number of pests
Farm ponds	Increased relative humidity of the soil Less labour needed to fetch water from the tanks Increase the water table and therefore more water in the bore wells
Bank loans	Start an income generating activity and with the money saved educate children
Vermi-compost	Do not need to buy chemical fertilisers Saves money Amount of pesticides used will be reduced Will be more healthy Get good non toxic fodder Increase in fertility of soil Less cost of cultivation Increase in Yield.
Improved Livelihoods	Children wearing good clothes and are neat Children go to schools in the cities Work their own land Do business or have jobs that are better paying Live in houses with tiled roofs Better forms of entertainment (?) Take loans from banks than from landlords or moneylenders Have less children

Appendix 3.6: Measure of Indicators

Table A3.8: PM&E for Sangha Development/Growth				
Indicator	**Measure**	**Method/Tool**	**Frequency**	**Responsibility**
Meet regularly	Number of meetings held/month	Collect from Sangha records	Nov/Dec 2003 June/July 2004 Jan/Feb 2005	BPF
Save regularly	Number of women who save regularly	Collect from Sangha records	Nov/Dec 2003 June/July 2004 Jan/Feb 2005	BPF
Internal Lending	***Number of loans given***	Collect from Sangha records	Nov/Dec 2003 June/July 2004 Jan/Feb 2005	BPF
Timely repayment of the loans	Number of loans repaid within the deadline	Collect from Sangha records	Nov/Dec 2003 June/July 2004 Jan/Feb 2005	BPF
IGA	Number of IGAs started by the Sangha and by Individual members	Collect from Sangha records	Nov/Dec 2003 June/July 2004 Jan/Feb 2005	BPF
Every member should be able to go to the bank and TI's	Number of women who have gone to the bank Number of women who have met GP officials Number of women who have met TP officials Number of women who have met district level officials	Voting	Nov/Dec 2003 June/July 2004 Jan/Feb 2005	BPF
Decrease in debt	Number of women whose families owe money to moneylenders	Voting	Nov/Dec 2003 June/July 2004 Jan/Feb 2005	BPF
Participation in decision making		Focus Group Discussions	Nov/Dec 2003 June/July 2004 Jan/Feb 2005	BPF

Table A3.9: PM&E for De-silting Activity and Restoration of Tanks				
Indicator	**Measure**	**Method/Tool**	**Frequency**	**Responsibility**
Period of Water storage in tanks is high	Number of days/months of water in Tanks	Observation and Discussions with Water users groups	Every six months	UAS
Increase in Irrigation area/ period	*Area irrigated Number of irrigations*	Discussions with Water users groups	After every irrigation	UAS
Increase in yield level which due to application of silt		Interviews and Anecdotes (already being done by UAS)	Rabi 2003 Kahrif 2004 Rabi 2004	UAS
Carry out fishing activity	Quantity of fish sold Number of fingerlings released		Every six months	UAS
Increase in volume of water	Maximum height of water reached	Scientific measurement		UAS
Impact of De-silting and restoration		FGDs		BPF

Table A3.10: PM&E for Livestock (to be done for sanghas as a unit)				
Indicator	**Measure**	**Method/Tool**	**Frequency**	**Responsibility**
Increase in the number of households depending upon Livestock	Number of families depending on livestock activities	Balloting	Nov/Dec 2003 June/July 2004 Jan/Feb 2005	UAS
Reduced diseases in animals	*Number of animals vaccinated* Number of animals currently infected	Balloting	Nov/Dec 2003 June/July 2004 Jan/Feb 2005	UAS
Increased production of fodder	Number of families purchasing fodder Frequency of fodder purchase	Balloting	Nov/Dec 2003 June/July 2004 Jan/Feb 2005	UAS
Increased production of milk	Number of families with <10 litres of milk Number of families with 11-20 litres of milk Number of families with 21-30 litres of milk Number of families with >30 litres of milk	Balloting	Nov/Dec 2003 June/July 2004 Jan/Feb 2005	UAS
Increase in per capita income through livestock activities	Number of eggs sold Number of chickens sold Number of sheep sold Number of goats sold Number of animals hired	Balloting	Nov/Dec 2003 June/July 2004 Jan/Feb 2005	UAS
Impact of Livestock management		FGDs		BPF

Table A3.11: PM&E for Agro-Forestry				
Indicator	**Measure**	**Method/Tool**	**Frequency**	**Responsibility**
Increase in tree cover	Percentage of tree survival	Counting	Once a year	BAIF/IDS
Change in crop yield	Quantity of yield for farms with agro-forestry	Interviews	Rabi 2003 Kahrif 2004 Rabi 2004	
Increased fodder availability	Number of months of fodder availability	Show of hands (number of people saying there has been an increase in fodder availability)	Rabi 2003 Kahrif 2004 Rabi 2004	
Decrease in water run off	Number of people saying there has been a decrease in the run off	Show of hands	Rabi 2003 Kahrif 2004 Rabi 2004	
Impact of agro forestry		FGDs		BPF

Table A3.12: PM&E for Improved Livelihoods				
Indicator	**Measure**	**Method/Tool**	**Frequency**	**Responsibility**
Educating Children in schools	Number of children going to school	Voting	3 times	BPF
Loan from SHG/ loans from banks used for investing in IGA's	Number of members taking loans for IG activity from the SHG Number of members taking loans for IG activity from the bank Number of loans taken	Voting (Individual recording of the women who have taken the loans)	3 times	BPF
Spending more time IG activities	No of people who spend >2 hours / day in activity	Show of hands	3 times	BPF
Demand for training and ideas on IG activities	How many training/information have you asked for in the past six months	Listing and then counting	3 times	BPF
Amount of asset built up through the IGAQ	Number of people who have got an asset after the IGA	Show of hands followed by discussions	3 times	BPF
Impact of improved/alternative livelihoods		FGDs		BPF

Table A3.13: PM&E for VFC				
Indicator	**Measure**	**Method/Tool**	**Frequency**	**Responsibility**
Decrease in grazing in the forest land	Number of families who have stopped grazing animals in the forest	Show of hands and discussions		
The VFC holds regular meetings	Number of meetings held	Check the record book and discussions		
Process of VFCs		FGDs		BPF

Table A3.14: PM&E for Vermi-compost				
Indicator	**Measure**	**Method/Tool**	**Frequency**	**Responsibility**
Decrease in the use of chemical fertilisers	Quantity of chemical fertiliser used	Interview	Rabi 2003 Kahrif 2004 Rabi 2004	UAS
Less use of pesticides	Number of sprays	Interview	Rabi 2003 Kahrif 2004 Rabi 2004	
Increase in yield	Number of farmers who believe this practice had increased yield by over 25%	Voting	End of the season	
Vermi-compost as an IGA	Number of farmers producing Number of farmers with >Rs 1,000 from sale of compost	Interview	Every six months	
Increased awareness on vermi-compost	Farmers buying compost Number of farmers using vermi-compost for their own fields	Interview	Every six months	
Impact of Vermi-compost		FGDs		BPF

Table A3.15: PM&E TI Indicators				
Indicator	**Measure**	**Method/Tool**	**Frequency**	**Responsibility**
Increased awareness on PUI	At least 5 government officials will have a greater understanding of PUI concept	Interviews	2003 and 2004	BPF
Increased awareness on participatory approaches	At least 5 government officials will have a greater understanding of participatory approaches	Interviews	2003 and 2004	BPF

Appendix 4.1: List of Sanghas in All the Villages

Table 4.1: Sangha Information in all Six Villages		
Village	**Name of Sangha**	**Gender**
Channapur	Nehru Swa Sahaya Sangh	Men
Channapur	Mahatma Gandhi Swa Sahaya Sangh	Men
Channapur	Sri Maruti Swa Sahaya Sangh	Men
Channapur	Sri Mooru Magatamma Devi Swa Sahaya Sangha	Women
Channapur	Akkamahadevi Swa Sahaya Sangh	Women
Channapur	Raja Baksh Swa Sahaya Sangh	Women
Daddikamalapur	Tulajabhavani SHG	Women
Daddikamalapur	Durgadevi SHG	Women
Daddikamalapur	Shrikrishna SHG	Men
Gabbur	Siddharoodh Swa Sahaya Sangh	Men
Gabbur	Gramdevi Swa Sahaya Sangh	Women
Gabbur	Basaweshwara Swa Sahaya Sangh	Men
Gabbur	Gajanana Swa Sahaya Sangh	Men
Gabbur	Walmiki Swa Sahaya Sangh	Men
Gabbur	Bibi Fatima Swa Sahaya Sangha	Women
Gabbur	Bheemambika Swa Sahaya Sangha	Women
Kotur	Yamunoorappa SHG	Men
Kotur	Pakkiraswamy SHG	Men
Kotur	Akkamahadevi SHG	Women
Kotur	Rajeshwari SHG	Women
Kotur	Jnyanajyothi SHG	Men
Kotur	Hasen Hussain SHG	Women
Kotur	Taj Mahal SHG	Women
Kotur	Shanoorbaha SHG	Women
Kotur	Ambabhavani SHG	Women
Kotur	Renuka SHG	Women
Mandihal	Shridevi SHG	Women
Mandihal	Akkamahadevi SHG	Women
Mandihal	Kalikadevi SHG	Women
Mandihal	Durgadevi SHG	Women
Mandihal	Mahalaxmi SHG	Women
Mandihal	Shivanand SHG	Men
Mugad	Durgadevi SHG (J)	Women
Mugad	Saathiramma SHG	Women
Mugad	Kalmeshwara SHG	Men
Mugad	Honnambika SHG	Men
Mugad	Padmavathi SHG	Men
Mugad	Durgadevi SHG	Women
Mugad	Laxmi SHG	Women
Mugad	Subhanalla SHG	Women
Mugad	Maruthi SHG	Men
Mugad	Madina SHG	Women
Mugad	Rajeshwari SHG	Women
Mugad	Chakkeshwari SHG	Women

Appendix 6.1

Table 6.1: Water Source and Access							
Source			Water access				
			Easy	Difficult	Very Difficult	Response	
Government Tap	Distance to source						
		<0.5 km	457	138	123	75	793
		0.5 - 1 km		5	0		8
		> 1 km	16	2	3	10	31
		9999		4	0	52	62
	Total		480	149		139	
Home tap	Distance to source						
		<0.5 km	154		2	2	178
		0.5 - 1 km	1		0	0	
		> 1 km	6		21	1	39
		9999	21	0	1	10	32
	Total		182	30	24	15	251
Open well	Distance to source	<0.5 km	4	23	2	2	31
		km	0	3	0		3
		> 1 km	0	0	1	0	1
	Total		4	26	3		35
	Distance to source	<0.5 km	29	1		1	31
		km	0	14		0	14
		9999	1	0		1	2
	Total			15		2	
Tank	Distance to source	<0.5 km	59	27	2		89
		0.5 - 1 km	0	1	3	0	4
		> 1 km	0	0	1	0	1
		9999	0	2	0	7	9
	Total		59		6	8	103

Source: Family information survey 1 conducted in five villages (data for Kotur not collected)

Appendix 8.1: Poultry Birds Distributed in the Villages

Table A8.1: Poultry Birds Given in the Villages			
Village	***No. of Members***		***No of Chickens***
	Men	Women	
Channapur		10	50
Daddikamalapur			
Gabbur			
Kotur		19	72
Mandihal			
Mugad			

Table A8.2:.Change in Livestock by Wealth Ranking Categories					
	Change in Cows	**Change in Buffalo**	**Change in Goats**	**Change in Sheep**	**Change in Poultry**
Rich	3	-4	2	-12	-15
Higher Medium	2	14	-6	0	18
Lower Medium	-4	7	10	0	5
Poor	-7	2	5	-12	11
Very Poor	-7	1	25	-1	104
Blank	0	0	0	0	0

A8.3: Reasons for Change in Livestock		
Reason	**Frequency**	**Percent**
No change	157	50.6
Project intervention	31	10.0
Family consumption	18	5.8
Purchase of animal/birds	36	11.6
Diseases/death	16	5.2
Livestock gifted	10	3.2
Livelihood	5	1.6
Livestock birds sold	52	16.8
Less fodder	3	1.0
Increase/reproduction of animals/birds	37	11.9
No one to care for livestock	10	3.2
Other	17	5.5

Appendix 9.1

Number of Crop Demonstrations conducted in Six Peri-Urban villages during Kharif 2002

Crops		**Name of the Villages**					
		Mugad	**Mandihal**	**Daddi kamalapur**	**Kotur**	**Gabbur**	**Channapur**
Paddy	No.	11	6	6			6
	Variety	Intan	Intan	Intan			Intan
	Type of Trial	Varietal	Varietal	Varietal			Varietal
Savi	No.	5	4		4		4
	Variety	TNAU-63	TNAU-63		TNAU-63		TNAU-63
	Type of Trial	Varietal	Varietal		Varietal		Varietal
Hybrid Sorghum	No.				5		7
	Variety				CSH-18, CSH 14, CSH 16 CSV-15		CSH-17, CSH-16, CSV-15, DSV-2
	Type of Trial				Varietal		
Soybean	No.				2		
	Variety				JS-335		
	Type of Trial				Varietal		
Ground nut	No.				1	3	
	Variety				GPBD-4	GPBD-4	
	Type of Trial				IPM	2 Weed control , 1 varietal	
Cotton	No.	2	2	2	2	2	2
	Variety	DHH-11	DHH-11	DHH-11	DHH-11	DHH-11	DHH-11
	Type of Trial	IPM	IPM	IPM	IPM	IPM	IPM

Appendix 10.1

Table A10.1: Households by Wealth Category by Village						
	Rich	Higher Medium	Lower Medium	Poor	Very Poor	Not available
Kotur	10.8	10.5	11.3	18.8	48.6	
Daddikamalapur	16.7	27.8	10.0	16.7	28.9	
Mandihal	12.4	16.3	20.8	16.9	33.7	
Mugad	11.9	7.1	15.9	21.8	43.3	
Channapur	5.6	6.7	14.7	22.6	48.0	6
Gabbur	7.1	20.0	23.5	29.4	18.8	1

Table A10.2: Comparison of Households in Income and Wealth Categories							
	Income Category						Total
	<5,000	5,000 to 10,000	11,000 to 25,000	26,000 to 50,000	>50,000	Blank	
Rich	10	54	57	32	47	24	224
Higher Middle	17	56	72	29	13	26	213
Lower Middle	22	102	91	34	19	39	307
Poor	37	182	125	27	7	49	427
Very Poor	146	437	170	33	13	90	889
Blank	1	1	0	1	0	4	7
Total	233	832	515	156	99	232	2067

Table A10.3: Comparison of Households in Land and Wealth Categories								
	Land Categories							Total
	Less than Half an acre	Half to .99 acres	1 to 2.99 acres	3 to 4.99 acres	5 to 9.99 acres	10 to 19.99 acres	20-45 acres	
Rich	1	0	24	37	48	33	8	151
Higher Middle	7	1	32	33	30	12	3	118
Lower Middle	5	9	64	58	52	20	3	211
Poor	5	8	97	51	57	8	0	226
Very Poor	12	14	89	43	34	5	1	198
Blank	0	0	0	1	0	1	1	3
Total	30	32	306	223	221	79	16	907

Table A10.4: Number of families Receiving Project Interventions: Primary Beneficiaries vs Other			
	Primary Beneficiaries	Other	Total
No Intervention	134	80	214
Interventions	64	31	95
Total	198	111	

Appendix 21.1

Table A12.1 Total Loans Taken from the Sangha		
Purpose	Loan Amount	Percent
Agriculture	248421	20.0
Bangle business	23900	1.9
Livestock	218700	17.6
Brick making	4000	0.3
Business	64500	5.2
Carpentry	5700	0.5
Dairy	15000	1.2
Domestic	236450	19.1
Education	22200	1.8
Flower business	2500	0.2
Fodder	108000	8.7
Fruit business	15000	1.2
Function	43750	3.5
Grocery shop	8600	0.7
Hospital	47700	3.8
House construction	71200	5.7
Insurance installment	1850	0.1
Kirani shop	5600	0.5
Land purchase	1000	0.1
Mango Seedlings	1500	0.1
Marriage	57650	4.7
Plot	14500	1.2
Repay the loan	4700	0.4
Sangha IGA	2700	0.2
Sewing machine	7200	0.6
Shed construction	3000	0.2
Tractor repair	2000	0.2
Vegetable business	2000	0.2
Total	**1239321**	100.0

Table A12.2 Total loans taken by men from the sangha		
Purpose	Loan Amount	Percent
Agriculture	116321	25.7
Buffalo	86100	19.0
Business	23000	5.1
Carpentry	1100	0.2
Carpentry utensils	3600	0.8
Cow	10000	2.2
Domestic	77900	17.2
Education	4200	0.9
Fodder	50000	11.0
Fodder business	29500	6.5
Function	9500	2.1
Goat	600	0.1
Grocery shop	4500	1.0
Hospital	400	0.1
House construction	14000	3.1
House repair	6700	1.5
Land purchase	1000	0.2
Marriage	12000	2.6
Shed construction	3000	0.7
Total	**453421**	**36.5**

Table A12.3 Total loans taken by women from the sangha		
Purpose	Loan Amount	Percent
Agriculture	131000	16.7
Bangle business	4900	0.6
Bangle Business	19000	2.4
Brick making	4000	0.5
Buffalo	75700	9.7
Bullock	1500	0.2
Business	41500	5.3
Carpentry utensils	1000	0.1
Cow	30400	3.9
Dairy	15000	1.9
Domestic	158100	20.2
Education	18000	2.3
Flower business	2500	0.3
Fodder	21500	2.7
Fodder business	7000	0.9
Fruit business	15000	1.9
Function	34250	4.4
Goat	9000	1.1
Grocery shop	4100	0.5
Hospital	47300	6.0
House construction	45500	5.8
House repair	5000	0.6
Insurance instalment	1850	0.2
Kirani shop	3600	0.5
Mango Seedlings	1500	0.2
Marriage	45650	5.8
Petty shop	2000	0.3
Plot	14500	1.8
Poultry	2400	0.3
Repay the loan	4700	0.6
Sangha IGA	2700	0.3
Sewing machine	2700	0.3
Sewing machine purchase	2000	0.3
Sheep	3000	0.4
Tailoring	2500	0.3
Tractor repair	1000	0.1
Vegetable business	2000	0.3
Vehicle repair	1000	0.1
Total	**784350**	**73.5**

Table A12.4: Proportion of Sangha Savings Sanctioned for Production, Consumption and Investment Loans			
Type of Loan	Men	Women	Total
Production	324721	407500	732221
Consumption	104000	308000	412000
Investment	24700	68850	93550

Table 12.5: Type and Proportion of Production Loans Taken from Sangha Savings: Men vs Women				
	Men	Percent	Women	Percent
Agriculture	116321.0	35.8	131000.0	32.1
Livestock	96700.0	29.8	137000.0	33.6
Business	61700.0	19.0	103900.0	25.5
Other	50000.0	15.4	35600.0	8.7
	324721.0	100.0	407500.0	100.0

Table A12.6: Total loans from the Revolving Fund		
Purpose	Amount of loan	Percent
Agriculture	4000	2.4
Bangle business	1000	0.6
Livestock	109500	64.4
Business	8500	5.0
Carpentry utensils	2000	1.2
Common purchase	2400	1.4
Domestic	2200	1.3
Education	6000	3.5
Feed	800	0.5
Fixed deposit	1000	0.6
Flower business	1000	0.6
Grocery shop	2300	1.4
Marriage	10000	5.9
Petty shop	2000	1.2
Pottery	800	0.5
Roof tile	1000	0.6
Sangha IGA	5000	2.9
Sewing machine	7000	4.1
To repay the loan	1000	0.6
Toilet	500	0.3
Vegetable business	2000	1.2
	170000	100.0

Table 12.7: Total Loans Given to Men's Sanghas from the Revolving Fund		
Purpose	Amount of loan	Percent
Buffalo	12000	40
Business	3000	10
Goat	5000	16.7
Marriage	10000	33.3
Total	30000	17.6

Table 12.8: Total Loans Given to Women's Sanghas from the Revolving Fund		
Purpose	Amount of loan	Percent
Agriculture	4000	2.9
Bangle business	1000	0.7
Buffalo	31000	22.1
Bullock	1500	1.1
Business	5500	3.9
Carpentry utensils	2000	1.4
Common purchase	2400	1.7
Cow	20500	14.6
Domestic	2200	1.6
Education	6000	4.3
Feed	800	0.6
Fixed deposit	1000	0.7
Flower business	1000	0.7
Goat	36200	25.9
Grocery shop	2300	1.6
Petty shop	2000	1.4
Pottery	800	0.6
Poultry	2500	1.8
Poultry house	800	0.6
Roof tile	1000	0.7
Sangha IGA	5000	3.6
Sewing machine	7000	5.0
To repay the loan	1000	0.7
Toilet	500	0.4
Vegetable business	2000	1.4
Total	**140000**	**82.4**

Appendix 14.1: Members who Have Visited Banks

Table A14.1: Number of Members who have Visited Banks
Participatory Indicators Collected for 2003-2004

Village	Sangha	Members 03	Bank 03	Members 04	Bank 04	Percent of Members going to Banks 03	Percent of Members going to Banks 04	Percent difference (03-04)
Channapur	Maruthi	20	19	16	16	95	100	5
Channapur	Muru Mukthamma	12	12	11	10	100	91	-9
Daddikamalapur	Tulja Bhavani	13	11	12	11	85	92	7
Daddikamalapur	Durgadevi	10	10	10	10	100	100	0
Gabbur	Gramadevi	20	19	18	18	95	100	5
Gabbur	Siddaruda, Gabbur	18	18	17	17	100	100	0
Kotur	Yamanurappa	17	17	16	16	100	100	0
Kotur	Rajeshwari	13	9	12	8	69	67	-3
Kotur	Sri Renukadevi	10	10	10	9	100	90	-10
Mandihal	Shridevi	15	6	14	6	40	43	3
Mandihal	Sri Kalikadevi	12	11	12	12	92	100	8
Mandihal	Mahalaxmi	13	13	12	12	100	100	0
Mandihal	Akkamahadevi	15	15	15	13	100	87	-13
Mugad	Durgadevi	10	10	10	10	100	100	0
Mugad	Laxmi	11	11	11	10	100	91	-9
Mugad	Madina	10	10	10	10	100	100	0
Mugad	Durgadevi (J Plot)	12	9	12	12	75	100	25
Mugad	Suban Alla	10	10	10	10	100	100	0

Table A14.2: Examples Provided by Members of 18 Sanghas of Interactions with TIs

Village	**GP**	**TP**	**ZP**	**GS**
Channapur	The men go if there is any work to be done.			
Daddi-kamalapur	To ask for a house, janata plot, house titles. One member is on the school committee so she keeps going to the GP.	To get her house done.		To ask for electricity .
Gabbur	They have gone to the corporator's house They have to the KEB office and to the corporation			
Kotur	To submit complaints of road repair and construction of washing stones house documents, land papers, to pay taxes or get their bore well or taps repaired	To install a bore well in his fields		
Mandihal	To get streetlight fixed, to pay house tax. To solve their water problems and alcohol problems. To pay electricity bills, for construction of gutters and to sanction plots for the themselves and to get ration cards	To get their water problem solved. To attend a meeting	One sangha member is in the Panchay at so she has to go to the ZP. Attende d the DSC meeting	We did go to the GS but we just sat there and listened.

Mugad	To ask for light and water To submit an application for a washing stone though the VDS To obtain title deeds To give applications for a plot To show the GP the soap powder that the sangha has been making To apply for a tap for their street. To take the GP secretary to meet the bank manager To get ration cards. To pay electricity bills To get their plots sanctioned	None of them have gone to the TP or the ZP.		Family was being allotted a house. Once we attended a GS meeting and we were they only ones and all the elders were there so we came back. We have gone to the GS. We go there and sit hoping we will get somethin g. We do not talk there. We see their faces and come back

Table A14.3: New SHGs formed in IDS Peri Urban Project Villages	
Village	*New Sanghas formed*
Mandihal	*Adishakthi Women SHG* *Pandurang Women SHG* *Panduranga Rukmini Men and Women Sangha* *Barama lingeshwar Women SHG*
Kotur	*Dood Nana Women SHG* *Maruthi Men Sangha* *Uduchamma Women SHG* *Vidya Women SHG*
Mugad	*Basaveshwar Women SHG* *Huligeshwari Women SHG* *Siddarameshwar Women SHG* *Saraswathi Women SHG* *Huligeshwari Men SHG* *Channabasaveshwar Men SHG* *Shanoor Baba Women SHG* *Sharada Devi Women SHG*
Daddikamalapur	*Sai Baba Men SHG*

Table A14.4: Number of Families that Benefited from The Interventions								
	No benefit	NR Benefits	**Economic Benefit**	**Credit Access**	**Awareness**	**Free Project Inputs**	**Other Benefits**	**Total**
SHGs	23	60	60	100	101	33	1	378
Veterinary Services	20	25	13	20	29	28	5	140
Tank rehabilitation	19	80	32	38	57	34	6	266
Exposure Visits	17	36	38	49	63	7	3	213
Canal Repair	16	27	4	11	21	13	5	97
Group Purchase	12	19	27	25	30	12	1	126
Poultry	10	6	15	11	14	4	1	61
Nutrition	8	9	6	9	9	4	2	47
FLD	6	21	11	14	20	13	0	85
Kitchen gardens	6	16	10	15	18	8	2	75
Training	4	14	19	25	31	10	0	103
Vermi Compost	3	6	8	9	10	0	0	36
wadi	3	6	5	4	7	0	0	25
Bunding	3	4	3	2	4	0	0	16
Silt application	2	18	9	12	13	9	1	64
Farmponds	2	6	4	4	5	1	0	22
Goats & Sheep	2	4	7	7	7	2	0	29
Livestock	2	4	5	8	9	3	0	31
Nurseries	2	3	4	3	4	2	0	18
Soap Production	2	2	6	4	5	1	0	20
Cattle feed	1	10	8	6	11	6	0	42
IPM	1	5	3	3	5	0	0	17
Poultry Houses	1	1	3	3	3	1	0	12
TI Linkages	1	1	0	0	0	1	0	3
Other	1	1	0	0	0	1	0	3
IGA	0	6	7	6	9	4	0	32
Tailoring	0	2	4	3	4	0	0	13
Savi Processing	0	2	3	3	3	1	0	12
Chulas	0	2	2	2	3	1	0	10
Biogas	0	0	0	1	1	0	0	2

Table A14.5a: Project Interventions by Wealth Category

	Rich	Higher Medium	Lower Medium	Poor	Very Poor	Total
No Interventions	13	7	11	19	45	95
1 Intervention	8	7	13	12	33	73
2 Interventions	2	6	7	14	14	43
3 Interventions	2	2	5	6	16	31
4 Interventions	4	4	2	3	9	22
5 Interventions	1	2	6	3	5	17
6 Interventions	0	2	1	4	5	12
7 Interventions	0	1	2	1	3	7
8 Interventions	0	0	0	1	1	2
10 Interventions	1	0	2	2	2	7
Total	31	31	49	65	133	309

Table A14.5b: Interventions vs No Interventions: By Wealth Ranking Categories

	Number					
No Intervention	Rich	Higher Medium	Lower Medium	Poor	Very Poor	Total
Interventions	18	24	38	46	88	214
Total	13	7	11	19	45	95
	Percent					
	Rich	Higher Medium	Lower Medium	Poor	Very Poor	Total
No Intervention	4.2	2.3	3.6	6.1	14.6	30.7
Interventions	5.8	7.8	12.3	14.9	28.5	69.3
Total	10.0	10.0	15.9	21.0	43.0	100.0

Table A 14.6: Occupational Changes by Wealth Ranking Categories

Number of Occupational Changes	Rich	Higher Medium	Lower Medium	Poor	Very Poor	Blank	Total
	Number of Families who Experienced Occupational Changes						
-2	0	0	0	2	0	0	2
-1	0	2	4	5	9	0	20
0	24	15	29	42	76	1	187
1	6	11	8	11	35	0	71
2	1	3	7	4	9	0	24
3	0	0	1	1	3	0	5
4	0	0	0	0	1	0	1
Total	31	31	49	65	133	1	310
	Percentage of Families who Experienced Occupational Changes						
Number of Occupational Changes	Rich	Higher Medium	Lower Medium	Poor	Very Poor		
-2	0	0	0	3	0		
-1	0	6	8	8	7		
0	77	48	59	65	57		
1	19	35	16	17	26		
2	3	10	14	6	7		
3	0	0	2	2	2		
4	0	0	0	0	1		
	Percentage of Families who Experienced Occupational Changes						
	Rich	Higher Medium	Lower Medium	Poor	Very Poor		
Dropped	0	6	8	11	7		
No Change	77	48	59	65	57		
Added	23	45	33	25	36		

Appendix 1: Criteria for Withdrawal

Table A15.1a: Criteria For Assessment of Self Help Group	
Essential Characteristics	1. To conduct meetings regularly 2. Attendance (100-1) 3. Participation in Discussions 4. Decision making 5. Conducting meetings independently of IDS 6. Taking responsibilities 7. Implementation of decisions 8. Sorting out internal conflicts by themselves. 9. Dealing with outsiders 10. Collective Leadership **11.** Maintain records/documents
Required Characteristics	12. To be in time for meetings 13. To help others 14. To have relation with other Sanghas (groups) 15. To take up broader issues (relating to entire village) 16. To Plan for future of Sangha (Groups) 17. Capacity for Self Learning 18. Self evaluation
Optional Characteristics	19. Advising new activities 20. To increase membership 21. Registration of the Sangha (Group)

Table A15.1b: Criteria For Assessment of Village Development Sanghas (V.D.S.)	
1.	Two representatives from each members Sangha should attend all meetings of federation (By the rule of one representative for 6 (six) months and another representative for one year)
2.	Regular meetings should be conducted in time
3.	All concerned Sanghas (groups) should have the membership of federation
4.	60% Sangha members should have the clear concept of federation
5.	50% of representatives (members) should be present in each meeting of the federation.
6.	Arrangements should be made to work by forming the subcommittees in the federation.
7.	Arrangements should be made to call emergency meeting whenever necessary.
8.	To present the financial report once a year in the federation
9.	Should encourage the strengthening of the local Sanghas
10	Federation should make arrangement for maintaining accounts books
11.	Members should take responsibilities in the federation.
12.	Activities should be continued even if members of the federation are changed.
13.	Should have the ability to maintain the documents independently.
14.	Should possess the ability to control the meetings independently.
15.	Federation should be able to resolve common problems
16.	Federation should implement the work by discussion and decision making.
17.	Collective leadership should be developed in the federation
18.	Federation should have the capacity to think about the future and also undertake its activities continuously.
19.	Federation should collect the contribution from the member Sanghas.
20.	Federation should work to fulfil the requirements of the members Sanghas. (Camp, Training, Resource collection)
21.	Federation should have cooperation and contact with other federations.
22.	Federation should help to solve the problems of member Sanghas whenever problems emerged.
23.	Federation should given market information to its members.
24.	Federation should also involve in the blider issues of the village
25.	Federation should obtain membership in the Govt. or semi Govt boards.

Table A15.1c: Criteria For Assessment of Village Development Sanghas (V.D.S.)	
1.	At least 40% of the Target Group Families should be involved in Self Help Groups.
2.	At least 80% of the Target Group Families should be involved in IDS programmes.
3.	Atleast 20% of the Women should participate in Gram Sabhas.
4.	Women should participate in decision-making regarding Village Development Activities. For example: Sathya Graha, Meeting with Government Officials, etc)
5.	At least 25% of SC families should participate in Social function of the Village.
6.	The Social Status of families from SC / ST and OBC should be improved after IDS started its work.
7.	Social Status of women should be improved after IDS work.
8.	At least 25% of the Target Group Families should have stopped taking loan from the moneylenders.
9.	The villages together should have found solution for atleast one common problem of the village.
10	People should protect and use the common property resources in a sustainable way.
11.	Village Development Sanghas should be functioning independently.
12.	The number of asset less families should reduce after IDS work.
13.	The number of Target Group families should reduce after IDS work
14.	There should be reduction in infant mortality rate.

Footnotes

[i] Interview with Dr. Basavaraj, Soil Scientist, UAS, 2003
[ii] Interview with farmers in Gabbur, April 2003
[iii] Interview with Dr. Basavaraj, Soil Scientist, UAS, 2003
[iv] Interview with BAIF Staff, October 2003
[v] Interview with BAIF Staff, October 2003
[vi] Interview with Basunath Patil, Gabbur June 2002
[vii] Interview with Ramappa, Gabbur June 2002
[viii] Interview with farmers in Gabbur, April 2003
[ix] Interview with Dr. Basavaraj, Soil Scientist, UAS, 2003
[x] Interview with Dr. Basavaraj, Soil Scientist, UAS, 2003
[xi] Interview with Mr. Bulla, Community Organiser, BAIF, October 2003
[xii] Interview with Mr. Shindhe, SDM, June 2004
[xiii] Interview with Dr. Hunshal, UAS, June 2004
[xiv] Interview with Sangha Members, Channapur, May 2003
[xv] Interview with Sangha Members, Channapur, May 2003
[xvi] Interview with Sangha Members, Channapur, May 2003
[xvii] Interview with Sangha Members, Channapur, May 2003
[xviii] Interview with Baif Staff, October 2003
[xix] This project is funded by the European Union and is entitled the Transfer of Technology for Sustainable Development (TTSD).
[xx] Interview with J.A.Mulla,Head of the Department, Animal Husbandry , University of Agricultural Sciences, Dharwad.
[xxi] Interview with C.S.Hunshal, Professor Agronomy, University of Agricultural Sciences, Dharwad.
[xxii] Interview with Nitturkar, Project Officer, BAIF, Dharwad.
[xxiii] Interview with Nagappa, sangha member, Kotur, Dharwad.
[xxiv] Interview with Hoovakka Patil, sangha member, Channapur, Hubli.
[xxv] Interview with Yallavva Naiker, sangha member, Channapur, Hubli.
[xxvi] Interview with J.A.Mulla,Head of the Department, Animal Husbandry , University of Agricultural Sciences, Dharwad.
[xxvii] Interview with J.A.Mulla,Head of the Department, Animal Husbandry , University of Agricultural Sciences, Dharwad.
[xxviii] Interview with J.A.Mulla,Head of the Department, Animal Husbandry , University of Agricultural Sciences, Dharwad.
[xxix] Interview with J.A.Mulla,Head of the Department, Animal Husbandry , University of Agricultural Sciences, Dharwad.
[xxx] Interview with J.A.Mulla, Head of the Department, Animal Husbandry, University of Agricultural Sciences, Dharwad.
[xxxi] Interview with C.S.Hunshal, Professor, Agronomy, University of Agricultural Sciences, Dharwad.
[xxxii] Interview with sangha members, Daddikamalapur, Dharwad.
[xxxiii] Interview with Bulla, Community Organiser, BAIF, Hubli.
[xxxiv] Interview with Nitturkar, Project Officer, BAIF, Hubli.
[xxxv] Interview with Dilshad Begum, Sangha member, Mugad, Dharwad.
[xxxvi] Interview with Nilavva, Sangha member, Mugad, Dharwad.
[xxxvii] Interview with sangha members, Mugad, Dharwad.
[xxxviii] Interview with Mehrunbi Attar of Madina sangha, Mugad, Hubli.
[xxxix] Interview with Rakesh Bangle, Assistant Director, Department of Animal Husbandry, Dharwad.
[xl] Interview with Rakesh Bangle, Assistant Director, Department of Animal Husbandry, Dharwad.
[xli] Interview with Rakesh Bangle, Assistant Director, Department of Animal Husbandry, Dharwad.
[xlii] Interview with Baif Staff, October 2003