



Household access to rural non-farm livelihoods. Synthesis of participatory rural appraisals and questionnaire surveys in four blocks of Madhya Pradesh (NRI report no. 2378)

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FINAL REPORT

Household Access to Rural Non-farm Livelihoods

**Synthesis of Participatory Rural Appraisals
and Questionnaire Surveys in Four Blocks
of Madhya Pradesh**

**Ulrich Kleih, Richa Som, Yogesh Kumar,
Surendra K Jena, Amitabh Singh and Leena Singh**

May 2003

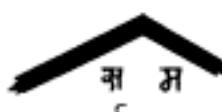
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The views expressed here are not necessarily those of DFID or the World Bank.*



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Abbreviations

ACPC	Agriculture Cost Price Committee
CBOs	Community Based Organisations
CSOs	Civil Society Organisations
DFID	UK Department for International Development
DPIP	Indira Gandhi Garibi Hatao Yojana (DPIP), Madhya Pradesh, WB funded
GoI	Government of India
GC	General (upper) castes
GS	Gram Sabha (General Body of a village in PRI)
IGA	Income Generating Activities
MFP	Minor Forest Products
MP	Madhya Pradesh
NABARD	National Bank for Agriculture and Rural Development
NGOs	Non-Governmental Organisations
NRI	Natural Resources Institute, University of Greenwich
NTFP	Non-Timber Forest Products
OBC	Other Backward Castes
PRA	Participatory Rural Appraisal
PRI	Panchayati Raj Institutions
SHG	Self-help Groups
RNFE	Rural Non-Farm Employment
SC	Scheduled Castes
ST	Scheduled Tribes
WB	World Bank

Exchange Rates

Rs 47.00 = 1 US Dollar
Rs 75.00 = 1 Pound Sterling
(March 2003)

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Summary

The research findings presented here form part of a project concerned with improved understanding and appropriate policy development for the rural non-farm economy (RNFE). The research is being undertaken in India, Eastern Europe, and Uganda by the Natural Resources Institute (NRI) in collaboration with local partners, with funding from the UK's Department for International Development (DFID) under a collaborative agreement with the World Bank.

This study presents the results of a Participatory Rural Appraisal and household questionnaire survey in Madhya Pradesh, which was undertaken by the NGOs Debate and Samarthan (Centre for Development Support) in collaboration with the Natural Resources Institute. The fieldwork was undertaken from November 2001 to August 2002.

The objectives of the research were to identify farm and non-farm income sources of rural households, barriers to the uptake of non-farm employment, and opportunities, which can be translated into policy recommendations. The PRA was undertaken in eight villages within the Betul and Narshimpur Districts. Betul is located in hilly terrain next to the border with Maharashtra, has a relatively high Scheduled Tribe population, and is rich in forest resources. Narshimpur, on the contrary, is renowned for its fertile agricultural land and high yields of crops such as sugarcane or soybeans.

The primary sector is by far the main source of income for the villagers. On the one hand, this includes agricultural production by farmers owning land, on the other hand, it includes agricultural wage labour. Also, in particular in Betul District, villagers earn income from the collection of minor forest products (MFPs) such as *tendu* leaves.

Farm sizes can vary considerably from about 0.5 acres to more than 50 acres in the case of large landholdings. According to the household survey, the mean farm size is 8.4 acres (the median is 4 acres). 58% of all the households sampled own land, with the tribal Block Bhimpur having the highest percentage (69%) and Gotegaon Block having the lowest (41%). Demographic pressure and inheritance practices lead to ever decreasing farm sizes, which in the medium to long-term will pose a serious threat to the viability of farm enterprises. In addition, declining soil fertility has been reported in some villages as a result of prolonged soybean cultivation.

Mechanisation in the form of increased use of farm equipment such as tractors, threshers, and motor pumps is also changing the face of agriculture in Madhya Pradesh, resulting in productivity increases. As for its impact on labour, the results are mixed. In some villages it has been reported that mechanisation reduces job opportunities for wage labourers, whereas in others this impact has not yet been felt. Also, mechanisation creates new employment opportunities for job categories such as tractor drivers, thresher operators, and mechanics. On the other hand, these new jobs are resulting in a gender bias, as they are almost exclusively being taken up by the male population. According to the household survey, the majority of villagers perceive mechanisation as having a negative impact on their livelihoods.

Out migration is seen to some extent in Betul District, where wage labourer households leave their villages during part of the year in search of work in neighbouring Districts such as Harda, where they work on sugar cane farms. On the other hand, Narshimpur, due to its stronger agricultural base, attracts labourers from outside, who work on farms or in processing industries such as *jaggery* (i.e. traditional unrefined sugar) making.

Based on the PRA survey, three out of eight villages have a high degree of non-farm employment (i.e. 30% - 50%), whereas five villages show a smaller level of RNFE income sources (i.e. 10% - 25%). This takes into account both full-time and part-time income from the non-farm sector. According to the questionnaire survey, both income earning household heads and spouses have on average about 1.5 jobs. 49% of the household heads had RNFE income sources in 2001, compared to 31% in the mid-1990s (i.e. 5 – 10% ago). 19% of those spouses that declared themselves as income earners had RNFE income sources in 2001, compared to 12% in the mid-1990s. Approximately two thirds of households in the tribal dominated Betul District had spouses that declared themselves as income earners, whilst it was only about one third in Narshimpur District. It can be concluded that the female household members rely more on agricultural wage labour, in particular in poor families.

42% of the other male income earners of the households reported income from RNFE sources as compared to 27% in the mid-1990s. As far as other female income earners were concerned, they stated for both periods that about 15% of their income sources were RNFE related. The latter information was based on a relatively small number of respondents.

The mean annual household income for 2001 was calculated at Rs21,200. This compares to a median of Rs10,600. Household heads would earn an average income of Rs16,700 per annum compared to Rs4,200 earned by spouses. It ought to be mentioned, that part of the households underestimated their net income to some degree.

The main sources of income in the secondary sector include food processing (e.g. *jaggery* making, grain milling), traditional manufacturing (e.g. carpentry, blacksmith), and modern manufacturing (e.g. construction). As for the tertiary (i.e. service) sector this provides income from activities such as retailing (e.g. grocery shops, hawking, mobile shops), employment in government services (e.g. teachers, health workers), and driving of vehicles in the transport sector.

Although it is often argued that a dynamic agricultural sector is important for the development of non-farm employment in rural areas, the socio-economic structure of the farming sector also appears to play a role in this context. For example, it was found that villages with a feudal landholding system and higher concentration of land ownership are less likely to develop a dynamic non-farm sector. On the other hand, there was more evidence of non-farm enterprises in communities where the land was owned by a larger proportion of villagers. Among the villages surveyed, where there are strong feudal structures the landlords are likely to discourage wage labourers from entering other sectors. Mechanisms to achieve this include provision of loans resulting in bonded labour, or preventing wage labourers from acquiring new skills or relevant information.

The main barriers to entry into RNFE in Madhya Pradesh, identified during the course of the survey, include the following:

- Inadequate credit facilities especially for small entrepreneurs involved in RNFE;
- Lack of market access, in the sense of inadequate market information, small local markets, and insufficient marketing linkages;
- Weak/inadequate managerial capacities and skills to initiate potential RNFE;
- Inadequate raw material supplies especially with respect to traditional RNFE activities;
- Weak infrastructure facilities to enable RNFE;
- In the open market traditional products face competition from industrially manufactured substitute products;
- Caste and class hierarchies creating barriers for the marginalized to take advantage of the RNFE sector.
- In addition to the survey findings at village level, it was observed that the business environment at district level is not very conducive.

The reasons behind **inadequate credit facilities**, include: defaulter status and absence of collateral security amongst the marginalised, lack of information about credit sources, complicated bank procedures, the need for ‘speed money’, and decreasing profitability in agriculture leading to low deployment of capital in RNFE.

Avenues to increase the access to credit facilities, include: strengthening of self-help credit groups, inter-linkage with flexible development credit institutions, and the building of federations of self help groups.

The issues related to **lack of market access**, include: existence of ‘predatory’ intermediary traders blocking the flow of information on market prices and marketing opportunities, excessive competition in the RNFE sector rendering it unprofitable for small entrepreneurs, lack of organised collective marketing, inefficient Government *mandis* (i.e. markets), existence of unofficial *mandis*, and inability to store products of the RNFE sector.

Measures to improve market access, in particular for small-scale RNFE producers, include: methods to enhance access to information on market prices and marketing opportunities (e.g. more transparency through information kiosks at block level), creation of storage facilities at the Panchayat level/cluster of Panchayats, reforms of local *mandis* and co-operatives, and more effective utilisation of the middlemen to the benefit of the marginalised.

The reasons behind **weak/inadequate managerial capacities and skills** to initiate potential RNFE, include: inability to undertake structured analysis of markets, weak RNFE planning focussing on village/cluster of villages as unit of RNFE promotion, low level of education inhibiting employment possibilities, pessimistic attitude toward starting new enterprises, in particular amongst wage labourers.

Measures to build skills and managerial capacities to initiate RNFE, include: vocational training in schools starting at a relatively early age, capacity building of potential young entrepreneurs, and more systematic block level RNFE planning.

The constraint of **inadequate raw material supply**, especially with respect to traditional RNFE activities, is related to: depleting natural resources, and harassment faced by the people during collection of raw material. Measures to ensure a more

regular supply of raw material, include: the strengthening of local governance institutions to take control of natural resources, the promotion of alternative inputs and design improvements for efficient product manufacturing, and the encouragement of more efficient raw material supply markets.

Amongst other things, **weak infrastructure facilities** are the result of lack of road maintenance reducing accessibility, and inadequate power supply. Measures required in this context, include: encouragement of Panchayats to invest in productive assets rather than welfare assets, and the use of development funds for the creation of an infrastructure base which is conducive to the development of the RNFE sector.

In the open market, **traditional products manufactured in the villages face competition from ‘modern’ substitute products**, due to quality issues, perception, and price. Measures required include the introduction of new technologies and manufacturing capacity at local level. Besides a conducive infrastructure, this involves improved planning at block level, and better linkages with research institutions and the industrial manufacturing sector (e.g. pharmaceutical industries requiring medicinal plants as input).

As for social stratification, **caste and class hierarchies often create barriers for the marginalised** to take advantage of the RNFE sector. On the one hand, due to better asset endowment, members of upper castes are more likely to be engaged in successful non-farm enterprises. On the other hand, it was observed that some upper castes try to block access by the marginalised in the village to agents of growth such as education, information and credit. Measures required include the formulation and implementation of pro-poor policies. Although progress is being made in policy design, more efforts are required as far as implementation and monitoring of policies are concerned. Pro-poor policies need to be gender sensitive in order to improve women’s access to livelihood assets such as health, education, and credit.

To sum up, non-farm employment has an increasing role to play in rural areas characterised by demographic pressure and depleting natural resources. The above-mentioned measures are required to stimulate growth of both the secondary and tertiary sectors. Nevertheless, it is inevitable that the economy of villages in Madhya Pradesh will still depend on agriculture in the foreseeable future. However, in view of changes in the farming systems (e.g. declining farm sizes, mechanisation, reduced soil fertility) certain adaptations are required. More emphasis needs to be put on livestock production. For example, dairy production, small ruminants and poultry can enhance the livelihoods of poor villagers. Also, higher value agricultural and forest commodities need to be targeted (e.g. fruits, vegetables, flowers, medicinal plants).

At the same time, it was found that the current business environment is not very conducive in rural Districts. Growth in both the on-farm and off-farm sectors depends on a **regulatory framework** which is conducive to business at District level without neglecting labour and environmental issues. More **Business Development Services (BDS)** are required, especially in support of small- and medium scale enterprises. It is suggested to consider the creation of a **Mission for Rural Enterprise Development** at State level.

1. Introduction

1.1 Background

The research findings presented here form part of a project concerned with improved understanding and appropriate policy development for the rural non-farm economy. The research is being undertaken by the Natural Resources Institute (NRI) in collaboration with local partners, with funding from the UK's Department for International Development (DFID) under a collaborative agreement with the World Bank. Interest in the non-farm economy originates from increasing realisation of its important role in rural livelihoods, and its potential contribution to poverty alleviation.

The research project has three main components:

- (a) Factors that determine household or individual access or capacity to engage in rural non-farm activities (the subject of this report);
- (b) The influence of local governance on the development of the rural non-farm economy; and
- (c) Characteristics and dynamics of the non-farm economy in Central and Eastern Europe.

Components (a) and (b) involved field studies in Uganda, and the States of Madhya Pradesh and Orissa in India. The research was phased over a three-year period 2000 – 2003 with activities taking place in India between mid-2001 to March 2003.

This synthesis report presents the main findings of a household survey and a Participatory Rural Appraisal in Madhya Pradesh, which were undertaken by the NGOs Samarthan and Debate in collaboration with the Natural Resources Institute. The fieldwork was undertaken between November 2001 and August 2002. In addition to similar studies focussing on household access to RNFE in Orissa, studies on local governance aspects in the RNFE context were undertaken in both states (Dasgupta et. al., 2002).

1.2 Methodology

Narshimpur and Betul Districts were chosen for the research in Madhya Pradesh. Narshimpur District has high agricultural potential and a relatively good road connectivity, whereas Betul presents a mix of agricultural and forestry resources and has a high proportion of tribal population. The study covered a sample of eight Panchayats within four Blocks representing good and poor access (i.e. in terms of road and town access) and high and low RNFE activities based on data available from the 1991 census. The 2001 census data was not available when the survey was designed and carried out.

A Participatory Rural Appraisal (PRA) was undertaken in Phase I of the project, focusing on household or individual access or capacity to engage in rural non-farm activities. Key issues assessed included household livelihoods assets, income generating activities (IGAs), social and gender related issues, and constraints and opportunities encountered in taking up new IGAs. The analysis was undertaken using

a classification of sub-sectors adapted from Fisher and Mahajan (1997). Table 1 outlines the main tools and techniques used as part of the PRA, fieldwork for which was undertaken in eight villages¹ by Samarthan between November 2001 and January 2002. Debate undertook at the same time a study on Local Government / PRI issues in different villages belonging to the same Panachayats. The findings of the latter study are presented separately.

Table 1: Tools and Techniques used for the PRA

Issue(s) purposes	Tools used
Assessment of community (physical/natural) assets	Social Mapping
Exploration of local resources and development conditions and observation of physical, natural and capital assets	Transect walk
Understanding of specific Income Generation Activities undertaken by Individuals and Small organizations (key issues)	Focus Group Discussions
Gaining in-depth knowledge of specific issues, structure and organizations	Key-Informant Discussion/In-depth Interview
Following up and illustrating specific issues	Caste Studies/Semi-structured interviews
Stakeholders perceptions	Semi-structured interviews
Income Generation present, future and trend and constraints	Ranking / focus group discussion / service opportunity map / seasonality calendars

Phase II of the project used a household questionnaire survey which was carried out by Debate (Betul District) and Samarthan (Narshimpur District) in the same 16 villages were the PRA and Local Governance survey took place. The main objective of the questionnaire survey was to obtain statistically valid data which could be used to back up the findings of the PRA.

The questionnaire survey included the following steps:

- Brain storming session for the design of the questionnaire,
- Preparation of questionnaire which focused on livelihoods assets, income sources, perceptions and constraints, and Local Governance related aspects.
- Pretesting of the questionnaire (20 households each in Betul and Sehore Districts)
- Finalisation of the questionnaire
- Sampling. A total of 800 households were to be interviewed in 16 villages belonging to eight Panchayats. Proportionate sampling was used to reflect differences in the size of village population. The Chulla² was taken as the unit of the household and not the physical structure of house. Table 2 indicates the villages surveyed and their location.
- Selection and orientation of field investigators.

¹ Manegaon, Mawai A, Bandesur, Thalwada, Devgaon, Bundala, Adarsh Dhanora, and Palaspani. Table 2 provides details of the settings of these villages.

² Chulla is a locally made stove out of mud and is used to cook food. The fuel is generally wood or coal. One Chulla is taken as a unit of family where food is made for the entire family.

- Data Collection
- Data Cleaning
- Preparation of coding manual (by Dr P Viegas, Independent Consultant)
- Data entry into data base (created by Dr P Viegas)
- Data processing and analysis using SPSS (mainly by Dr P Viegas)
- Report writing

Table 2: Villages surveyed and Repartition of Sample

District	Block and criteria	Panchayat	Village	No of HH Interviewed
Betul	Betul (High RNFE / good access)	Devgaon	Devgaon	76
			Chowki	72
		Janthapur	Bundala	34
			Ratanpur	34
	Bhimpur (Low RNFE / poor access)	Adarsh Dhanora	Adarsh Dhanora	86
			Hidli	40
		Palaspani	Palaspani	46
			Khatapani	54
Narshimpur	Gotegaon (High RNFE / good access)	Jotheshwar	Mawai A	57
			Joth	17
		Manegaon	Manegaon	71
			Paraswada	15
	Chichli (Low RNFE / poor access)	Batesara	Bandesur	36
			Batesara	52
		Thalwada	Dhalwada	41
			Thalwada	68
Total				799

NB: The average population size of the villages surveyed is of the order of 500 – 1000 inhabitants.

2. Socio-demographic Information

According to the questionnaire survey the average (i.e. mean) household size per Block varies within the range of 5.4 and 6.1 persons, with an overall average of 5.9 persons per household for the two Districts combined³. The ratio of adult males compared to adult females is 1.8 to 1.6 persons per household. The ratio of male children to female children is 1.7 to 1.4 persons per household. The average age of adult males is 37.4 years compared to 36.6 years for adult females. The age of male children and female children is 8.1 and 8.2 years respectively. About 40% of the household earners are income earners, reflecting a relatively good dependency ratio. In particular, in Betul District the ratio is somewhat higher due to the fact that there women are more likely to be engaged in income earning activities (i.e. Details of the household composition per Block are available in Table A1 of Appendix 1).

Table 3 demonstrates the high proportion of tribal population in Betul District. In particular, the more remote Block of Bhimpur has a high proportion of Scheduled Tribes, with the Gonds making up the vast majority of them. The villages in Chichli have a relatively high proportion of General / Upper Castes (i.e. in particular Rajputs).

Table 3: Caste Profile of the Sampled Population (percentage)

	Betul	Bhimpur	Gotegaon	Chichli
General / Upper Caste	8.9%	9.8%	9.4%	40.6%
Other Backward Castes (OBC)	32.2%	10.3%	43.8%	27.9%
Scheduled Castes (SC)	10.3%	4.5%	19.4%	23.4%
Scheduled Tribes (ST)	48.6%	75.4%	27.5%	8.1%

3. Access to Livelihood Assets

3.1 Landownership

Landownership is proportionally higher in tribal areas with 69% of households in Bhimpur owning land. In Betul District it is slightly less (i.e. 66%). This compares with 40% - 50% of households owning land in Narshimpur District. Whereas the figures for the ownership of fertile are similar, the percentage of farmers owning irrigated land is significantly lower (i.e. overall 58% of households own land compared to 34% of households owning irrigated land).

The average size of landholdings is highest in the villages surveyed in Chichli Block, which has a high proportion of Rajputs owning relatively large amounts of land (average size of land is 15.5 acres per household). The average landholdings in tribal areas are smaller and more equally distributed (i.e. 6.5 to 5.9 acres). Land ownership is most skewed in Gotagaon where a few landowners own the bulk of the land. The mean size per farm there is 8.3 acres compared to the median size which is 3 acres.

³ Figures are rounded. As a result, rounding errors are possible.

As for the relationship between caste and the total amount of land owned by households, a Pearson correlation coefficient of 0.255 was found, indicating that the correlation is significant at the 0.01 level (1-tailed).

12% of the households indicated owning non-fertile land. 12% - 17% of farmers in Betul District reported leasing in / sharing in of land, compared to 4% - 5% in Narshimpur District. Access to common grazing land is more common in Betul District (i.e. 25% and 34% in Betul Block and Bhimpur Block respectively), compared to 4% to 8% in Narshimpur District. Unsurprisingly, access to forest land is also highest in the tribal areas with 90% of households in Bhimpur Block having access to this resource, compared to 33% in Betul Block and 1% to 2% in the Blocks of Narshimpur District. About half of all the households interviewed have access to kitchen gardens. However, the access is higher in tribal areas (e.g. 73% in Bhimpur Block) as compared to the Blocks in Narshimpur District (i.e. 32% - 35%).

Although the emphasis of this research is on the rural non-farm economy it is important to bear these landownership patterns in mind given that it is widely accepted that a dynamic agricultural sector is able to generate employment in the non-farm sector through backward and forward linkages. More details on landownership patterns are contained in Appendix 1.

In the PRA it was reported that population pressure and inheritance practices are resulting in declining farm sizes. This poses a threat to the long-term viability of farming. Also, extensive soya bean cultivation has reportedly led to a decrease in soil fertility. As a consequence, farmers have started to look for alternative strategies (e.g. shift from soya bean production to pulses).

Table 4: Landownership

	Betul	Bhimpur	Gotegaon	Chichli	Total
Households owning land (%)	66%	69%	41%	50%	58%
Mean land size (acres)	6.5	5.9	8.3	15.5	8.4
HHs owning fertile land (%)	64%	69%	38%	50%	57%
Mean fertile land size (acres)	6.0	4.6	7.6	14.4	7.6
HHs owning irrigated land (%)	34%	37%	20%	41%	34%
Mean irrigated land size (acres)	5.4	3.8	6.8	14.8	7.9

NB. The means only take into account those households that actually own land

3.2 Livestock Ownership

Cows are the most commonly owned animals in the villages. However, there are marked differences in the ownership patterns in that 44% to 55% of the villagers belonging to the Blocks in Narhsimpur District own milching cows, compared to about 20% in Betul District. The ownership of calves and heifers shows similar patterns. The ownership of non-milching cows is 18% to 28% across all four Blocks. Betul District has a relatively high ownership of oxen and bullocks (i.e. 53% in Betul Block and 69% in Bhimpur Block, which is most likely due to Gvt scheme), compared to 14% in Gotegaon and 29% in Chichli. Buffaloes are owned by about 20% of all the households interviewed.

Goats and poultry are usually considered an interesting option for poverty reduction amongst the marginal groups. Although the ownership of these animals is higher in Betul District (e.g. 12 – 15% of households own goats, and 12 - 38% own poultry) only a fraction of the households own these animals. The figures for Narshimpur District are of the order of 3 – 8%.

At the same time, the average size of herds and flocks are also small in the case of all the animal categories. For example, those who own milching cows only own 1.7 head on average. Goat herds are on average 3.5 animals per household, and poultry flocks 2 – 3 birds. This indicates that there is a potential for increased animal ownership also in view of increasing demand for livestock products such as milk, eggs, and poultry meat. Constraints to animal ownership identified during the PRA include unavailability of pasture in particular for the landless and marginal farmers, and the amount of care required by poultry. It appears, larger –scale landowners discourage goat herding in the villages for fear of crop damage.

3.3 Ownership of Physical Assets

Most of the equipment owned for productive purposes is related to cultivation. In particular, this includes ploughs, ox-carts, and irrigation equipment. In Betul District, the ownership of carts and ploughs is relatively high (i.e. 48% - 64%). This compares with 28% for Chichli and 9% - 13% for Gotegaon. The ownership of irrigation equipment is similar across all four Blocks (i.e. 20% - 37%) with an average of 27% of households owning at least one piece. Chichli is the only Block where mechanisation appears to be making in-roads in that 15% of households own tractors and 18% threshers, which in turn reflects the landownership pattern (i.e. more households own relatively large farms).

It is interesting that ownership of television sets (25% of all households) is higher in all Blocks than ownership of radios (14%). 41% of the total sample households own a bicycle, 11% a motor cycle, and 1% a car. More details are contained in Appendix 1.

The ownership of physical assets required for non-farm activities is noticeably low in all of the four Blocks. On average, 5% of all the households own a machine for *jaggery* making (14% in Chichli), 2% own a flour mill, 1% own a rice dehuller, 1% a generator set, and 9% (i.e. 7% - 13%) own a sewing machine. Looms or spinning equipments are virtually absent in all the villages. With the exception of *jaggery* making in locations such as Chichli, this also indicates that mechanised processing of agricultural produce is not very common in the villages. Although mechanisation is (slowly) on the increase, many tasks are still predominantly carried out by manual labour (e.g. threshing).

As for mechanisation, during the course of the PRA it was observed that on the one hand this is perceived as a threat to the livelihoods of those who depend on agricultural wage labour, on the other hand it creates new job opportunities in the form of tractor driving, mechanical repair, etc. At the same time, these ‘new’ jobs are resulting in a gender bias as they are almost exclusively taken up by the young, male population. According to the household survey, the majority of villagers perceive

mechanisation as having a negative impact on their livelihoods. Agricultural wage labourers in some soya bean growing areas stated that their daily wage rates had dropped from Rs50 to Rs20 as a consequence of mechanisation (e.g. harvesters, threshers). Promotion of rural non-farm livelihoods appears important in light of the long-term impact of more mechanised agricultural production on the marginalised population groups.

3.4 Access to Electricity

During the PRA, electricity was frequently mentioned as a constraint to both agriculture and the start of new non-farm enterprises. The household survey reveals that on average 83% of the households have electricity at their home, 22% have electricity on the farm, and only 2% have the power supply to run household industries.

During the course of the PRA, villagers mostly complained about the quality of power supply. Although the infrastructure may be in place, shortage of power supply was frequently mentioned as a constraint to farming (e.g. irrigation) and post-harvest activities such as threshing and milling. Many village businesses reported that power was only available for six hours per day. As a result, some owners of small enterprises started to buy diesel powered equipment (e.g. threshers).

3.5 Education Levels

Amongst the adult population surveyed the literacy levels are similar across all four Blocks. According to the survey, 65% of the male adults are literate and 36% of the female adults are literate. 13% of the female adults and 18% of the male adults have primary education. Similar proportions exist for middle school education. 7% of the females and 12% of the males went up to high school, and 6% and 10% respectively to higher secondary school. 4% of the males have graduated and 2% have a post-graduate degree.

As for vocational training, on average 4% of household heads, 2% of spouses, and 2% of the first son and daughter respectively have obtained some form of formal vocational training. The majority of those who obtained the training responded that it was useful.

As for the relationship between caste and the level of household education, a Pearson correlation coefficient of 0.180 was found, indicating that the correlation is significant at the 0.01 level (1-tailed).

The key issues to education are how to reduce the high level of illiteracy (i.e. about two thirds of the female adult population and about one third of the male adult population). The vast majority of children go to school nowadays. However, during the PRA it could also be observed that some of the marginalised families are not able to send their children regularly to school. For example, in Betul District (i.e. Bhimpur Block) it was reported that migrant workers may take their children with them when they temporarily move to Harda District to work in sugar cane fields. Apparently,

agricultural wage labourers sometimes consciously take the decision to take children with them to the fields arguing that this type of informal training is required as part of their education to earn their livelihood. On the other hand, if children of migrant workers are left behind then the older girls of the family are likely to be required to look after their siblings. It is estimated that approximately 5 – 10% of children do not attend school on a regular basis.

It was also reported during the PRA that parents are starting to become disillusioned about the usefulness of education given that young adults find it difficult to find jobs corresponding to their qualifications. During the questionnaire survey it was tried to obtain a picture of the value parents accord to formal education nowadays. 88% of the overall sample population believe that primary and secondary education increases job opportunities.

Nevertheless, it appears important that in future there will be a better balance between academic education and vocational training. Youngsters can be introduced to the latter at the age of about 12. In addition to the mainstream academic education practical topics ought to be taught to the youngsters with a view to broaden their long-term skill base (e.g. animal husbandry, food processing, health care, information and communication technology, mechanical repairs etc). Curriculum formulation should take on board the views and demands expressed by local entrepreneurs.

3.6 Membership of Self-help Groups (SHGs)

Despite the promotion of Self-Help Groups it was found that overall only a relatively small proportion of the households have members belonging to SHGs (i.e. 11% of the total sample). Only Bhimpur Block shows a relatively higher group membership with 19%. The vast majority of the groups encountered are women SHGs. Although Narshimpur District is covered by the World Bank funded DPIP project (District Poverty Initiative Programme) none of the villages surveyed is covered by the project. Only a small percentage of households in Betul District indicated membership of forest groups (5% and 3% in Betul and Bhimpur Block respectively).

Better access to loans is the main benefit associated with SHGs. This is not surprising given that SHGs are first and foremost promoted in the context of savings and credit. Other benefits indicated include, support in case of personal problems, access to information, and better access to Government services. Functional literacy, skills and capacity building were only indicated by very few respondents.

Procedures and time requirements were the main constraints mentioned in the context of Self-Help Groups. Other problems indicated include caste barriers, lack of awareness, and domination by certain individuals.

3.7 Financial Assets

Lack of finance and access to credit sources were frequently mentioned as the most important constraint to the start of rural non-farm enterprises during the PRA. Nevertheless, when the survey team tried to obtain a clearer picture on credit sources

and reasons why a particular source was chosen, the vast majority of villagers proved to be unwilling to disclose this information during the questionnaire survey. Reasons for this include the fear to be association with a defaulter's status in the case of formal banks, and in the case of informal loan sources villagers were hesitant to provide this information for fear it might have negative impacts on future loan availability from moneylenders. On the other hand interviewees were more forthcoming when asked for specific constraints associated with each loan source.

The few households that were willing to talk about their sources of loans indicate RRB / LDB loan, commercial bank, agricultural co-operative, moneylenders, and friends and family. Local landlords were hardly mentioned as source and SHGs were virtually absent. The reasons for taking out formal loans include, agricultural production and, to a smaller extent, non-farm enterprises. The reasons for taking out informal loans include household consumption, rituals and ceremonies, and also non-farm enterprises.

Table 5: Loan Constraints: Formal Sector

Total Respondents (N)	Betul	Bhimpur	Gotegaon	Chichli	Total
No constraints	11%	11%	0%	0%	6%
Procedures and formalities	37%	39%	25%	41%	36%
Distance to bank / source of credit	5%	3%	8%	7%	5%
Lack of awareness / info	33%	32%	9%	11%	23%
Attitudes of bank staff	16%	17%	24%	27%	21%
Problem with default	14%	18%	11%	11%	14%
Cultural barriers	1%	0%	4%	8%	3%
Speed money	29%	37%	33%	44%	36%
Absence of collateral	19%	23%	13%	7%	16%
Other	8%	3%	6%	10%	7%
No answer	14%	13%	34%	18%	19%

NB: Replies were sought without prompting the interviewees, i.e. the answers were not read out to them.

As indicated in Table 5, 'speed money', and procedures / formalities are the main constraints mentioned by the villagers, followed by lack of awareness / information, attitudes of bank staff, absence of collateral and problem with default.

High interest rates, lack and size of the collateral required, creation of dependency, and the fact that only short-term loans are available, are the principal constraints associated with the informal loan sector.

Non-membership, but also procedures, and the fact that a group member may not be trusted have been indicated as the main problems in the context of borrowing from Self-Help Groups.

Lack of awareness, procedures, small savings by the Self-Help Group, and attitude by bank staff were indicated as the constraints encountered by SHGs wanting to borrow money from the banks.

Table 6: Loan Constraints: Informal Sector

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
No constraints	11%	4%	0%	0%	4%
High interest rate	72%	89%	50%	56%	69%
Creation of dependency	11%	13%	9%	24%	14%
Lack and size of collateral	27%	37%	38%	49%	37%
Small size of loans	12%	11%	1%	1%	7%
Short term loans available	24%	28%	4%	7%	17%
Others	4%	6%	16%	12%	9%
Lack of awareness	14%	1%	1%	1%	5%
Absence of collateral	0%	1%	0%	0%	1%
No answer	1%	1%	37%	26%	15%

NB: Replies were sought without prompting the interviewees, i.e. the answers were not read out to them.

4. Income Sources by Sub-sectors

A sub-sector classification which was adapted from Fisher and Mahajan (1997) was used for analytical purposes. The main categories of the classification include the following:

- a) Primary production (e.g. Crop production, milk production, rearing of animals, NTFP collection),
- b) Agricultural and food processing (e.g. jaggery making, pappad / bari making),
- c) Other primary processing (e.g. mining, bidi-rolling),
- d) Traditional manufacturing (carpentry),
- e) Modern manufacturing (e.g. mechanical repairs),
- f) Services (e.g. trade).

In this study, the non-farm economy was defined as comprising sub-sectors (b) to (f).

As part of the PRA, the following aspects were analysed for the different sub-sectors: human resources, availability of raw materials, knowledge base, capital availability, availability of infrastructure, market scenario, and constraints and threats. Based on this categorisation, case studies were prepared for *jaggery* processing, *pappad / bari* making, carpentry, mechanical repair, and retail trading. The key issues identified are summarised below in Table 14 and Section 5 on Constraints and Opportunities.

4.1 Employment and income patterns

Table 7, which is taken from the PRA report indicates to what extent villagers depend on the rural non-farm sector for their livelihoods. In three out of eight villages, the extent of RNFE was estimated at 30% - 50%. The remaining five villages showed an extent of 10% - 20%.

During the questionnaire survey, each income earning household member has been asked for up to three sources of income (i.e. sub-sectors) and their nature of involvement (e.g. landowners versus wage labourers in the case of agricultural production). The households were asked for the current situation (i.e. using 2001 as the baseline), and the past (i.e. 5 – 10 years back, that is the mid-1990s) so that any significant shifts could be discerned.

The data presented in Tables 7 and 8 indicate that the primary sector (i.e. mainly agricultural production) dominates the income sources of household heads and spouses alike. In particular, for small-scale and marginal farmers this takes place in the combination of cultivation on the family farm and agricultural wage labour on larger farms.

The household heads that have declared themselves as income earners have on average about 1.5 sources of income (i.e. jobs) during the year. Part of the jobs may be on-farm and part of them may be off-farm. In 2001, according to the household survey, 49% of the household heads have an RNFE income source (i.e. 59% in Betul Block, 43% in Bhimpur Bbck, 58% in Gotegaon Block, and 41% in Chichli Block). It needs to be borne in mind that these figures are not based on monetary values but on the fact that RNFE related income generating activities were carried out during the course of the year.

Table 7: Difference amongst the Villages with High RNFE and Villages with Low RNFE

Factors		Low RNFE					High RNFE			Remarks
Villages		Bundala	Bundesar	Manegaon	Mawai A	Palaspani	Adarsh Dhanora	Deogaon	Thalwada	
Extent of RNFE		10%	15.3%	25.17%	16.2%	19.79%	30.60%	50.94%	35.45%	High=>25% Low=<25%
I G A	Only Agriculture	19.73% (Aggregate Picture)						38.72% (Aggregate Picture)		
	Wage Labour	61% (Aggregate Picture)						21.24% (Aggregate Picture)		
	Primary + Secondary, and /or Tertiary*	10.33% (Aggregate Picture)						17.26% (Aggregate Picture)		
	Only Secondary and / or Tertiary	8.94% (Aggregate Picture)						22.78% (Aggregate Picture)		
Extent of caste hierarchy		Medium	High	High		Low		Medium		
Caste based occupational affinities		High	High	Medium		Medium	Low	Low		
Natural capital, specially forest		Low	Low	Low	Low	Medium	High	Low	Low	
Education and access to information		Low	Medium	High	High	Low	Medium	Medium	High	

* Households who earn their income in the primary, plus secondary and / or tertiary sectors.

Source: PRA Survey Results, Som *et al* (2002)

Amongst those spouses that responded, each also has about 1.5 jobs. In the tribal areas, collection of Non-timber Forest Products (NTFPs) is primarily a female activity. Spouses (i.e. predominantly women), have a considerably lower presence in the RNFE sector than men (i.e. 19% in total). In particular, in Betul and Bhimpur the figures are only of the order of 8% to 13%, whereas they are between 33% to 43% in Chichli and Gotegaon Block respectively.

However, it needs to be borne in mind that these figures are only for those members of the household who are income earners, and the number of female income earners in Narshimpur District is significantly lower than in Betul District. Approximately two thirds of households in the tribal dominated Betul District had spouses that declared themselves as income earners (i.e. 66%), whilst it was only about one third in Narshimpur District (i.e. 35%).

Compared to the period around 1995 (i.e. about 5 - 10 years ago), the extent of RNFE has increased, albeit relatively slowly. Amongst the income earning household heads, about 31% have reported that they had income from RNFE sources then in one form or another. This compares to 49% in 2001. As for spouses, the extent of RNFE income sources were 12% in the mid-1990s compared to 19% in 2001.

42% of the other male income earners of the households reported income from RNFE sources as compared to 27% in the mid-1990s. As far as other female income earners were concerned, they stated for both periods that about 15% of their income sources were RNFE related.

Amongst the different RNFE sectors there are few that stand out as major sources of employment for the majority of villagers. The percentage figures for the main sub-sectors are below 10% for the overall sample.

The main sub-sectors include *jaggery* processing (i.e. mainly in Betul and Chichli Block), building construction (i.e. mainly Gotegaon and Chichli), trade, health and education. This applies for both, household heads and spouses.

In addition to information on the sub-sectors, it was attempted to obtain information in what role the household members were involved in these sub-sectors. Tables 10 and 11 indicate the nature of involvement. As far as household heads are concerned 50% of the total sample indicate they obtain income as landowners (i.e. higher percentage in Betul District reflecting landownership patterns explained above), 58% obtain income from wage labour, 13% from salaried employment, and 16% from trading. In addition, income from leasing out or leasing in of land was reported by 4% and 5% respectively. Ownership of equipment was only a source of income for about 4% of the total sample.

74% of spouses declared that they obtained income from wage labour activities, and 20% from landownership. The high percentage (50% in total) related to trading is due to the fact that collection and selling of non-timber forest products (i.e. mainly in Betul District) was put into this category. Nevertheless, female traders / brokers were also encountered in Gotegaon and Chichli Blocks (i.e. 4% and 12% respectively). 7% obtain their income as salaried employees.

Other male income earners obtain their income from landownership (33%), wage labour (82%), salaried employment (16%) and trading (15%). Other female income earners equally obtain the bulk of their income from wage labour (60% of total), however 25% indicated income from landownership, and 9% from salaried employment. A relatively high percentage of this group is also involved in the collection of NTFPs. At the same time, it ought to be mentioned that there was only a limited number of respondents belonging to the category ‘other female income earners’.

Migration takes place primarily in Betul District from where wage labourers migrate to neighbouring Districts such as Harda to work on sugarcane farms. Narshimpur, on the other hand, attracts migrants from other parts of the state and country.

It was attempted to obtain income figures as part of the questionnaire survey. However, the collection of this data proved to be difficult, in that households were often reluctant to provide this information. Amongst other things, this was related to a recent Government survey in some of the Blocks to establish the list of households Below the Poverty Line (BPL). As a result, it was found that some of the income figures have been underestimated by the households, or no information was provided.

Nevertheless, the data (Tables 12 and 13) provides an indication of the order of magnitude of net annual household income. The mean household income across the four blocks is estimated at Rs21,200. This compares to a median of Rs10,600. Total average income of household heads is of the order of Rs16,700, compared to a median of 7,200. Average annual income of spouses is of the order of Rs4,200 compared to a median income of Rs2,600.

The average household income from landownership is of the order of Rs15,500 per annum (highest in Chichli with 25,800 and lowest in Bhimpur with Rs8,660). The median income from this source of income is Rs6,900 for the entire sample. Wage labourers reported an average annual income of the order of Rs6,300 (median Rs4,500). Salaried employment yields an average income of Rs27,350 (median Rs9,950). Average trading related income is of the order of Rs4,500 (median Rs2,250), indicating that a substantial part of trading takes place at a small scale.

Table 8: Summary of Sub-sectors, Household Heads, Current Jobs (2001)

Sources of Income: Sub-sectors	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	188	197	152	195	732
Primary production	98.9%	109.1%	92.8%	106.7%	102.5%
Agricultural and food processing	11.2%	1.0%	3.3%	6.7%	5.6%
Other primary processing	0.0%	0.0%	0.7%	1.5%	0.5%
Traditional manufacturing	4.8%	2.0%	7.9%	3.1%	4.2%
Modern manufacturing	30.3%	22.3%	15.1%	13.8%	20.6%
Services	11.7%	15.7%	25.0%	11.8%	15.6%
Other	0.5%	1.5%	5.9%	3.6%	2.7%
Total RNFE	58.5%	42.6%	57.9%	40.5%	49.3%
Total (all jobs/all sectors combined)	157%	152%	151%	147%	152%

NB: RNFE includes Agricultural and food processing, other primary processing, traditional manufacturing, modern manufacturing, services, and other. Percentages above 100% are possible due to multiple answers.

Table 9: Summary of Sub-sectors, Spouses, Current Jobs (2001)

Sources of Income: Sub-sectors	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	136	154	56	69	415
Primary production	138.2%	166.2%	94.6%	101.4%	136.6%
Agricultural and food processing	1.5%	0.0%	3.6%	7.2%	2.2%
Other primary processing	0.0%	0.0%	0.0%	0.0%	0.0%
Traditional manufacturing	0.7%	0.0%	0.0%	1.4%	0.5%
Modern manufacturing	3.7%	0.6%	28.6%	2.9%	5.8%
Services	7.4%	7.8%	5.4%	10.1%	7.7%
Other	0.0%	0.0%	5.4%	11.6%	2.7%
Total RNFE	13.2%	8.4%	42.9%	33.3%	18.8%
Total (all jobs/all sectors combined)	151%	175%	138%	135%	155%

NB: Figures refer to spouses that have declared themselves as income earners.

Approximately two thirds of households in the tribal dominated Betul District had spouses that declared themselves as income earners, whilst it was only about one third in Narshimpur District.

Percentages can exceed 100% in one sub-sector if individuals undertake several jobs (e.g. cultivation on the family farm, agricultural wage labour, and NTFP collection. The latter is very common in Betul District).

Table 10: Sources of Income – Household Heads, Nature of Involvement

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	188	197	152	195	732
Land owner	56%	60%	32%	47%	50%
Leasing / sharing in	5%	6%	2%	2%	4%
Leasing / sharing out	7%	9%	1%	3%	5%
Livestock owner	2%	1%	1%	0%	1%
Owner of equipment	11%	5%	0%	0%	4%
Hiring in equipment	1%	1%	1%	0%	0%
Hiring out equipment	1%	1%	1%	1%	1%
Wage labourer	55%	35%	82%	68%	58%
Salaried employee	11%	17%	16%	9%	13%
Trader / broker	11%	19%	17%	17%	16%
Totals	160%	153%	151%	146%	152%

Table 11: Sources of Income – Spouses, Nature of Involvement

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	136	154	56	69	415
Land owner	24%	24%	13%	13%	20%
Leasing / sharing in	1%	1%	2%	0%	1%
Leasing / sharing out	3%	0%	0%	0%	1%
Livestock owner	1%	0%	0%	0%	0%
Owner of equipment	4%	0%	0%	0%	1%
Hiring in equipment	0%	0%	0%	0%	0%
Hiring out equipment	0%	0%	0%	0%	0%
Wage labourer	58%	62%	116%	100%	74%
Salaried employee	5%	7%	4%	10%	7%
Trader / broker	55%	81%	4%	12%	50%
Totals	151%	175%	138%	135%	155%

NB: The high figure of trading by spouses in Betul District is largely due to the fact that collection and selling of non-timber forest products has been subsumed under this category.

Table 12: Income Levels, per HH member category (2001)

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Households Interviewed	216	226	160	197	799
Total household income (Respondents)	212	224	140	145	721
Mean (Rupees / annum)	24,381	23,269	14,763	19,727	21,233
Median (Rupees / annum)	11,335	12,095	8,000	9,000	10,564
Total income of HH head (Respondents)	185	198	123	130	636
Mean (Rupees / annum)	18,609	15,814	12,486	19,245	16,685
Median (Rupees / annum)	7,500	7,182	6,000	7,200	7,182
Total income of Spouse (Respondents)	115	147	34	37	333
Mean (Rupees / annum)	3,919	5,134	2,886	2,800	4,226
Median (Rupees / annum)	2,400	2,825	2,263	2,400	2,600
Total income of other male earners (Resp.)	86	81	30	26	223
Mean (Rupees / annum)	13,313	7,553	9,308	9,550	10,243
Median (Rupees / annum)	7,000	5,806	5,000	5,400	6,000
Total income of other female earners (Resp.)	28	43	16	3	90
Mean (Rupees / annum)	3,013	7,850	4,706	1,167	5,564
Median (Rupees / annum)	2,370	3,300	3,800	1,200	2,840

Table 13: Income Levels, per HH, Nature of Involvement (2001)

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Households Interviewed	216	226	160	197	799
Income, landownership (Respondents)	124	143	38	73	378
Mean (Rupees / annum)	17,110	8,662	16,314	25,842	15,520
Median (Rupees / annum)	7,440	5,472	6,000	12,000	6,892
Income, equipment ownership (Respondents)	27	13	1	0	41
Mean (Rupees / annum)	18,328	11,946	15,000		16,223
Median (Rupees / annum)	4,000	5,000	15,000		4,800
Income, wage labour (Respondents)	151	150	85	62	448
Mean (Rupees / annum)	6,096	5,754	7,073	7,198	6,319
Median (Rupees / annum)	4,500	3,900	6,000	5,525	4,500
Income, salaried employment (Respondents)	42	49	30	13	134
Mean (Rupees / annum)	23,668	38,552	17,537	19,671	27,350
Median (Rupees / annum)	7,750	18,000	15,500	5,000	9,950
Income, trading (Respondents)	72	141	17	23	253
Mean (Rupees / annum)	4,887	3,259	8,465	7,791	4,484
Median (Rupees / annum)	2,230	2,050	5,000	7,000	2,250

NB: The collection of data on the level of income proved to be difficult, in that households were often hesitant to provide this information. Amongst other things, this was related to a recent Government survey in some of the Blocks to establish the list of households Below the Poverty Line (BPL). As a result, it was found that some of the income figures have been underestimated by the households.

In Betul and Bhimpur Blocks trading includes the collection and selling of NTFPs, resulting in a high number of respondents in this category.

4.2 Overview of Sub-sectors

Table 14 provides the key issues identified for the different sub-sectors which were analysed as part of the survey in Betul and Narshimpur Districts. More coherent and co-ordinated policy making and implementation is required for all the sectors.

Table 14: Overview of Sub-sectors

Primary production	<p>Agriculture, which forms the backbone of the economy, is mainly based on crops such as soyabean, grains, sugarcane, and pulses. The sector is undergoing change due to factors such as declining farm sizes, decreasing soil fertility, and liberalisation (e.g. increasing competition on the domestic soya oil market due to imports). More diversification is required in the future (e.g. into horticulture, floriculture, maize, pulses), and irrigation will play an increasingly important role. At the same time, the sector has proved to be dynamic in the past when it was able to respond to a market opportunity and establish itself as the country's leading soya bean producer. Also, a thriving agricultural sector is important for the development of a rural non-farm economy.</p> <p>The collection of non-timber forest products (NTFPs) is important for the inhabitants of tribal / forested areas. In particular, women are engaged in the collection and selling of products such as <i>tendu</i> leaves, and <i>amla</i>. However, it appears marketing could be improved by better group organisation, value addition, and linkages to the national market. Also, cultivation of certain products with a high market value should be considered.</p> <p>Given the limited amount of livestock ownership, especially by the poor, there is scope to improve this sector. In addition to dairy production, more emphasis should be placed on goat and poultry keeping. Marginalised groups need particular encouragement in this respect. Full consideration needs to be given to relevant backward and forward linkages (e.g. animal health care, feed, and marketing of products). Competition from other states and countries needs to be envisaged.</p> <p>Increased fish production can be envisaged as a result of better water harvesting and management practices (e.g. small-scale dams, ponds). In the long-term, aquaculture will become more important whilst the market share of marine fish will decline.</p>
Agricultural and food processing	<p>During the course of the survey, processing industries with and without good markets were encountered. For example, <i>jaggery</i> making is thriving especially in Betul and Chichli Blocks and has an established market. <i>Pappad</i> and <i>bari</i> making, on the other hand, was found to lack linkages with the wider market and the customer base at the village level is low. There are also social barriers which inhibit better use of locally available, lower caste, labour force.</p>

	A small number of grain mills were encountered per village. They stated shortage of power supply as a main constraint to their business, as a result of which some of them started to use diesel engines.
Other primary processing	<p>Very little activity was encountered in this sector in the villages surveyed. The sub-sector appears to be concentrated in pockets (e.g. mining, quarrying). However it has potential due to the abundance of natural resources in Madhya Pradesh. More emphasis should be placed on value addition of non-timber forest products (NTFPs).</p> <p>At the same time, the protection of workers and the environment is particularly important in this sub-sector (e.g. in the context of quarrying and <i>bidi</i>-rolling). Also see Fisher and Mahajan (1997).</p>
Traditional manufacturing	<p>This sub-sector is undergoing profound changes due to competition with ‘modern’ products (e.g. plastic), lack of raw material and mechanisation. Some of the professions need help to make the transition to ‘modern’ manufacturing (e.g traditional blacksmiths to mechanical repair, or carpenters from making of wooden agricultural implements to ‘modern’ furniture).</p> <p>Others, e.g. makers of bamboo articles, should be assured sufficient supply of raw materials. In particular, during festivals there is demand for their products.</p>
Modern manufacturing	<p>Growing demand drives certain categories of this sector, such as road and cement based building construction, mechanical repairs, and manufacturing of metal products. Mechanisation of agriculture and other sections of the economy plays a role here. Other categories such as tailoring, which has been included in this category due to the use of sewing machines, faces competition from industrially manufactured products.</p> <p>Options to stimulate the sector include the enhancement of the skill base, infrastructure, business support services, and market linkages for those sectors that have potential. Linkages with the large-scale corporate sector should be encouraged (e.g. input supply from more rural Districts).</p>
Services	<p>On a national scale, the service sub-sector (e.g. trade, transport, telecommunications, catering, tourism, education, health) is growing rapidly and has good prospects as a result of an expanding economy and rising incomes (also see Fisher and Mahajan, 1997). The same applies at the local level. The more dynamic rural areas are more likely to have a thriving service sector.</p>

	<p>At the same time, competition is high within this sub-sector due to many new entrants such as unemployed youths. In the past, the public sector was a principal provider of opportunities for new entrants into the labour market. However, the reversal is happening in the wake of liberalisation.</p> <p>Nevertheless, the tertiary sector has considerable potential for employment generation, both for educated and skilled job seekers, as well as less educated workers. The creation of viable private enterprises should be encouraged by promotional agencies.</p>
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5. CONSTRAINTS AND OPPORTUNITIES

This section is a compilation of the existing constraints in the villages that restrain the growth of the Non-Farm Sector in the rural areas. The views presented below are essentially the perceptions of the villagers expressed during the course of the PRA and the household survey. The prevailing opportunities as voiced by the people as a solution to the specific constraints have been crystallised and presented for each of the constraints. Other relevant opportunities existing at the macro level in the state have been included under the section of opportunities⁴. The implications and the resultant issues, which need to be influenced at the policy level, have also been elaborated in the sections under the opportunities.

5.1 The Constraints: A Comparative Picture of Importance

To begin with, Table 14 presents the ranking of constraints as opined by the villagers during the course of the PRA. It needs to be noted that the constraints as presented here have been grouped under broad categories to render a holistic view to the whole scenario. Considering the importance of this section, it was apt to attempt towards a more generic picture for the benefit of policy recommendations. The table is an aggregate picture of the exercise undertaken by the study team wherein the community from each village was asked to rank the various constraints, specific to their own village.

Table 14: Comparative Ranking of Constraints to RNFE

S.No.	Issue	Ranking	
		Men	Women
1	Access to Credit	1	2
2	Access to Markets	3	3
3	Skills to Initiate and Manage RNFE	4	4
4	Supply of Raw Material	5	5
5	Weak Infrastructure Facilities	4	6
6	Competition with Substitute Products	6	7
7	Social Stratification	2	1

Source: Som et al (2002), Participatory Rural Appraisal

According to the questionnaire survey the main constraints to rural non-farm employment are lack of finance (71%), lack of information (35%), lack of education and training (29%), and lack of markets (14%). Other issues mentioned include lack of transport, unhelpful Government services, and lack of job opportunities.

⁴ Note that under the section of opportunities, a broad picture in the sense of policy recommendations has been presented

Regarding constraints particularly encountered by women and the youth, these follow a similar pattern, with the exception that 8% indicated lack of family support as a constraint to rural non-farm employment by women.

In addition to constraints, villagers were also asked for their opinions (i.e. perceptions) regarding certain factors of change in the rural economy and their impact on family livelihoods. Factors that are seen as having a negative impact include, pressure on agricultural land, agricultural mechanisation, the (bad) road network, (lack of) access to information. Issues, which triggered a neutral response include ‘opening up of caste system’. Electricity supply (or the current lack of it) triggered a negative response amongst the villagers in Narshimpur District, whereas their counterparts in Betul District felt less strongly about this. Similarly, ‘natural resources availability’ triggered a negative reply in Narshimpur and a positive reply in the forest rich Betul District. A slight majority saw the impact of market access as neutral, compared to the rest which saw this aspect negatively. The impact of opening up of gender roles was seen as positive by a large majority in all the Blocks.

Each of the constraints mentioned in Table 14 has been dealt with in detail accompanied with the existing opportunities, in the following paragraphs. Table 15 presents a summarised picture of the main constraints and the subsequent opportunities to overcome them.

Table 15: Existing Constraints and Opportunities for RNFE in Madhya Pradesh

S.No	Constraints	Opportunities
1.	Inadequate credit facilities, especially for small entrepreneurs involved in RNFE	Strengthening community based credit facilities and setting up flexible institutions to provide credits to small/poor entrepreneurs
2.	Access to information on market prices and marketing opportunities	NGO creating information Kiosk with the help of civil society groups / active extension government workers/Programme
3.	Weak skills, inadequate managerial capacities to initiate potential RNF enterprise	Capacity building initiatives involving professional training institutions within the Govt/NGOs and corporate sector
4.	Inadequate raw material supply in traditional RNFE activities (wood/bamboo...)	Strengthen local self-governance bodies to generate and control natural resources/minor forest produce
5.	Weak infrastructure facilities to enable RNFE activities	Allocation of resources to local self governance institutions and incentives to promote productive infrastructure at village/Panchayats/blocks/districts
6.	Small size of operation and limited product diversity makes RNFE uncompetitive	Build clusters of activities taking block as a unit of planning for attaining economies of scale
7.	Caste and class hierarchy create barrier for the marginalized to take advantage of RNFE sector	Strong social and pro poor policies and social mobilisation efforts with the support of civil society organisations

5.2 Access to Credit

Constraint: Inadequate credit facilities especially for small entrepreneurs involved in RNFE

Access to credit is one of the main constraints to the promotion of RNFE. The problem is multifaceted in nature and has both socio-cultural and socio-economic sides to it. Due to lack of credit, the size of operation is small and therefore has limited product diversity. This, when compared to the existing diversity of commodities in the open markets of today and the relatively higher buying capacity of the people, renders the enterprise uncompetitive. The major issues, which have been identified during the survey as the impediments to access to credit have been elaborated as follows: -

Defaulter status and absence of collateral security among the marginalized

Many of the villagers are not considered credit-worthy since they are in the category of defaulters. Most of the people under this category had taken loans for agricultural and non-farm enterprises but could not repay due to various reasons like failure of crops, loss in business etc. There have been cases where the principal has been returned but the interest has not been repaid. The people have therefore been labelled as defaulters and since they already have the burden of repayment for the loan taken in the past, they themselves got discouraged to take out more loans. Moreover, having the status of defaulters, they are not considered creditworthy in the criteria of the banks. This limits their ability to access credit from the banking system.

Lack of information about various sources of credit

The villagers, especially the marginalized sections, lack information on the various sources of credit and the means to attain them. The credit institutions and Government officers provide the information about schemes and credit facilities in such a technical language which is not comprehensible. This gives an advantage to the officials as well as to vested interest groups. At times, the vested interests / pressure groups also misguide the poor about the sources of credit. This is mainly done to keep intact the business interests of the local moneylenders who charge high interest rates and are under no regulations. It needs to be mentioned here that there are regulations to control the rate of interest charged by the moneylenders, although the *gram sabha* has the authority to rectify the rates specified by the moneylenders. However, there is a massive discrepancy between the rules on paper and what happens in practice. On the other hand, the cycle of daily wage labour in which the majority of the villagers are caught does not leave much time and scope of exposure about the various avenues of credit.

Complicated bank procedures

By and large, the level of education is not very high in the villages surveyed. The procedures to obtain loans involves various complicated steps like filling of many types of forms, taking them to various officers for sanctioning etc. On the one hand this hassles the simple villagers and on the other hand they are subjected to

harassment at each stage. It also involves losing precious days of wage labour because of repeated visits to the block/district head quarter.

The need for ‘speed money’

Bribery at each stage was reported as a rampant practice, to the extent that a substantial amount of the sanctioned loan ends up in the pockets of the officers. As a result, the net amount available to the loan takers is much smaller than the sanctioned amount. The reduced amounts of money actually received by the poor entrepreneurs make business activities unviable and the loan uneconomical. This can compel potential entrepreneurs to opt for the local moneylenders, which may effectively turn out to be cheaper and more transparent.

Reduced profitability in agriculture leads to low deployment of capital in RNFE

With the pressure on land increasing due to the traditional inheritance pattern and increasing population size, the agricultural land available per individual is also decreasing. For example, for a farmer having 20 acres of land and four sons, the land will become divided with each son obtaining only 5 acres of land. This land gets further divided amongst the next generation, ultimately resulting in smaller and smaller amounts of land available per individual.

In addition to land fragmentation, farm profits are decreasing due to increasing input costs and declining market prices. As a result, rural communities find it difficult to generate surplus capital to be used as investment in the RNFE sector. On the other hand, authors such as Fisher *et al.* (1997) provide evidence in their studies that a strong agricultural base is required for the promotion of RNFE. This points to the need of promotional policies to strengthen both the agricultural and non-farm sectors.

Opportunities: Avenues to increase access to credit facilities

The opportunities prevailing to counter the constraint of availability of credit are multi-pronged in nature and need to be considered at various levels. At the community level, it is required to strengthen the self-help community based credit facilities like the self-help groups, village level co-operatives and other such unions. This would ensure the generation of funds from within the community and also assure management of funds by the community.

Within the available constraints, various opportunities need to be evolved. Some of them may be mapped out as follows:

Strengthening self-help credit groups

One of the successful examples build in wide scale within the State is of organising the poor in credit groups. Various NGOs and Government programmes have promoted such kind of groups. These groups have a strong potential to develop a sense of trust among members as well as mobilise internal savings for lending. As most of the RNFE require small size of credit, any mechanism of matching credit grants to the groups will enable them to efficiently take up productive activities under RNFE.

Inter-linkage with flexible development credit financial institutions

At the institutional level, funds of external agencies such as NGOs, Government schemes and other internationally sponsored development programmes could be utilised to fund the groups. This is also possible bearing in mind the fact that the amount required by the villagers is of small scale, therefore, institutional linkages of self help groups with IDBI, NABARD, *Rastriya Mahila Kosh* etc, need to be linked identifying block and district level organisation which may play the role of a financial institution in a flexible and efficient manner. Long-term reforms will be required in order to develop formal banking system which are more flexible and poor friendly.

Building federations of self help groups

In order to develop indigenous mechanisms of lending for the poor groups as well as to compete in the market as a collective strength, federations of the groups involved in RNFE need to be developed. These federations should be given credit facilities so that they can lend to the groups. These federations should have representation of the credit institutions on the board to ensure accountability and credibility. A representative role of block and Zilla level panchayat representatives should also be ensured.

At the block level planning needs to be undertaken to attain economies of scale. This would necessarily require the building of clusters of activities to ensure greater choice and diversity in products, thereby ensuring the customer base. This would also obliterate the possibilities of product replication in the neighbouring villages, which is the main reason of the inability to scale up the business.

As for the issue of credit defaulters, the example of the ongoing World Bank sponsored DPIP project can be replicated. Here the defaulters have been exempted (as women have not been treated as defaulters, since the loan was taken by their husbands) of all the pending/standing loans and Common Interest Groups have been formed at the village level and are being funded anew. However, this is only one project dealing with this issue. It is important that the Government designs and implements a coherent strategy regarding loan default.

5.3 Access to Markets

Constraint: Lack of access to markets in the sense of inadequate access to information, limited local demand, and insufficient marketing linkages.

Existence of ‘predatory’ intermediary traders

According to the survey, the biggest hurdle to access of information on the various tenets of the market are the middlemen⁵, who are often perceived as predatory. It is in the interest of the all powerful and wealthy association of the middlemen to deliberately block market access as well as information about the prevailing

⁵ Middlemen are persons who are involved in purchasing goods from the community at the village level and selling them in the markets. It has been an age old system which has got informally institutionalised with its inherent problems.

conditions and opportunities in the market. Moreover, the villagers have become so dependent on the middlemen that the option of selling their products directly in the markets is often not a feasible one.

Over the time, villagers, in particular small-scale producers, have developed a deep rooted feeling that they do not possess the skill to market their products. As a result, they feel compelled to resort to the help of the middlemen. Moreover, at times, it is not an economically feasible option to go all the way to the markets since the produce is available in small quantity only. This has therefore given rise to a strong link between the middlemen and the wholesalers, leaving the villagers at the bottom of the chain where, according to them, they are obtaining unfair prices for their products.

Small local markets, and unemployment leading to excessive competition in the RNFE sector

Many villagers engaged in non-farm employment, pointed out that the local market was limited for their products. Reasons for this include lack of purchasing power amongst the majority of villagers, small size of the population, and the fact that other villagers are engaged in similar activities (e.g. processing of food articles for home consumption).

With the promulgation of education in the past few years, many educated youths have started to enter the service sector. These youths with their educated backgrounds tend to decline to work as wage labourers as their elder generation had done. As a consequence, many of them ventured into small-scale enterprises such as retailing of various utility commodities. The sudden upsurge of such youths entering the small enterprise sector, resulted in increased competition regarding the sale of their products. The situation is more pronounced at the block and sub-block level due to the relatively small size of the market. This has led to situations where the selling price has been lower than the cost price, and in other cases the young small-scale entrepreneurs have been unable to sell their products. This in turn resulted in losses and in a wave of disappointment.

At the same time, it ought to be mentioned here that some young entrepreneurs with degrees (e.g. Master of Arts) have been encountered in the villages, who reported that their education has helped them in identifying and starting new businesses (e.g. grain milling or modern masonry / small-scale construction).

Lack of organised collective marketing

There are no systems of cooperative marketing in the villages surveyed. Interventions by the Panchayats to organise such collective markets are also not there. For example, in the case of marketing of milk and its products, each individual household head was reported to go all the way to the nearest market and sell his produce. When viewed in an integrated way, a substantial amount of time and energy of the villagers was being wasted due to the concept of individual marketing. There are no milk routes to ensure the timely delivery of products. This has, at times, given rise to the practice of selling products at a very low price due to fear of spoilage. In particular, raw and processed food commodities, which have a short shelf life, require organised marketing interventions.

Inefficient Government Mandis

Although the practice of selling produce in agricultural *Mandis* (*Krishi Upaj Mandi*) is widespread, their functioning was reported to be inefficient and unsatisfactory by the farmers. Delay in payments is a common grievance reported from all the villages. This, in turn, results in the preference of selling products to the middlemen and keeping the system of middlemen alive despite all efforts to cut it back. This has repercussions on the whole economy of the village and the various income generating activities.

Existence of unofficial Mandis

In the district of Betul it was reported that the *jaggery* is sold in the *Mandi* of Betul Bazaar. Such *Mandis* are not regulated by the Government allowing the middlemen to play a very conspicuous role in such localities. Transactions worth crores are undertaken here and the middlemen earn handsomely on the charges levied by them at two stages in the marketing chain, i.e., the *jaggery* producers on the one side and the wholesale dealers on the other side. Farmers claimed that they ‘lose’ as much as 30% of their profits (in comparison to what they could have obtained in Government markets) due to this.

Inability to store the products of RNFE sector

Most of the entrepreneurs reported the inability to store their RNFE products (i.e. especially processed agricultural products and minor forest produce) due to lack of storage space as well as paucity of working capital. This compels them to sell their produce immediately, despite their knowledge that prices will increase during the off season and selling of products during this time would yield higher profits. Their inability to store their products makes them incapable to withstand middlemen’s pressure as well as fetch a good price.

Opportunities: Methods to enhance access to markets

There are various measures required to improve the marketability and profitability of the MNFP sector. Some of the suggestions are as follows:

Efficient and accurate information flow about market prices

A correct and efficient flow of information can improve decision making of the entrepreneurs to choose an appropriate market for selling their products. Similarly, information would be a powerful instrument to deal with the middlemen in an effective manner. For example, information kiosks could be created with the help of Civil Society Groups, active Extension Government Workers and Project staff of the various programmes being deployed in the village. Such kiosks could cater for all kinds of information related to the market and other aspects of village life.

Creation of storage space at the level of Panchayat/cluster of Panchayats

There is a need to develop storage space at local level either at Panchayat or cluster of Panchayat level. The resources under infrastructure development should be accessed from the Government as well as from the financial institutions in form of a self-loan. There should be a recovery strategy and pricing policy to receive payments from the users. Village Panchayats or block panchayats can manage such operations. It is felt, that the management of the storage places should not take place at Gram Sabha level but by one of the committees (e.g. *Krishi samiti* or Agriculture Committee).

Reforms of local mandis and co-operatives

There is a need to make the market structure more transparent and accountable. The election of *mandi samiti* is fraught by elite farmers; therefore such structures do not favour small farmers and entrepreneurs. The state needs to look into building linkages of mandis/markets with local governance structures as well as developing mechanisms for fair pricing and reduced hassles for the sellers. Inefficient response of markets promotes the growth of middlemen.

Collective storage space with the intervention of panchayats could be organised and taxes levied for the same. The concept of cooperative marketing could be introduced to ensure fair returns. Building networks of similar products taking a cluster level approach could be organised to ensure the sale of products.

Effective utilisation of the middlemen

Although criticised above in the context of flow of market information, it needs to be acknowledged that middlemen provide an important link within the marketing chain by ensuring that the product reaches the end user in the right place at the right time. The villages being situated in remote and often inaccessible areas, the role of the middleman in bridging the gap between producers and the consumers needs to be recognised and enhanced to the benefit of small-scale entrepreneurs.

Attempting to reinforce Government run collection of products cannot be seen as a viable option and its feasibility is questionable. It has also been expressed by the villagers that the middlemen are preferred because of convenience and especially in the case of small-scale farmers the cost of transportation needs to be seen in relation to the profit. Therefore, it appears to be a valid option to formalise the already existing institution of middlemen. In this context, it is suggested to improve the prevailing system rather than setting up a costly new system requiring substantial amounts of institution and skill building. In particular, transparency needs to be enhanced as far as information is concerned and competition amongst traders needs to be increased. In some cases, self-help groups could play the role of middlemen and could act as agencies/bodies to provide credit.

5.4 Skills to Initiate and Manage RNFE

Constraint: Weak/Inadequate managerial capacities and skills to initiate potential RNFE

Inability to undertake structured analysis of markets

As already mentioned, cases of youths entering into new ventures of business like that of retailing (e.g. of clothes, vessels etc.) were encountered. However, the groundwork required before investing capital into a new enterprise was not undertaken and also there exists (amongst the villagers) a limited understanding as well as exposure (to the outside world), partly because of lack of access to information. The lack of ability to analyse market trends was quite clear, the result being unsuccessful businesses. It needs to be noted here that the markets at the village level are small, thereby restricting opportunities in the villages themselves. There may be more marketing opportunities in the cities and towns, but better linkages are required. Competitive factors were not well articulated and alternative options not sufficiently explored. As a result, cases of defaulters who had taken credit to start some kind of retail trade are very common.

In particular, as far as marketing capacity building is concerned, the following areas should be covered in training schemes: capacities to articulate market trends, the articulation of the demand and supply scenario, the probable future of a particular activity and the forward and backward market linkages.

Weak RNFE planning keeping village/cluster of villages as unit of promotion of RNFE

More often than not, new enterprises start off with profitable returns initially, based on customers generally located in a cluster of four to five neighbouring villages. However, as the business becomes lucrative in neighbouring villages, other small-scale business people are likely to start their own enterprises in these communities. This results in a reduction of customer base and increased competition, sometimes to a point where entrepreneurs find it difficult to recoup the investment and maintenance costs. It is felt that this is mainly due to lack of capacity and inadequate marketing strategies to retain the original customer base. The advantage of being the first entrepreneur in the area is not utilised wisely, as a consequence of which they see themselves 'out-competed' by new market entrants.

Low level of education inhibit employment possibilities in small sector

The level of education on the whole is low in the villages visited. This makes employment difficult in sectors requiring a certain educational level and skills (e.g. service sector). In some places, there have been deliberate attempts by the higher caste village elite to dissuade the poorer sections of the village population to obtain better education. Due to low levels of income as well as unfavourable conditions to send their children to school, the girls suffer the most as they become the target of high expenditure (e.g. dowry) and are the first to be taken out from the school.

Pessimistic attitude toward starting new enterprises

This is very true in the case of wage labourers who in many cases have resigned to fate with pessimism deeply rooted in their minds. The ‘webs’ of poverty and submission through the ages have led them to believe that their conditions can never improve. Therefore, although opportunities do exist, they are extremely reluctant to entertain new enterprises considering the risk of failure. They also have the strong mindset that only such enterprises can be undertaken in which they possess the traditional skills. They are, therefore, hesitant to explore new options and undertake any new enterprises.

Opportunity: Measures to build Skills and Managerial Capacities to initiate RNFE

Capacity building of potential young entrepreneurs

There is a need for capacity building initiatives to build the analytical and technical skills of the villagers. This would necessarily involve an integrated and multi-pronged approach, which would aim at educating the villagers, especially the marginalized sections, on the various factors involved in starting an enterprise.

It would also include lessons right from the first step of accessing credit, to the choice of enterprise, the analysis of the market scenario, and forward and backward linkages. For such an intensive and integrated training module, it will be useful to involve the professional training institutions within the Government, NGOs and the corporate sector.

The recent trend of the Rural Development Cell amongst the corporate giants to adopt some villages and promote them can be encouraged and replicated at a larger scale. With the easy availability of capital and skills, these corporate companies are able to invest in skill building and promoting RNFE of these villages through intensive hand holding processes. An example worth citing here is that of Hindalco in Sonbhadra, Uttar Pradesh. It is suggested to analyse the success rate of different Rural Development Cells.

Systematic district and block level RNFE planning

There is a need to undertake district and block level resource mapping of available inputs, processing and output potential of various RNF activities. This would involve identifying and synchronising effective spatial planning nodes of production and marketing with the existing market/production places. This systematic approach will enable facilitating agencies to propose the most promising enterprises in the villages with the aim that a viable business scale may be attained for each activity. More institution building is required with regard to enterprise support services.

5.5 Supply of Raw Material

Constraint: Inadequate Raw Material supply especially with respect to the traditional RNFE activities

Depleting Natural Resources

The traditional caste based occupations such as carpentry, bamboo making and pottery have evolved through the ages and rely on natural resources for their raw material. For example, the raw material for carpenters is wood, whereas the supply of bamboo is essential for the survival of the art of making bamboo products. Although Madhya Pradesh has a relatively dense forest cover, over the years this have been subjected to over exploitation by various vested interest groups. With the growing importance of biodiversity conservation at all levels and the international pressures to undertake stringent conservation measures, most of the forests have now been declared as protected by the Forest Department. Therefore the supply of wood has become heavily constricted.

Bamboo being another forest species is also facing the same problem. Ruthless exploitation by industrial companies, especially the paper mills, has depleted the population of the species in the past. Added to this fact is the constraint faced due to the physiological cycle of bamboo. The bamboo flowers once in twelve years and therefore its reproductive cycle is very slow, which represents a natural constraint to the population of the species. Once extracted, the species has to undergo the same cycle of twelve years again before a new offshoot comes.

Harassment faced by the people during collection of raw material

It was reported by many carpenters that making wooden articles subjects an individual to harassment by the officials since it is now illegal to commercially exploit wood. Although bamboo has been declared under the category of MFP and the local people are legally entitled to collect bamboo on their private land with the permission of the forest authorities, the reality is different in that the existing impositions are not according to the legal rights bestowed to the people. The forest officials have deprived local people with the information that they can collect privately owned bamboo for their use and continue to impose the previous rules thereby subjecting the people to harassment if they are caught while collecting bamboo. It is a known fact that the mass scale exploitation of forest species is being mainly undertaken by the Timber lobby and other industries such as Paper Mills, for whom these species are of commercial interest. Since there exists a corrupt nexus between such exploiters and the Forest Department officials, it is very convenient for both to hold the local people responsible for any kind of extraction.

Opportunities: Ensuring regular supply of Raw Material

Strengthen local governance institutions to take control of the natural resources

The provisions endowed to the local people need to be known to them. As a consequence, the dissemination of information about the local population's legal rights is imperative. Strengthening the local self-governance bodies to enhance

control over the natural resources including the MFP is essential to ensure the rights as well as the livelihoods of the people dependent on the Forests. Most of the villages located in the vicinity of the forests come under areas where PESA (Panchayat Extension to Schedule Areas) is enforceable. This act empowers the *gram sabha* to have control over the natural resources. Therefore, the effective implementation of this law is the key to address the grievances of the people and ensure their traditional livelihoods.

Promote alternative inputs and design improvements for efficient product selling

Considering a depleting natural resource base, in the context of raw material supply for RNFEs, there is a need to invest in the following:

- Develop private production sites of raw material;
- Identify substitutes which can produce better or similar quality of goods;
- Improve technology for efficient use of available scarce raw material

5.6 Infrastructure

Constraint: Weak infrastructure facilities to enable RNFE

It is assumed that the provision/existence of good roads, power, water and telecommunications would enhance the status of RNFE and act as promotional inputs. These preconditions have implications for greater access to market, information, reduced cost of production and transportation as well as efficient outreach of products in different markets.

Un-maintained roads reduce accessibility

By and large the condition of roads is not good in both the districts and is comparatively worse in Narshimpur. This is posing a hindrance to the people, especially involved in dairy. Shelf life being a constraint to dairy, it requires timely delivery of products to the customers. The men grudgingly accepted that because of the poor conditions of road, they had to spend substantial time on transportation. In some of the remote villages, with poor access, the potentials exist to earn livelihood from dairy but because of difficult accessibility, the van of the *dugdh sangh* (Milk Cooperative) never reaches there and hence marketing becomes a problem. Good accessibility is also crucial for exchange of information and facilitating exposure to outside world.

However, good accessibility of a village does not necessarily imply that the village will have a thriving RNFE. It is a combination of many factors, which govern the status of RNFE. Bad roads are also one of the reasons attributed to the proliferation of the practise of middlemen. Considering the time taken to cover such short distances, due to bad roads, it is preferred to sell the produce to the middlemen.

Power Supply

Supply of power is essential for irrigation purposes as well as, in case of RNFE, things like good processing, motor repair, etc. shortage of power supply was a

universal complain from almost all the villages. This was therefore reducing the production of jaggery, operation of threshers, flour mills etc., although there was potential to do so. Again, in the case of poultry farming, which is a comparatively new enterprise, electricity is essential to regulate the temperature. This is reflected by villagers who stated that there was a willingness to start this new type of business but due to lack of power supply it was not possible to get started.

Opportunity: Improving Infrastructure Facilities to improve the status of RNFE

Encouraging Panchayats to invest in productive assets

The mandate for panchayats to invest on production oriented infrastructure development requires strengthening. Although panchayats are being given funds for the development of their respective villages, these funds are basically being invested to develop infrastructure for social welfare purposes rather than infrastructure such as storage rooms etc. that are production oriented. The reason is obvious as developing infrastructure for the social welfare results in public acclaim whereas production oriented infrastructure only yield results in the long run.

Diversion of development funds for creation of productive infrastructure base

There is a need to mobilise resources at the state district and block level to invest in improving road network. The policies of repayments need to be evolved where panchayats also contribute, especially where the RNFE will be greatly benefited.

5.7 Competition due to Open Market

Constraint: Competition with substitute products vis-à-vis quality issues due to use of traditional technology

Food processing, in particular MFP processing used to be a commonly found means of livelihood. For example, processing of *gulli* to make oil (in Betul) had been, till a few years back, a source of livelihood for many. The market demand was high and the choices were limited. However, the processed food products are now facing competition due to the opening of the market and the entry of more refined products in the market like industrially manufactured cooking oil. These modern products are processed by the use of sophisticated machinery and therefore are of better quality. Hence products such as *gulli* oil face stiff competition from such sophisticated products.

The outreach of the manufacturers of the present day food industry is expanding very steadily to the rural markets. With their sophisticated packaging and high quality measures, the market of the traditional products is decreasing and has many a time resulted in the complete wipe out of such products from the market. For example, the *ghani* units of many households, which were being used for processing *gulli* oil in Adarsh Dhanora now lie idle.

Opportunities: Linkages with Corporate sector

To counteract the impacts of the open market, keeping intact the interests of the villagers, steps to improve the existing technologies need to be undertaken. The introduction of new technologies would require inputs of capital, the channels for which would have to be explored. Probabilities of linking the manufacturing companies directly with the community and using the community as the salesmen might be a viable option. This on one side would do away with the concept of middlemen and on the other side would generate means of livelihood for the community-based salesmen/women.

Secondly, the market of MFP has high value in the domestic and international health industry. The two levels need to be linked and equity measures worked out so that mutually beneficial opportunities can be achieved. The marketing and technology inputs can be of the MNC pharmaceutical company and the knowledge and skills would be of the local people. In addition to a conducive infrastructure, this involves improved planning capacity at district and block level, and better linkages with research institutions and the industrial manufacturing sector. NGOs can play a facilitatory role in this context.

5.8 Social Stratification and RNFE

Constraint: Caste and class hierarchy create barrier for the marginalized to take advantage of RNFE sector

Caste and class hierarchy play a very important role in determining the socio-politico-economic scenario of a typical Indian village. This factor is in its subtle but overarching manner largely responsible for the stagnation of the development of the marginalized sections. There are deliberate attempts on behalf of the upper caste and upper class to subjugate the marginalized and block all access to agents of economic growth like education, information, access to credit etc. This was voiced by the marginalized community themselves during the survey.

It was also prominently observed that the higher caste individuals had undertaken most of the successful enterprises and this was mainly because they had the advantage of influential contacts for ensuring access to credit and in some cases had the benefit of schemes like PMRY due to being caste brothers of the Sarpanches. The details of the influence of caste can be seen in chapter 5.

Opportunities: Formulation and Implementation of pro-poor policies

Strong social and pro poor policies need to be formulated and implemented to address the issues of caste and class discrepancy. The present pro-poor government is undertaking steps like the implementation of various schemes through the mission mode and other schemes like the watershed development scheme etc. It is evident that there is a strong political will to promote the interest of the poor and marginalised. However, the loopholes lie in the effectiveness of implementation of these schemes. More stringent measures to monitor the implementation of these programs need to be undertaken. Apart from this, the implementation of these schemes / programs should

not have a target driver approach but a process driven approach which would thereby ensure the sustainability of these programs. An amalgamated approach involving cross learning exercises between the government and non-government sector should be taken as an ideal approach.

It is important that the formulation and implementation of pro-poor policies are to the benefit of women. For example, the education of girls with a scheduled caste / tribe background requires more promotion. The current measures and monitoring systems in place may give the impression that a high percentage of these girls attend school, however, in reality, they are the first ones to loose out when families encounter economic hardship forcing them to migrate. The Dalit Agenda which was put in place in January 2002 emphasises promotion of small-scale enterprises run by the Scheduled Castes (SC) families. Given its recent start, it is too early to draw conclusions about the success of this initiative.

5.9 Creation of a Conducive Business Environment at District level

In addition to the constraints which were raised by the population during the course of village and household surveys (i.e. micro-level), it is important to bear in mind that a macro-environment needs to be created that is conducive to the development of small, medium, and large-scale enterprises at district level. The present situation is still characterised by obstacles that hinder enterprises to take full advantage of their potential. For example, there are still regulations in place that were created when the public sector had a stronger role to play in the economy. However, things have considerably moved on since the beginning of liberalisation in 1991. At the same time, it appears that liberalisation was more successful at a higher level, whilst it has often failed to benefit the private sector at a lower level (i.e. district and below) (Saxena, 2003).

Hence, the creation of a regulatory framework is required that is conducive and facilitatory to the needs of private sector development in the districts. In addition, Business Development Services (BDS) reflecting the needs of local companies need to be put in place with adequate back-up from the State. The option of creating a Rural Enterprise Development Mission should be considered to this effect.

6. Conclusions

The survey data clearly demonstrates the importance of the rural non-farm sector for the future development of the economy. Considering the challenges encountered by the sector in a large state like Madhya Pradesh there is a need for concerted action involving different stakeholder groups such as Government, private sector and NGOs.

It was found during the course of the study that substantial amounts of resources are being spent at state level and in the large urban centres to promote economic growth, and at village level to build the asset base of rural households. At the same time, it transpires that the current district environment is not very conducive to enterprise development in rural areas. As a consequence, it appears that more efforts are required to establish a more business-friendly environment at the meso-level (i.e. district and below). This requires a thorough review of regulations in place, and the creation of Business Development Services (BDS) that are able to cater for the needs of small, medium, and large-scale enterprises in the districts.

APPENDIX 1

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APPENDIX 2

Outline of a More Conducive Business Environment at District Level

Currently, there is a void between macro- and micro levels as far as rural enterprise development is concerned. On the one hand, there is a quite dynamic macro environment benefiting large companies and (a few) large urban centres, on the other hand, significant resources are spent on the creation of household assets (e.g. credit supply, education and skills development). At the same time, it is apparent that the current district environment is not conducive to enterprise development, as a consequence of which potential rural entrepreneurs are reluctant to set up business or they move into the informal sector. Many of the resources directed at the micro-level in rural areas do not reach target groups due to bureaucracy, outdated regulations, and other factors existing in district headquarters and below.

More efforts are required to make the district headquarters, but also other small towns more dynamic and business-friendly. Key requirements to achieve this include a more business-friendly regulatory framework, adequate infrastructure and appropriate Business Development Services (BDS).

The creation of a Rural Enterprise Development Mission is an option to be considered by the State Government in order to promote the rural economy. The potential tasks to be fulfilled by this Mission include, technical and financial facilitation of setting up BDSs in districts, the identification of emerging sectors and markets, monitoring of district performance in enterprise creation, and advisory role to the State Government.

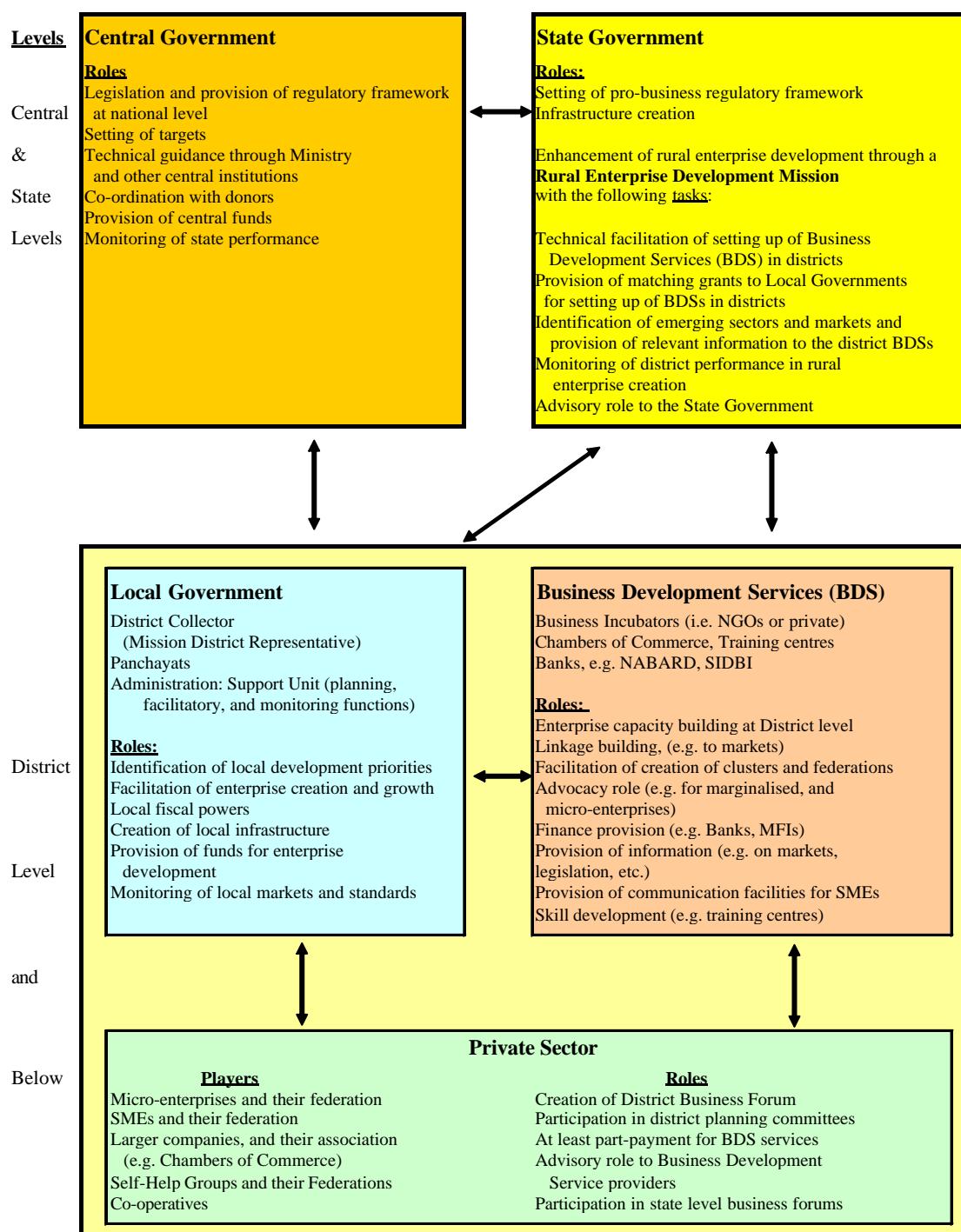
The role of the Central Government includes legislation and provision of regulatory framework at national level, setting of targets, technical guidance through ministry, co-ordination with donors, and monitoring of state performance.

As for the Local Government (LG), in the short-term it appears preferable that the aforementioned Rural Enterprise Development Mission be represented by the District Collector at this level. However in the medium to long-term the Panchayats should have a stronger role to play in order to ensure better sustainability of local initiatives. LG would require a well-resourced support unit with a planning, facilitatory and monitoring role. The role of District Investment Centres (DICs) ought to be thoroughly reviewed in this context. Changes of mindset at local level and capacity building are key requirements, coupled with the engagement of the private sector and their associations. It is important that the latter are also formed for small and medium-scale enterprises as well as for Self-Help Groups (Adolph, 2003). These associations should then be represented on local planning committees, in order to improve the currently lacking interaction between private sector and LG.

Business Development Services (BDSs) are important for the enhancement of rural enterprises, but several types of them are needed in districts in order to be able to cater for the needs of small, medium, and large-scale enterprises. This may include Chambers of Commerce, business incubators (run by NGOs or the private sector), training institutions, and banks with a stronger focus on services other than purely financial matters. Marr (2003) provides an outline of the main BDS models used in different parts of the world and the respective institutional approaches.

Pilot initiatives should be started in a selected number of districts using successful examples as models. Successful BDS providers from Madhya Pradesh and elsewhere, and private sector representatives ought to be involved during planning and implementation of these initiatives. Figure 1 highlights the key stakeholders with an interest in rural enterprise development and their respective roles.

Figure 1: Stakeholders in Rural Enterprise Development and their Respective Roles



APPENDIX 3

Results from the Household Questionnaire Survey

Table A1: Household Size and Characteristics

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
Total HH Size, mean	5.91	5.88	5.44	6.13	5.86
Total male adults per HH, mean	1.71	1.63	1.87	2.03	1.80
Total female adults per HH, mean	1.54	1.57	1.63	1.73	1.61
Total male children per HH, mean	1.45	1.40	1.72	2.36	1.69
Total female children per HH, mean	1.20	1.35	1.37	1.56	1.35
Total number of income earners per HH, mean	2.38	2.39	1.94	2.09	2.23
Total number of non-income earners per HH, mean	3.44	3.38	3.54	3.82	3.53
Age, male adult, mean, years	36.99	36.99	36.96	38.64	37.40
Age, female adult, mean, years	37.37	35.61	35.69	37.48	36.57
Age, child male, mean, years	7.95	8.40	7.71	8.04	8.06
Age, child female, mean, years	8.49	7.82	7.76	8.72	8.21

Table A2: Landownership

	Betul	Bhimpur	Gotegaon	Chichli	Total
Respondents (N)	216	226	160	197	799
HHs with land	142	157	66	99	464
%	66%	69%	41%	50%	58%
HHs without land	74	69	94	98	335
%	34%	31%	59%	50%	42%
Total land owned by HHs					
Total land (Respondents)	142	157	66	99	464
%	66%	69%	41%	50%	58%
Mean (acres)	6.5	5.9	8.3	15.5	8.4
Median (acres)	4.0	4.0	3.0	8.0	4.0
Landowners:					
Fertile land (Respondents)	138	156	61	99	454
%	64%	69%	38%	50%	57%
Mean (acres)	6.0	4.6	7.6	14.4	7.6
Median (acres)	3.0	4.0	3.0	7.0	4.0
Non-fertile land (Resp.)	23	47	13	15	98
%	11%	21%	8%	8%	12%
Mean (acres)	4.0	4.4		7.3	5.0
Median (acres)	2.0	3.0		7.0	3.0
Irrigated land (Resp.)	74	84	32	81	271
%	34%	37%	20%	41%	34%
Mean (acres)	5.4	3.8	6.8	14.8	7.9
Median (acres)	2.6	3.0	4.5	8.0	4.0
Leaseholders (or shared in):					
Fertile land (Resp.)	26	38	6	9	79
%	12%	17%	4%	5%	10%
Mean (acres)	3.5	4.1	8.1	8.7	4.7
Median (acres)	3.0	3.4	4.0	6.0	3.8
Non-fertile land (Resp.)		2			2
%	0%	1%	0%	0%	0%
Mean (acres)	4.0	2.5		7.3	2.5
Median (acres)	2.0	2.5		7.0	2.5
Irrigated land (Resp.)	8	30	4	3	45
%	4%	13%	3%	2%	6%
Mean (acres)	2.4	3.8	12.2	7.5	4.6
Median (acres)	2.5	3.4	10.7	10.0	3.0

Table A3: Ownership of Animals, Percentage of HHs Owning Animals, and Mean Number of Animals per HH

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
Milching cows	21%	19%	44%	55%	34%
Mean	1.6	1.7	1.6	1.9	1.7
Non-milching cows	18%	28%	26%	22%	24%
Mean	2.1	1.6	2.6	2.6	2.2
Oxen / bullocks	53%	69%	14%	29%	44%
Mean	2.3	2.3	2.3	2.1	2.3
Buffaloes	15%	18%	13%	32%	20%
Mean	1.8	1.2	1.8	2.9	2.1
Calves / heifers	29%	36%	41%	55%	40%
Mean	2.2	1.7	1.9	2.6	2.2
Horses	1%	0%	0%	2%	1%
Mean	1.5			1.3	1.4
Donkeys	0%	0%	0%	1%	1%
Mean	2.0	1.0		1.0	1.3
Goats	15%	12%	4%	8%	10%
Mean	4.5	2.7	2.4	3.6	3.5
Sheep	0%	1%	0%	1%	0%
Mean		2.5		1.0	2.0
Poultry	12%	38%	6%	3%	16%
Mean	2.8	3.0	1.7	1.4	2.8
Pigs	0%	0%	0%	1%	0%
Mean				1.0	1.0

NB. The means are calculated only for those households who actually own animals.
Random errors are possible.

Table A4: Ownership of Equipment

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
Tractor	4%	2%	3%	15%	6%
Trailer	8%	5%	3%	12%	7%
Ox-cart	48%	58%	9%	28%	38%
Plough	51%	64%	13%	29%	42%
Irrigation equipment	23%	27%	20%	37%	27%
Thresher	5%	2%	5%	18%	7%
Flour mill	1%	1%	1%	4%	2%
Jaggery making equipment	4%	0%	1%	14%	5%
Vocational equipment	0%	0%	1%	0%	0%
Television	19%	13%	38%	32%	25%
Radio	10%	12%	21%	15%	14%
Motor cycle	8%	5%	14%	18%	11%
Bicycle	38%	22%	49%	59%	41%
Car / jeep	2%	0%	1%	3%	1%
Sewing machine	13%	8%	10%	7%	9%
Loom / spinning equipment	0%	0%	0%	0%	0%
Rice dehuller	0%	0%	1%	1%	1%
Generator set	0%	0%	1%	2%	1%
Other assets	2%	4%	3%	3%	3%

Table A5: Access to Electricity

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
Electricity at home	83%	76%	91%	85%	83%
Electricity at farm	20%	15%	18%	34%	22%
Electricity at household industry	1%	2%	1%	3%	2%

Table A6: Levels of Education

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Households Interviewed (N)	216	226	160	197	799
Illiterate					
Female Adults	63%	66%	69%	60%	64%
Male Adults	33%	40%	26%	36%	35%
Upt to Primary					
Female Adults	12%	7%	15%	21%	13%
Male Adults	20%	21%	15%	17%	18%
Female Children	39%	42%	45%	56%	44%
Male Children	41%	33%	51%	58%	44%
Up to Middle School					
Female Adults	13%	8%	12%	13%	12%
Male Adults	21%	12%	19%	18%	17%
Female Children	14%	12%	24%	28%	17%
Male Children	16%	16%	22%	28%	19%
Up to High School					
Female Adults	3%	8%	11%	6%	7%
Male Adults	12%	10%	18%	11%	12%
Female Children	3%	6%	7%	3%	5%
Male Children	3%	3%	3%	5%	3%
Up to Higher Secondary					
Female Adults	3%	6%	8%	9%	6%
Male Adults	5%	8%	17%	10%	10%
Female Children	0%	0%	0%	0%	0%
Male Children	0%	0%	1%	0%	0%
Intermediate					
Female Adults	1%	0%	0%	0%	0%
Male Adults	1%	1%	1%	0%	0%
Female Children	0%	0%	0%	0%	0%
Male Children	0%	0%	0%	0%	0%
Graduation					
Female Adults	1%	2%	0%	1%	1%
Male Adults	3%	3%	4%	7%	4%
Female Children	0%	0%	0%	0%	0%
Male Children	0%	0%	0%	1%	0%
Post graduation					
Female Adults	0%	0%	1%	0%	0%
Male Adults	1%	1%	5%	4%	2%
Female Children	0%	0%	0%	0%	0%
Male Children	0%	0%	1%	0%	0%
Professional degree					
Female Adults	0%	0%	0%	0%	0%
Male Adults	0%	0%	0%	0%	0%
Female Children	0%	0%	1%	9%	2%
Male Children	0%	0%	0%	9%	2%
Non-formal education					
Female Adults	4%	3%	0%	0%	2%
Male Adults	5%	6%	0%	0%	3%
Female Children	0%	0%	0%	0%	0%
Male Children	0%	0%	0%	0%	0%

NB: The sample covers all the household members. Some double-counting was possible.
Children not accounted for on the list are either below 6 years old or not attending school (i.e. estimated at approximately 5% - 10%).

Table A7: Perceived Value of Primary and Secondary Education

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
Primary education increases opportunities (Yes replies)	98%	95%	75%	79%	88%
Secondary education increases opportunities (Yes replies)	96%	95%	78%	79%	88%

NB: The percentage figures indicate the proportion of people who have a positive perception about primary and secondary education.

Table A8: Household Members who have obtained Formal Vocational Training

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
Household Head	3%	5%	7%	2%	4%
Spouse	3%	1%	2%	0%	2%
Son 1	3%	1%	3%	2%	2%
Daughter 1	4%	1%	1%	0%	2%

Table A9: Membership of Self-Help Groups

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
Membership, household in general	10%	19%	4%	8%	11%
Membership, female	6%	19%	1%	4%	8%
Membership, male	3%	1%	3%	2%	2%
DPIP membership	0%	0%	0%	0%	0%
Watershed group membership	1%	0%	0%	0%	0%
Forest group membership	5%	3%	0%	0%	2%
Other	0%	0%	0%	0%	0%

Table A10 : Benefits associated with Self-Help Groups

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
No benefits	5%	4%	0%	1%	3%
Access to loans	47%	52%	4%	5%	30%
Access to information	13%	15%	1%	0%	8%
Skills and capacity building	1%	2%	0%	0%	1%
Functional literacy	3%	3%	0%	0%	2%
Better access to Gov	9%	14%	0%	1%	7%
Support when pers prob.	16%	18%	0%	0%	10%
Improved status / self	2%	3%	1%	0%	2%
Improved social skills	3%	2%	0%	0%	1%
Others	16%	9%	2%	2%	8%
No information	40%	35%	0%	0%	21%

Table A11 : SHG Constraints

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
No constraints	5%	4%	0%	1%	3%
Procedures	47%	52%	4%	5%	30%
Lack of awareness	13%	15%	1%	0%	8%
Lack of literacy	1%	2%	0%	0%	1%
Lack of market opportunities	3%	3%	0%	0%	2%
Conflict within groups	9%	14%	0%	1%	7%
Caste barriers	16%	18%	0%	0%	10%
Gender barriers	2%	3%	1%	0%	2%
Lack of leadership	3%	2%	0%	0%	1%
Domination by certain indiv.	16%	9%	2%	2%	8%
Time requirements	40%	35%	0%	0%	21%
Other	6%	1%	1%	4%	3%

Table A12: Sources of loan

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
RRB / LDB Loan	1%	4%	4%	3%	3%
Commercial bank	1%	3%	4%	5%	3%
Agric. Co-operative	2%	1%	2%	5%	3%
Moneylenders	1%	0%	4%	3%	2%
Local landlord	1%	0%	1%	1%	1%
Friends / family	2%	2%	4%	2%	2%
SHG	0%	0%	0%	0%	0%
Other source	0%	0%	0%	1%	0%

Table A13: Purpose of loan - formal sector

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
Formal sector – Replies	0%	0%	0%	0%	0%
Agric production	6%	5%	5%	15%	8%
Non-farm enterprise	1%	3%	6%	4%	3%
Repayment of previous loan	0%	0%	2%	0%	0%
HH consumption	0%	0%	2%	0%	0%
Other	0%	0%	1%	1%	1%

Table A14: Purpose of loan - Informal sector

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
Agric production	0%	0%	0%	1%	0%
Non-farm enterprise	4%	0%	0%	0%	1%
Repayment of previous loan	0%	0%	0%	1%	0%
HH consumption	2%	1%	9%	2%	3%
Rituals / ceremonies	1%	1%	1%	2%	1%
Other	0%	0%	1%	1%	0%
Other source	0%	0%	0%	0%	0%

Table A15: Loan Constraints - Individuals borrowing from SHG

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
No constraints	4%	2%	0%	0%	2%
Non-membership	44%	62%	1%	0%	29%
Small amount of loan	3%	4%	1%	0%	2%
Procedures	12%	22%	0%	1%	10%
Group member is not trusted	10%	16%	0%	0%	7%
Other	3%	3%	1%	2%	2%
Lack of awareness	45%	25%	0%	0%	19%

Table A16: Loan Constraints - SHG borrowong from bank

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
No constraints	3%	2%	0%	0%	1%
Procedures	25%	45%	0%	0%	20%
SHG members are defaulters	3%	5%	0%	0%	2%
Small savings by SHG	18%	24%	0%	0%	12%
Rating of SHG by bank	0%	3%	0%	0%	1%
Attitude by bank staff	14%	20%	0%	0%	9%
Other	3%	1%	0%	0%	1%
Lack of awareness	56%	36%	0%	0%	25%

Table A17: Sources of Income, Sub-sectors - Household Heads

	Current situation (2001)				
	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	188	197	152	195	732
Primary production					
Crop production	76.6%	81.7%	85.5%	97.9%	85.5%
Milk production	3.2%	2.0%	2.6%	4.6%	3.1%
Goat rearing	1.6%	0.0%	0.7%	1.5%	1.0%
Rearing other animals	2.1%	5.1%	0.7%	1.0%	2.3%
NTFP collection	10.1%	16.8%	2.6%	1.0%	7.9%
Threshing grain/oilseeds...	5.3%	3.6%	0.7%	0.5%	2.6%
Agricultural and food processing					
Milling of grains, seeds..	0.5%	1.0%	2.0%	1.0%	1.1%
Jaggery processing	10.1%	0.0%	0.7%	5.1%	4.1%
Dairy processing (ghee, paneer..)	0.5%	0.0%	0.0%	0.0%	0.1%
Fish processing	0.0%	0.0%	0.7%	0.5%	0.3%
Other primary processing					
Mining, quarrying/stoneware	0.0%	0.0%	0.0%	1.5%	0.4%
Processing of fibres	0.0%	0.0%	0.7%	0.0%	0.1%
Traditional manufacturing					
Carpentry	1.1%	1.0%	3.3%	1.5%	1.6%
Bamboo products	0.0%	0.0%	0.7%	0.5%	0.3%
Blacksmith	3.2%	1.0%	0.0%	0.0%	1.1%
Pottery	0.0%	0.0%	3.3%	1.0%	1.0%
Production of leather articles	0.5%	0.0%	0.7%	0.0%	0.3%
Modern manufacturing					
Tailoring	1.1%	0.0%	0.7%	1.0%	0.7%
Brickmaking	4.3%	2.5%	1.3%	1.5%	2.5%
Bldg construction/masonry	10.6%	7.1%	12.5%	9.7%	9.8%
Road construction	14.4%	12.2%	0.7%	1.0%	7.4%
Mechanical repairs	0.0%	0.5%	0.0%	0.5%	0.3%
Services					
Trade	1.6%	2.5%	6.6%	3.1%	3.3%
Restaurants/food stalls	0.0%	0.0%	0.7%	0.0%	0.1%
Motorised transport	2.1%	2.5%	2.0%	0.5%	1.8%
Non-motorised transport	0.0%	0.0%	2.6%	0.0%	0.5%
Communications/phone	0.5%	0.0%	0.0%	0.0%	0.1%
Health sector/nurse/aanganwadi	3.2%	4.1%	9.2%	4.1%	4.9%
Teacher, /vocational trng.	1.6%	5.1%	1.3%	1.5%	2.5%
Rural tourism	0.0%	0.0%	1.3%	1.0%	0.5%
Bank clerks & other finance services	0.0%	0.5%	0.0%	0.0%	0.1%
Religious services	0.0%	0.0%	0.0%	0.5%	0.1%
Hali	2.7%	1.0%	1.3%	1.0%	1.5%
Other	0.5%	1.5%	5.9%	3.6%	2.7%
Total (all jobs combined)	157%	152%	151%	147%	152%

Table A18: Sources of Income – Sub-sectors, Spouses

	Current situation (2001)				
	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	136	154	56	69	415
Primary production					
Crop production	64.7%	65.6%	89.3%	100.0%	74.2%
Milk production	8.1%	5.2%	0.0%	0.0%	4.6%
Goat rearing	0.0%	0.0%	0.0%	0.0%	0.0%
Rearing other animals	0.0%	0.0%	0.0%	0.0%	0.0%
NTFP collection	52.9%	83.1%	5.4%	1.4%	49.2%
Threshing grain/oilseeds...	12.5%	12.3%	0.0%	0.0%	8.7%
Agricultural and food processing					
Milling of grains, seeds..	0.0%	0.0%	3.6%	0.0%	0.5%
Jaggery processing	1.5%	0.0%	0.0%	7.2%	1.7%
Dairy processing (ghee, paneer..)	0.0%	0.0%	0.0%	0.0%	0.0%
Fish processing	0.0%	0.0%	0.0%	0.0%	0.0%
Other primary processing					
Mining, quarrying/stoneware	0.0%	0.0%	0.0%	0.0%	0.0%
Processing of fibres	0.0%	0.0%	0.0%	0.0%	0.0%
Traditional manufacturing					
Carpentry	0.0%	0.0%	0.0%	0.0%	0.0%
Bamboo products	0.0%	0.0%	0.0%	0.0%	0.0%
Blacksmith	0.7%	0.0%	0.0%	0.0%	0.2%
Pottery	0.0%	0.0%	0.0%	0.0%	0.0%
Production of leather articles	0.0%	0.0%	0.0%	0.0%	0.0%
Production of brass	0.0%	0.0%	0.0%	1.4%	0.2%
Modern manufacturing					
Tailoring	2.2%	0.0%	0.0%	0.0%	0.7%
Brickmaking	0.7%	0.0%	0.0%	0.0%	0.2%
Bldg construction/masonry	0.0%	0.0%	26.8%	2.9%	4.1%
Road construction	0.7%	0.6%	1.8%	0.0%	0.7%
Mechanical repairs	0.0%	0.0%	0.0%	0.0%	0.0%
Services					
Trade	0.7%	0.0%	1.8%	2.9%	1.0%
Restaurants/food stalls	0.0%	0.0%	0.0%	0.0%	0.0%
Motorised transport	0.0%	0.0%	0.0%	0.0%	0.0%
Non-motorised transport	0.0%	0.0%	0.0%	0.0%	0.0%
Communications/phone	0.0%	0.6%	0.0%	0.0%	0.2%
Health sector/nurse/aanganwadi	5.1%	4.5%	1.8%	2.9%	4.1%
Teacher, /vocational trng.	1.5%	2.6%	0.0%	4.3%	2.2%
Rural tourism	0.0%	0.0%	0.0%	0.0%	0.0%
Bank clerks & other finance services	0.0%	0.0%	0.0%	0.0%	0.0%
Religious services	0.0%	0.0%	0.0%	0.0%	0.0%
Hali	0.0%	0.0%	1.8%	0.0%	0.2%
Other	0.0%	0.0%	5.4%	11.6%	2.7%
Total (all jobs combined)	151%	175%	138%	135%	155%

NB: Figures refer to spouses that have declared themselves as income earners; i.e. in approximately two thirds of households in Betul District and one third of households in Narshimpur District.

Table A19: Summary of Sub-sectors, Other Male Income Earners, Current Jobs (2001)

Sources of Income: Sub-sectors	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	112	102	63	75	352
Primary production	121.4%	144.1%	61.9%	85.3%	109.7%
Agricultural and food processing	8.0%	1.0%	9.5%	9.3%	6.5%
Other primary processing	0.0%	2.0%	0.0%	0.0%	0.6%
Traditional manufacturing	0.9%	0.0%	0.0%	2.7%	0.9%
Modern manufacturing	14.3%	2.0%	20.6%	18.7%	12.8%
Services	28.6%	12.7%	22.2%	12.0%	19.3%
Other	0.9%	0.0%	4.8%	5.3%	2.3%
Total RNFE	52.7%	17.6%	57.1%	48.0%	42.3%
Total (all jobs/all sectors combined)	174%	162%	119%	133%	152%

Table 20: Summary of Sub-sectors, Other Female Income Earners, Current Jobs (2001)

Sources of Income: Sub-sectors	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	36	60	19	10	125
Primary production	145.9%	142.3%	73.7%	120.0%	131.0%
Agricultural and food processing	8.1%	1.9%	15.8%	20.0%	7.1%
Other primary processing	0.0%	0.0%	0.0%	0.0%	0.0%
Traditional manufacturing	0.0%	0.0%	0.0%	0.0%	0.0%
Modern manufacturing	5.4%	0.0%	0.0%	0.0%	1.8%
Services	0.0%	7.7%	21.1%	0.0%	7.1%
Other	0.0%	1.9%	0.0%	0.0%	0.9%
Total RNFE	13.5%	11.5%	36.8%	20.0%	16.8%
Total (all jobs/all sectors combined)	159%	154%	111%	140%	148%

NB: Figures should be used with care due to the limited number of respondents.

Table 21: Summary of Sub-sectors, Household Heads, Current Jobs (2001) and Past Jobs (mid-1990s)

	2001	Mid- 1990s
Total Respondents (N)	732	766
Primary production	102.5%	112.7%
Agric and food processing	5.6%	3.3%
Other primary processing	0.5%	0.1%
Traditional manufacturing	4.2%	4.0%
Modern manufacturing	20.6%	6.8%
Services	15.6%	13.7%
Other	2.7%	2.9%

Table 22: Summary of Sub-sectors, Spouses, Current Jobs (2001) and Past Jobs (mid-1990s)

	2001	Mid-1990s
Total Respondents (N)	415	440
Primary production	136.6%	138.0%
Agric and food processing	2.2%	2.3%
Other primary processing	0.0%	0.0%
Traditional manufacturing	0.5%	0.5%
Modern manufacturing	5.8%	2.5%
Services	7.7%	5.2%
Other	2.7%	1.8%

Table 23: Summary of Sub-sectors, Other Male Income Earners, Current Jobs (2001) and Past Jobs (mid-1990s)

	2001	Mid-1990s
Total Respondents	352	260
Primary production	109.7%	113.8%
Agric and food processing	6.5%	4.2%
Other primary processing	0.6%	0.0%
Traditional manufacturing	0.9%	0.4%
Modern manufacturing	12.8%	5.0%
Services	19.3%	17.3%
Other	2.3%	0.4%

Table 24: Summary of Sub-sectors, Other Female Income Earners , Current Jobs (2001) and Past Jobs (mid-1990s)

	2001	Mid-1990s
Total Respondents	125	113
Primary production	127.2%	131.0%
Agric and food processing	4.8%	7.1%
Other primary processing	0.0%	0.0%
Traditional manufacturing	0.0%	0.0%
Modern manufacturing	0.0%	1.8%
Services	9.6%	7.1%
Other	0.8%	0.9%

Figure 2: Summary of Sub-sectors, Household Heads
Current (2001) and Past (mid-1990s)

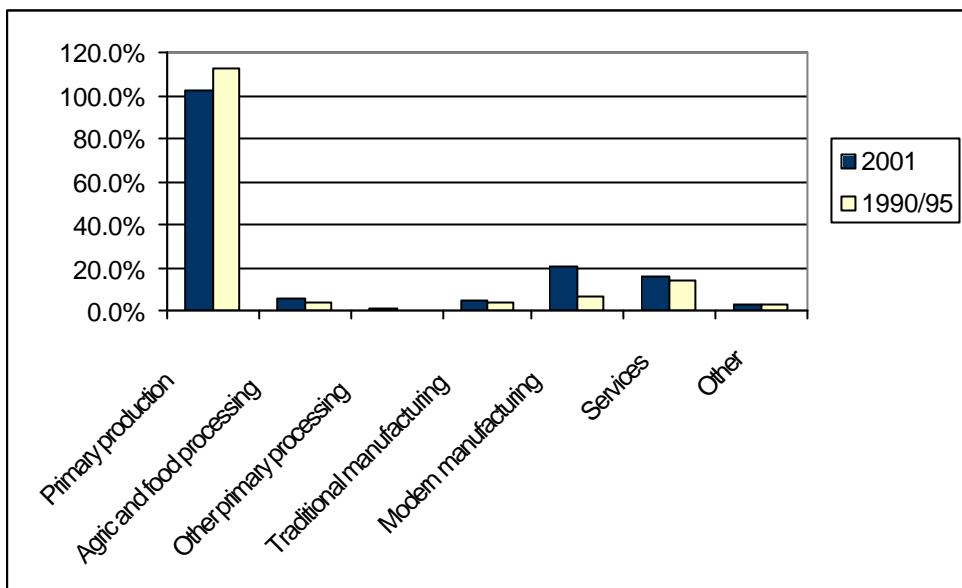
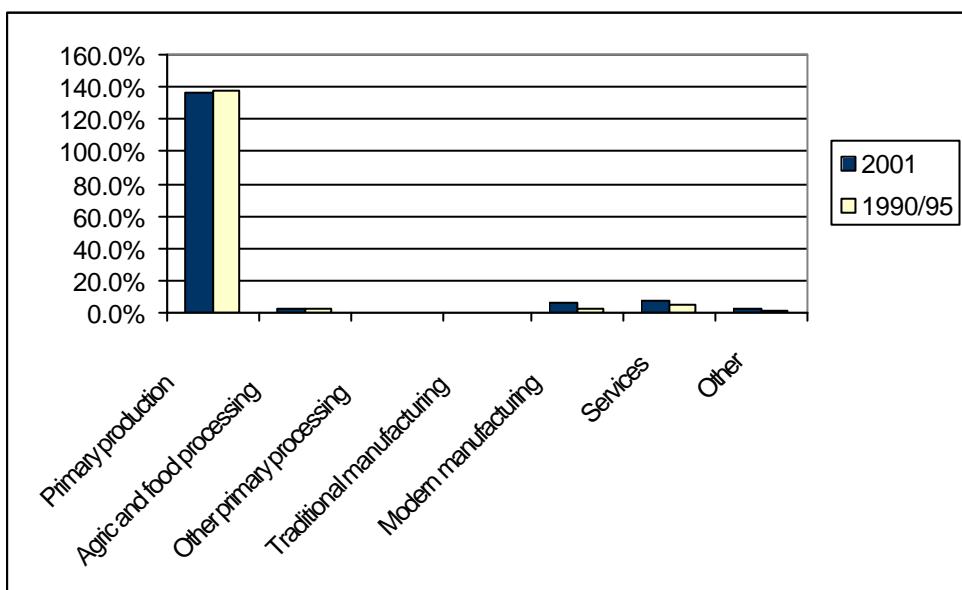
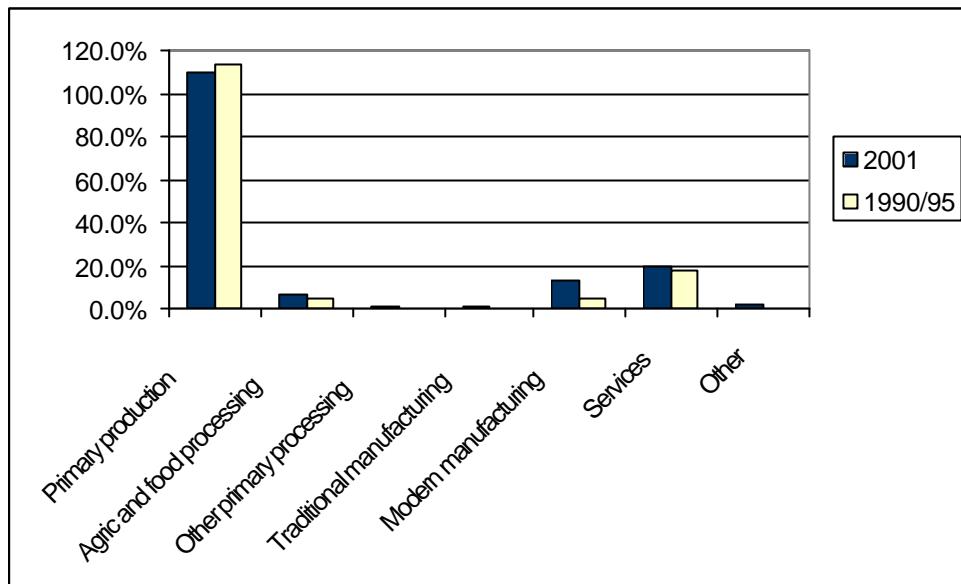


Figure 3: Summary of Sub-sectors, Spouses
Current (2001) and Past (mid-1990s)



**Figure 4: Summary of Sub-sectors, Other Male Income Earners
Current (2001) and Past (mid-1990s)**



**Figure 5: Summary of Sub-sectors, Other Female Income Earners
Current (2001) and Past (mid-1990s)**

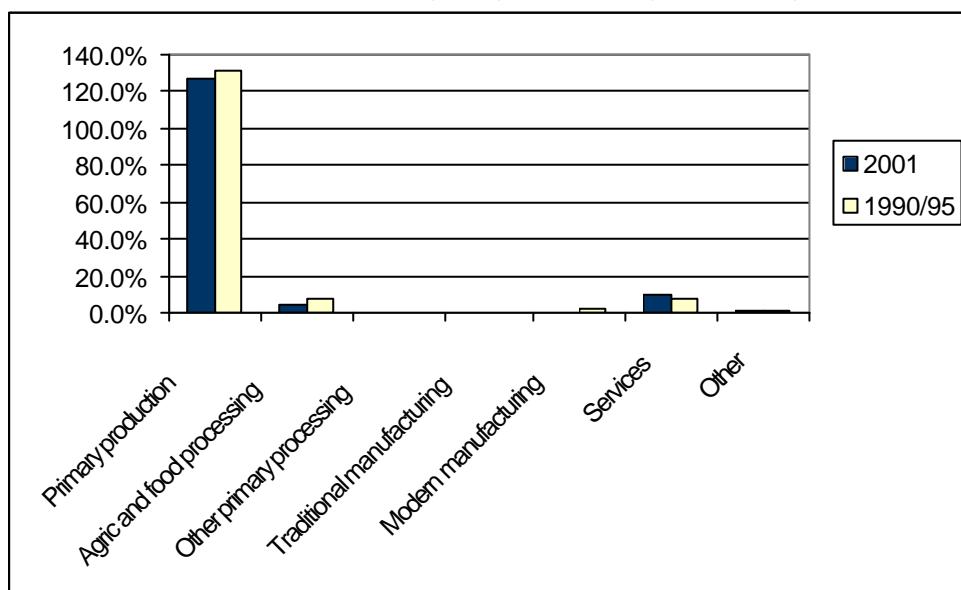


Table A25: Sources of Income, Nature of Involvement, by Caste, all Family Members (multiple responses were possible per household)

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Households Interviewed (N)	216	226	160	197	799
Land owner (total respondents)	190	210	73	123	596
General / upper caste	16%	4%	19%	59%	21%
OBC	33%	10%	47%	29%	26%
SC	3%	4%	8%	7%	5%
ST	48%	82%	26%	5%	48%
Leasing / sharing in (total respondents)	17	16	4	3	40
General / upper caste	6%	0%	0%	33%	5%
OBC	12%	6%	0%	33%	10%
SC	6%	6%	50%	0%	10%
ST	76%	88%	50%	33%	75%
Leasing / sharing out (total resp.)	17	17	1	5	40
General / upper caste	6%	24%	0%	40%	18%
OBC	24%	24%	0%	40%	25%
SC	18%	6%	100%	20%	15%
ST	53%	47%	0%	0%	43%
Livestock owner (total respond.)	5	1	2	0	8
General / upper caste	0%	100%	0%		13%
OBC	80%	0%	50%		63%
SC	20%	0%	0%		13%
ST	0%	0%	50%		13%
Owner of equipment (total resp.)	36	15	1	0	52
General / upper caste	11%	13%	0%		12%
OBC	75%	27%	0%		60%
SC	6%	0%	100%		6%
ST	8%	60%	0%		23%
Hiring in equipment (total resp.)	1	1	1	0	3
General / upper caste	0%	100%	0%		33%
OBC	0%	0%	0%		0%
SC	100%	0%	0%		33%
ST	0%	0%	100%		33%
Hiring out equipment (total resp.)	4	4	1	2	11
General / upper caste	25%	0%	0%	100%	27%
OBC	25%	25%	100%	0%	27%
SC	0%	0%	0%	0%	0%
ST	50%	75%	0%	0%	45%
Wage labourer (total resp.)	291	287	250	274	1102
General / upper caste	4%	0%	3%	11%	5%
OBC	22%	4%	42%	26%	23%
SC	10%	2%	19%	44%	19%
ST	63%	94%	36%	18%	54%
Salaried employee (total resp.)	56	67	38	30	191
General / upper caste	7%	21%	13%	27%	16%
OBC	52%	12%	37%	17%	29%
SC	14%	6%	26%	40%	18%
ST	27%	61%	24%	17%	37%
Trader / broker (total resp.)	141	213	36	53	443
General / upper caste	2%	2%	3%	21%	5%
OBC	18%	6%	72%	51%	21%
SC	9%	2%	19%	25%	8%
ST	71%	90%	6%	4%	67%

Table A25: Impact of Factors of Change on Family Livelihood – Perception
 (Scale used to indicate importance of impact: -5 to +5)

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
Impact of Pressure on Agricultural Land					
Positive	2%	1%	2%	5%	3%
Negative	62%	65%	63%	63%	63%
No Impact	35%	33%	21%	26%	29%
No response	0%	2%	14%	6%	5%
Importance of Impact (Median)	-1	-1	-2	-2	-2
Impact of Agricultural Mechanisation					
Positive	17%	14%	21%	35%	21%
Negative	69%	70%	68%	57%	66%
No Impact	13%	16%	6%	7%	11%
No response	0%	0%	6%	2%	2%
Importance of Impact (Median)	-1	-2	-3	-2	-2
Impact of Natural Resources Availability					
Positive	46%	72%	9%	2%	35%
Negative	0%	1%	73%	92%	38%
No Impact	52%	27%	13%	6%	26%
No response	2%	0%	5%	1%	2%
Importance of Impact (Median)	1	1	-3	-2	-2
Impact of the Road Network					
Positive	5%	4%	16%	24%	12%
Negative	50%	34%	66%	55%	50%
No Impact	44%	62%	14%	19%	37%
No response	1%	0%	4%	2%	2%
Importance of Impact (Median)	-1	0	-2	-2	-1
Impact of Electricity Supply					
Positive	4%	1%	21%	6%	7%
Negative	37%	39%	54%	83%	52%
No Impact	59%	60%	23%	8%	39%
No response	0%	0%	1%	4%	1%
Importance of Impact (Median)	0	0	-2	-2	-1
Impact of Market Access					
Positive	6%	8%	19%	19%	13%
Negative	38%	38%	38%	25%	35%
No Impact	54%	53%	24%	39%	44%
No response	2%	1%	19%	17%	9%
Importance of Impact (Median)	0	0	-1	-1	0
Impact of Information Access					
Positive	8%	8%	6%	6%	7%
Negative	57%	56%	74%	82%	66%
No Impact	34%	35%	18%	9%	25%
No response	1%	0%	2%	4%	2%
Importance of Impact (Median)	-1	-1	-3	-2	-1
Impact of Opening up of Caste System					
Positive	27%	15%	31%	25%	24%
Negative	9%	4%	20%	28%	14%
No Impact	63%	81%	48%	44%	60%
No response	1%	0%	1%	3%	1%
Importance of Impact (Median)	0	0	1	-1	0

Impact of Opening up of Gender Roles					
Positive	69%	68%	68%	72%	69%
Negative	4%	3%	11%	11%	7%
No Impact	26%	29%	20%	15%	23%
No response	0%	0%	1%	3%	1%
Importance of Impact (Median)	1	1	2	2	1

NB: Scale used to indicate importance of impact: -5 to +5

Table A 26: General Constraints encountered to start New Job Outside Agriculture

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
Lack of finance	67%	68%	77%	74%	71%
Lack of market	4%	5%	20%	30%	14%
Lack of education and training	39%	34%	15%	22%	29%
Lack of electricity	1%	0%	0%	1%	1%
Lack of raw material	1%	1%	1%	4%	2%
Lack of transport	6%	5%	14%	4%	7%
Lack of equipment	2%	1%	1%	1%	1%
Lack of job opportunities	8%	7%	3%	0%	5%
Unhelpful Gvt services	8%	7%	2%	2%	5%
Lack of information	53%	55%	14%	10%	35%
Social barriers	0%	0%	1%	2%	1%
Others	5%	5%	34%	33%	18%
No constraints	4%	4%	0%	0%	2%
Totals	199%	193%	182%	181%	189%

NB: Responses were not prompted, i.e. possible answers were not read out to the interviewees. Multiple answers were possible

Table A27: Constraints encountered by Women to start New Job outside Agriculture

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
Lack of finance	52%	54%	51%	34%	48%
Lack of market	1%	3%	11%	6%	5%
Lack of education and training	45%	46%	19%	19%	34%
Lack of electricity	0%	0%	0%	0%	0%
Lack of raw material	0%	0%	1%	1%	0%
Lack of transport	6%	5%	9%	4%	6%
Lack of equipment	0%	0%	0%	0%	0%
Lack of job opportunities	5%	5%	3%	0%	3%
Unhelpful Gvt services	2%	4%	1%	1%	2%
Lack of information	53%	53%	19%	14%	36%
Lack of family support	9%	4%	12%	7%	8%
Gender related constraints	4%	3%	7%	4%	4%
Caste related constraints	0%	0%	1%	1%	1%
Age related constraints	0%	0%	1%	1%	0%
Others	0%	0%	13%	11%	5%
No constraints	3%	2%	1%	0%	2%
Totals	180%	179%	148%	101%	154%

NB: Responses were not prompted, i.e. possible answers were not read out to the interviewees. Multiple answers were possible

Table A28: Constraints encountered by Youth to start New Job outside Agriculture

	Betul	Bhimpur	Gotegaon	Chichli	Total
Total Respondents (N)	216	226	160	197	799
Lack of finance	33%	39%	20%	18%	28%
Lack of market	1%	5%	3%	6%	4%
Lack of education and training	19%	22%	5%	7%	14%
Lack of electricity	0%	0%	0%	0%	0%
Lack of raw material	1%	2%	0%	1%	1%
Lack of transport	6%	5%	7%	2%	5%
Lack of equipment	0%	1%	0%	0%	1%
Lack of job opportunities	4%	6%	1%	1%	3%
Unhelpful Gvt services	5%	5%	2%	0%	3%
Lack of information	18%	19%	6%	5%	13%
Lack of family support	0%	0%	2%	1%	1%
Gender related constraints	0%	1%	3%	1%	1%
Caste related constraints	0%	0%	0%	1%	0%
Age related constraints	0%	0%	0%	0%	0%
Others	0%	0%	7%	5%	3%
No constraints	3%	0%	0%	0%	1%
Totals	91%	106%	56%	46%	77%

NB: Responses were not prompted, i.e. possible answers were not read out to the interviewees. Multiple answers were possible



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