

# **Report on Local Area Economy Study**

## **'SARWAN'**

*Submitted to:*

**Vikas Bazar Network**

**February, 2010**

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## **Abbreviations**

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BPL	Below Poverty Line
HYV	High Yielding Variety
HH	House Hold
NGO	Non Government Organisation
OBC	Other Backward Castes
PDS	Public Distribution System
PHC	Public Health Clinic
PRA	Participatory Rural Appraisal
SC	Scheduled Caste
SHGs	Self Help Groups
ST	Scheduled Tribe
VEC	Village Education Committee
VO	Voluntary Organisation
VHC	Village Health Committee

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### ***Executive Summary***

The 'Study on Local Area Economy' was organized by Vikas Bazar Net and its partner organizations as a process to understand the relationship existing between the local produce and the market. We have conducted this study in the Sarwan block of Deoghar district. The major component of the study is Village resource mapping to understand the type of local resources available for livelihood, Household resource study to understand the resources and utilization at household level and the market study to understand the variation in demand and supply and also the changes according to new arena. Altogether we have studied 12 villages, 120 HHs and 5 markets.

After compiling the data of the surveys it was found that most of the population has agriculture as their prime occupation. This sector is providing the major source of income to the area. The landholding pattern varies from individual to individual but most of the families fall under the category of marginal to small farmers. The productivity of the land is also low. The irrigation status of the area is poorly developed and mostly the agriculture is rain fed. Paddy is the major crop grown in the area followed by wheat, potato, mustard and vegetables. Majority of the HH has land and animals as their assets. The cultivable land mostly falls under tanr land. *Wells are main source of irrigation. Entire agriculture practice is of traditional nature i.e. it is labour based. Goatry and dairy are practice throughout the area but in fragmented manner. Goatry is one of the important sources of income. The market for it is quite voluminous but only 50% of the local demand is met here. It is growing slowly as the people lack the technical knowledge regarding goat raring.*

*Migration is a well known feature of the area. It is seen mostly in those villages which are well connected to road and railways. The migrating population generally belongs to the age group of 15-35 years.*

Apart from the natural resources the network of financial resources is also well developed. But due to the low literacy status and poor accessibility of most of the villages the non formal source of finance has a greater stake in the area. Big mahajans are there who lend money at an interest of 50% to 120% per annum. Due to migration and low income generation activity people are forced to take loans from the mahajans and the big farmers and are bound to do labour activity in their farmers at low wage rate.

The market system of the area is in the stage of development. It is changing in a higher pace. The market lacks the system of tax payment. The trader system is also developing. Outside traders are now coming to the area. They come mostly for vegetables. The markets have well developed connectivity but lacks infrastructural facilities like cold storage, storage house etc.

From the study we have identified 6 major livelihood activities for this area. These activities are paddy cultivation, vegetable cultivation (cauliflower, cabbage and potato), goat rearing and poultry.

## **Organizational Profile**

### ***1.1 Background Information about the Organization:***

NEEDS stands for 'Network for Enterprise Enhancement and Development Support' is a non- profit organization with primary area of operation in 3 major sector i.e. livelihood, reproductive health and child protection. These are designed based on poverty indices and issues of poor families. NEEDS is registered under Indian Trust Act 1882 vide trust registration number SL # 3017 D# IV175 dated 07/11/1998.

Name of the Agency:    **NEEDS**

Network for Enterprise Enhancement and Development Support

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Legal Status : a) Registered Trust (Under Indian Trust Act, 1882)  
: b) Registered under section 4(1) (b) of FCRA act 1976  
: c) Registered u/s 80G (5) (vi) of Income Tax Act 1961  
: d) 12(a)A of Income Tax Act

## **Vision**

Create a value based society of dignified and informed citizen (comprising significantly the erstwhile marginalized and the oppressed from the perennially unresponsive regions in the place with pride).

**Mission**

Sustained food and nutritional security of vulnerable populace, especially women and children, through environmentally sound interventions, whilst facilitating equity, justice and human rights.

We have separate sectoral missions for different sectors on which we are working. Those are as follows:

**Livelihood:** Enhance sustainable livelihood of marginalized.

**Reproductive Sexual Health:** Reduce under-five mortality rate, the maternal mortality ratio and reverse the spread of HIV/AIDS while intervening on young people's reproductive sexual health.

**Information and Communication Technology:** Reaching information society till the last mile.

**Education:** All children will learn, grow and develop to realize their full potential.

**Our program participants:**

Tribal, women, children and adolescent are our primary program participants. By enhancing opportunities for these communities we help bringing changes in their life. They actively participate in planning and monitor process of programs of their own groups, hence own the change that they bring of the community and their own life.

## **Approach**

NEEDS believes in high community ownership and participation in its all programs. Focusing on this we include community in each stage of planning so that they own and plan for them according to their need. The focus group with whom we work generally belongs to tribal population, more specifically the women and children. Each and every activity is planned with the help of community institutions like SHG, VEC, VHC and child bank. Presently we are working with the ultra poor families of devipur block as ultra poor initiative, popularly known by community as Upna Sapna program.

## **Self Help Group**

Up to Jan 31<sup>st</sup> 2010, the total number of women SHG has reached to 548. The total savings by the SHGs till Dec '09 was more than Rs.72 lakhs. Till date we are able to link our all SHGs with different livelihood planning. The prime focus of it is to ensure first food security of the family. In the next step we plan other income generation activity with them.

Food security is the major focus of NEEDS. Focusing on this issue the Women SHGs supported by NEEDS were first groom to achieve the food security for their family by doing their own credit planning for the agriculture season. The major focus is on extending the SRI technology among the poor so that with the optimum utilization of their small land holdings and available resources, they can achieve food security throughout the year. Along with this MPB (Maize, Pulse and Beans) cultivation is also introduced so that they can fulfill the nutritional needs of their families. Capacity building trainings are organized based on the need of the SHG groups and also new technology trainings were also organized like SRI training, improved technique of cultivation of maize, bean and pulse. Under our different programs we have also practicing multitier system with the members of groups to assure more nutrition along with long term and continuous income to them. SHG members in villages Sundari, Siljori etc. are continuously producing vermin compost for their use and selling purpose. The vermin compost technology was transferred to these members as an alternative source of income to them also to fulfill the need of FYM required for their crops. Presently they are continuously doing the activity and generating an income of Rs. 1500-2400 per month.

Besides we focus on inclusion of excluded in our programs as most marginalized community i.e. disable and positive people by its policy and have becoming an inclusive organization by its strategy.

Our Rural technology Park is continuously working on modulating livelihood techniques, accessing best practice models, developing prototypes, scaling by replicating. Networking and collaborations are key program strategy of NEEDS for outreach and advocacy.

Our ICT segment works on optimizing knowledge sharing, knowledge management and skill training options by evolving local contents and developing IEC appropriate for illiterates or neo-literates.

## **2 About the Study**

Vikas Bazaar.Net is a forum of development organizations, created to initiate joint and coordinated effort of stakeholders for accelerating the participation of marginal and small producers in the market for their benefit. The ‘Study on Local Area Economy’ was initiated by the network as a process to orient its partners towards market-led livelihood promotion and help them in exploring and engaging in sub-sectors suited to their local context.

### ***2.1 Objective of the study***

The study was intended to serve following objectives:

- To understand the conceptual framework for analyzing livelihood situation.
- To enhance the knowledge and skill to identify opportunities for such an intervention.
- To develop skills in applying tools in identifying intervention.

### ***2.2 Selection of Area***

Area for the study was first selected was different but after discussion with VB. Net the area for study gets changed and sarwan block is finnaly selected for conducting the LAE



jointly. NEEDS is a grass root NGO which works in 6 blocks of Deoghar district. The presence of NEEDS in Sarwan is already there. We have selected 12 villages for study the LAE which are Binjha, Uppar baghdabra, Hariraidih, Jogiatibu, Pichhi, Dahua, Manjhladih, Manigarhi, Dondia (Dubjora), Dhanhait, Kolhariya and Belthikri . The six markets which are selected for understanding the LAE are Ghasko, Manigarhi, Lakhodiya, Binjha, Sarwan and Sonaraithari.

### ***2.3 Sample Selection Process***

Villages and Hatts were selected in such a manner that a representative sample of the study area can be obtained. For this, villages and hatts from different clusters of the study area were selected. Markets/hatts are main centre of economic activities where exchange of goods and services takes place. These markets/hatts are organized in clusters and generally cover 10-15 villages. First of all list of all important markets of the area is done depending upon the coverage and importance. For each selected market/hatt, 2 villages, 1 nearer to market/hatt and 1 away from market/hatt was selected.

Households were sampled to ensure adequate representation to the different sections of society. Households were selected during village meeting. Based on livelihood status, village households were classified in three categories- households having excess amount after year around food security, households having year around food security somehow and households facing difficulties in earning livelihood and food insecure. On an average 10 households from a single village focusing on different caste and different economic status was selected. Due to time constraint one market is not surveyed.

### ***2.4 Methodology Adopted***

The quantitative and qualitative data/information was collected using various research instruments including Participatory Research Appraisal (PRA) tools and rigorous household studies. Partnership approach between the consultants and the field team was followed. This process helped in capacity building of field team. Village surveys were conducted using simple PRA tools and techniques. A meeting with the villagers were

called at common place in village. PRA exercise was conducted to map the natural resources, village infrastructure, various tolas, sources of irrigation and socio-economic characteristics; Seasonal/monthly activity calendar and cash flow analysis was carried out with group of households. Group discussion was conducted covering issues pertaining to agriculture, livestock and natural resource management.

In-depth interviews were conducted with selected HH using a structured questionnaire. Interviews were conducted with the head of the household and his/her spouse.

Study of selected markets\hatts was conducted using semi structured checklist. First of all, transit of the market was taken to make observation. Followed by, counting of shops and interaction with sellers and buyers. Interview and discussion with key market players i.e. paikars, traders, and intermediaries etc was conducted.

### **3 Background Information about the Study Area**

Sarwan block is situated 18 Kms away from Deoghar block. This is a part of Santhal Pargana region. The area is dominated by OBC, SC and ST caste population. The geography of the land is very undulating; the area also has forest cover which is distributed throughout the region. Land quality varies from good to less good variety. Yellow soil is the major type of soil present in this region. Most of the land remains fallow due to less availability of irrigation sources. Ajay and Patro River are the main water resource present in this region, but is of seasonal type. In some parts the water is available for irrigation. Saal, Sagwan, Accacia, Palash constitutes the major type of trees in the forest. Major part of the forest is owned by Govt. Mahua trees are also present in the block. It is found both in private and public land. This block is well connected to Deoghar, Plojori, Giridih and Madhupur through roads.

**Table 1: Key Statistics of Sarwan Block**

Total no. of Panchayats	:	
Total no. of Villages	:	391
Total No. of Household	:	20825

Household Size	:	6.2
Total Population	:	128938
Total SC Population	:	16841
Total ST Population	:	10814
Sex ratio	:	933
Literacy rate	:	34.56%
Female Literacy	:	19.03%
Total Workers No.	:	51781
No. of Cultivators	:	22364 (Male=15520, Female=6844)
No. of Agri.Labors	:	15001 ( Male= 8673, Female= 6328)
No. of Workers in HHI	:	8537 (Male=4483, Female=4054)
No. in Other works	:	5879 (Male=5300, Female=579)
Work Participation	:	82.3
Non-Workers	:	59.84% ( Total no. 77157)
Agriculture Labor	:	11.63%

(Source: *Census 2001*)

**Table 2: General Information about the Sampled Villages**

Total Household	910	
Total population	5934	
Male	3098	52.20%
Female	2836	47.80%
Total SC	752	12.67%
Total ST	451	7.6%
0 -06 yr Population	1295	21.82%
Total Literate	1792	30.19%
Male	1418	45.77%
Female	374	13.19%
Total Illiterate	4142	69.81%
Total Worker	2580	43.48%
Main Worker	1349	22.73%

Marginal Worker	1231	20.74%
Non Worker	3850	64.88%

(Source: Census 2001)

### **Land**

The area is characterised by undulating terrain with low to slightly high slope. Rainfall of the area is quite good. Land is undulating and mostly consists of yellow soil. The fertility of the soil is also poor. The depth of fertile soil ranges between 1-3 inches. Soil is mostly sandy and has less of vegetative cover. The fertility of the soil is also not good and it requires the fertilizers and manure during cultivation. In few places the mineral deposits are present. The soil type is quite suitable for brick making.

### **Land Use Pattern**

**Out of the 12 surveyed villages the land used data shows the following information**

Total Geographical Area	:1975 acre
Forest Area	: 85 acre
Cultivable Land	: 1548 acre
Irrigated Land	: 192 acre
Wasteland (cultivable)	: 294 acre

During the resource survey the above data related to land has found out. From the data it revealed that 78.37% of the land is used for cultivation. The cultivable land consists of tanr, middle land and done. In some areas the fallow land or cultivable waste land is used for cultivation of maize, arhar and some low water requirement plants. More or less every HH has homestead land which is also used for cultivation of maize and seasonal vegetables. The forest cover is quite less in the villages and people generally used coal and purchased wood for fire. The percentage of irrigated land is also very low which (approx. 9.8% of the available land). The irrigation source is mainly the seasonal river or

the wells. But mostly the wells are used for irrigation purpose as few of the villages are situated in the bank of the rivers.

### ***Water & Irrigation Sources***

Sarwan block is quite poor in terms of irrigation resources. The agriculture is mostly rain fed. Under the NREGS few water harvesting structures have been constructed which is helpful in increasing the vegetable production of the area. Ajay and Patro are the two major rivers of the area but are generally seasonal in nature. Villages adjacent to the river banks are better in terms of water availability than the far one. Few wells are constructed at the rivers which are perennial in nature and are the major source of irrigation. In most of the villages the old wells are of small size and mostly used in drinking purpose. This block lacks the availability of rain water harvesting structures.

<i>River</i>	:	<i>Ajay and Patro River (seasonal)</i>
<i>Pond/ Tank</i>	:	<i>Approx. 01 in 85% villages</i>
<i>Well</i>	:	<i>Less than 30% of the farmers have got well for irrigation purpose</i>

### ***Agriculture Scenario***

Agriculture contributes the major part of the livelihood basket of the area. Almost entire population practice the agriculture. The land owned by the general caste population is more fertile and levelled while the backward caste population has small and fragmented landholdings. Most of the farmers fall under small and marginal category. The agriculture is rain-fed. Paddy becomes the main crop of the area followed by cultivation of vegetables and wheat. In the successive years the cultivation of vegetables has increased sharply due to availability of water resources constructed under NREGA scheme and availability of good connectivity to the market due to better transportation facilities. Wells are main source of irrigation. Entire agriculture practice is of traditional nature i.e. it is labour

based. In few cases like the big farmers are now doing mechanised farming. Both women and men are involved in the agriculture works.

Agriculture extension system in the area is very weak and farmers depend on their own experience and input traders for agriculture related information and suggestions. Under developed irrigation facilities and institutional support, leads to sub-optimal utilization of land as a primary resource of livelihood

### **Off Farm and Animal Husbandry**

Goatry and dairy are practice throughout the area but in fragmented manner. Goatry is one of the important sources of income. The market for it is quite voluminous but only 50% of the local demand is met here. It is growing slowly as the people lack the technical knowledge regarding goat rearing. The demand of goats increases during the season of Durgapuja, as people purchase pattha for giving bali, the holy sacrifice in the name of Devi Durga. Dairy is generally practiced by the Yadavs and Bermas. They used to have 1-3 good variety cow or buffalo in their house. They sold milk to local milk collector @ Rs. 25/Litre. But the amount is very small and the demand is too high. Poultry is practiced in very small scale and the daily need of 3 Mt is met from outside. People do poultry as risk mitigation strategy at the time of lean period.

### **Non-Farm Activity**

In this group of activity three major activities were found after the survey. These activities are pottery, Bamboo works and brick quenching. These activities (pottery & Bamboo works) are mostly caste focused and practiced by the respective caste only. Brick quenching is the affair of good economic class people and the hired labours belongs to all caste. This is the major income source after the paddy season for both the class. Most of the itta Bhattha are illegal that they operate without a license. Stone quarry and stone chips making are also present in this area. Except stone quarry for crushers (building material), this block lacks any other mines and mineral reserves. Few people are engaged in cloth stitching and wooden works but the number is very less. Bidi making is also another non-farm activity present in this area.

### Bidi making

Binjha, Uppar baghdabra and some other near by village in Sarwan block is well known for Bidi making works. This activity is not caste specific. The people who are engaged in this activity belong to ST, SC, OBC and General. The business men supply them with the Tendu leaves and tobacco and they people roll the leaves into bidi. The labour payment for this work is Rs. 35-40/1000 bidi. Then this bidi goes to Asansol and Burdwan for branding and packaging.

### Bamboo Craft

Bamboo work is concentrated in few villages of the block namely – Dhanhait, Bandabra, Harladih, Binjha Hansdiha etc. This activity is reserved for mohli community in area, who traditionally make bamboo item to earn livelihood. Most of the items are manufactured for day to day domestic use like basket, Sup, Jhadu etc. These items have good local demand in rural areas. Craftsmen arrange raw bamboo from neighboring villages and few of them have their own bamboo plants. The demand for bamboo item remains throughout the year. The demand got increased during the Chatth puja and paddy harvesting season. From a single bamboo they prepare items of Rs. 180-200 while the cost of one bamboo is Rs. 30-35. The living standard of these traditional bamboo craftsmen, who fall under SC category, is very low. They are amidst poverty, illiteracy and scarcity.

### Stone Quarry and Chips Making

Stone quarry and chips making industry is not well sounded in this block. It is concentrated in 2-3 villages only. These units were established to cater the need of road construction within the village. They generally provide employment to 100-150 people during the lean period. But the presence of basic facility like safe drinking water, rest house etc are not present in the near by area of brick quarry.

### **Migration**

Migration is a well known feature of the area. It is seen mostly in those villages which are well connected to road and railways. The migrating population generally belongs to the age group of 15-35 years. Mostly the male folks are involved in the migration. The

population which generally migrates has less amount of land holding and also has bigger family size. Some of the population who migrates is generally influenced by the new life style promoted by those who returned after far places. Generally they migrate to the places like Delhi, Mumbai, Kashmir, Kolkata & Gujarat. Landless labour (mostly SC and Minority caste) are victims of forced migration. The work which they do there varies from household labours, brick quarrying, sweets making, embroidery, stitching, road construction etc. The period of migration varies from 15 days to 8 months. The period generally begins after the paddy harvesting. And it gets highest during the summer season. The phenomenon of female migration is very less in the area. They generally remain to take care of the old people, animals and the house. The living condition of these type of families are very poor and are mostly under the loan of moneylenders. The education standards of the families are also very poor.

### **3.1 Key Livelihood Concerns in Study Area**

After analyzing the available secondary data it is quite visible that approx 68% of the population is non-working in Sarwan block. This non- working population, comprising mainly of poor ST, OBC and SC families, is resource less and has no ensured income and source of livelihood. Due to fragmentation of land after generation after generation has made the land less productive and high input consumptive. After harvesting paddy in the month of November - December, they are bound to migrate in nearby areas or in outside, in search of unskilled work. Women, children and aged persons stay in village to take care of home and animal. Due to the absence of continuous and optimum source of income the population is forced to take loan from Mahazans at peak time on higher rates. The rates vary from 50% to 120% per annum depending upon the type of need and amount of money. Mostly the loan is taken for agriculture and health purpose. Sometimes it is also taken to arrange the expenses of marriage. Due to the high rates they mostly are unable to repay and work as labour on low wage. The Mahazans are generally a person having high economic status and are mostly outsiders.



Due to the lack of skills in both the male and female the opportunity of getting high wage rates get reduces. Even the women are not free to perform all types of labour works. The dependency of female members is more on male as the boundary for their social and economic freedom is very limited. Even the low illiteracy rate prevailing among the women comes as big hurdle in their part as they are not able negotiate well with the work providers and are always cheated. The average age of female marriage is 15-17 years while in male it is ranging between 18-20 years.

The area has got sufficient land but less than 60% is cultivable land. The lands are mostly rain fed so mostly mono cropping is practiced in agriculture. Few of the villages which are situated in river bank also do cropping in winter season. Due to arrival of NREGS few wells are dug within the villages which have also increased the irrigated area under cultivation. Even there is a high need of irrigation infrastructure and necessary support services for agriculture needed. Majority of the farmers take only one crop in a year which is Paddy. The yield of paddy is low. In a good monsoon year, yield of improved varieties is around 10-12 quintals per acre while yield of local varieties is around 10 quintals per acre. Entire cultivation is labour intensive. Due to small size and low productivity of the land the labour retention or absorption capacity of the agriculture activity is very low. So, there is a high percentage of unskilled labour in the area. Besides agriculture some off and non-farm activities are also practiced within the area, but are generally caste specific. So, these activities also have less potential to absorb the excess labour. But the migrating population has high level of skill as they were doing different skilled work in the outside places. By providing local level jobs and market will help in generating income and also decrease migration. The development of irrigation facilities and new technology in the agriculture will also develop a high potential of job within the area.

## 4 Household Survey

### 4.1 Overview of the Households

To study the household condition we selected 12 villages of Sarwan block. Altogether 120 HH were studied. While grouping the HHs in respect to their economic status out of 120 sampled HH, 35 HH falls in the category of good, 37 HH ok and 48 HH in the not ok category. 3 HH (2.5%) belongs to ST, 34 HH (28.33%) to SC, 57 HH (47.5%) to OBC, 11 HH (9.17%) to Minority and 15 HH (12.5%) to General category. Among OBCs Yadav is the dominant castes.

Details about the families which are surveyed		
Economic Status	No. of HH	Percentage (%)
Good	35	29.17
Ok	37	30.83
Not ok	48	40.00

### Demography

Total population of sampled 120 HH was 861, out of which 446 (51.8%) were male and 415 (48.2%) were female. Average household was having 7.2 persons. Population of 0 – 14 year age group was 322 (37.4 %); that of 15 – 60 year age and above 60 age group was 479 (55.63%) and 60 (6.96%) respectively.

### Asset Ownership

#### Type of House

Category	Type of house			
	Kuttcha	Pucca	Both	Semi pucca
Good	20	10	5	0
Ok	21	13	1	2
Not ok	43	0	0	5

Out of the surveyed 120 HH, 2% have got Pucca (RCC) house while 70% HH are residing in Kaccha house i.e mud wall with bamboo and mud-tiled roof or khapra roof. 5% HH have both types of houses while 5.8% have semipucca house with cemented walls and khapra roof. 80% HH reported to have electricity connection. The use of electrical energy

was mainly for domestic purpose and few also utilize it for agricultural purpose. Weel and hand pump both are used for drinking purpose. Most of the people falling to the good or Ok category use hand pump water for drinking purpose while the poor have access to well for it.

### Land and Irrigation Source

Out of the 120 HH, 85.84% owned agriculture land while 14.16% HH, were landless (owned house but no farming land). The average land holding per household comes mostly in the range of 1-2 acres. However most of the families have land holdings between less than a acres and 1-2 acres. The landless families are mostly from ST and SC category. On an average each and every HH possess barren or wasteland. The percentage of irrigation land is very low in all cases. Mostly the irrigated lands are possessed by the higher status people or caste.

**Table 4: Land Details for Sampled Households**

Land	No. of HH	%age
Total Land (cultivable)		
Landless	17	14.16%
Less than a acre	32	26.66%
Between 1-2 acre	33	27.5%
3-4 acres	23	19.16%
5-10 acres	13	10.83%
More than 10 acres	2	1.67%

Land	Total area	Average
Fallow land	116.7	0.9725
Irrigated land	82.5	0.69
Total Land (cultivable)	218.48	1.82

Most of the cultivable land is categorized as *tand* or upland, middle land is more than low land. More than 80% HH have home stead land which is generally used for cultivation of maize, potato and seasonal vegetables. Mostly the homestead land has irrigation facilities.

### Agriculture Equipment

Method of ploughing is conventional and local (desi) wooden plough is used for this purpose. This plough is available with 83% HH having land. Other HH either borrow or hire plough for farming. 9% of the HH having land, own small kerosene operated water pumps to lift water from well. Few of the HH have tractors for ploughing their land and some of the big farmers also heir tractor for ploughing their lands.

### Livestock

Among the sampled HH, 79% HH have animals resources while the rest do not have it or they generally purchase and sale it during the lean period. Most of the animals owned by these HH are of local breeds but Yadavs possess the hybrid or developed variety as this is the caste specific livelihood of them. Ox, cow and goats are the most preferred animals. Most of the HH have cows and ox for ploughing purpose while goat is used for economic aspect only i.e. they are sold during the lean season or in the time of Durgapuja. The cows are also used for milk but the average yield of local variety is between 2-3 liters while the improved variety ranges between 8-10 liters' a day. Goats are the most common animal found in sampled HHs. Respondent reported to have 1-8 goats. The requirement of fodder for the animals is generally met by the available grasses and fodders within the villages, pasture land and in some cases the forests. Few of the families which have adopted animal rearing as economic activity also purchased supplementary feed for their animals.

**Table 6: Livestock Ownership**

Animal	Population	Average
Cow	142	1.183
Ox/ he buffalo	143	1.191
Buffalo	22	0.183
Goat	108	0.9

Pig	3	0.025
Hen	12	0.10

As the agricultural practices of the area is entirely traditional so most of the animals are reared for agriculture purposes like cow and ox are used during ploughing of land. Goats are generally reared by every one (caste). Hens are generally very small in no. and they not much preferred by the people as during flue they occur a huge loss. The market for milk and goat is well developed so people preferred to have these.

### **Other Assets**

Among other assets mostly come the trees and transportation or communication assets. Near about each family possesses the bicycle for transportation purpose. The trees are also planted as assets for future and the species which are planted are sal, sagwan, mango, jack fruit etc. Few families which fall under the good economic status also possess assets like motor pump, tractor, and thresher.

### **Livelihood Activities**

Out of the sampled 120 HHs it revealed that most of the HHs which has any amount of land is involved in the agriculture activity. Rest of the families mostly the land less is involved majorly in labour work or in animal husbandry. Out of the 120 HHs, 7 HHs have Govt. and private jobs. Near about 87% of the HHs are engaged in cultivation work. Most of the migrating families which have land come back at the time of rainy season to harvest paddy. Thus agriculture is the major component of livelihood of the people. The labour work population mostly belongs to the OBC, SC and ST caste population. They are generally unskilled and are involved in unskilled labour work mostly mud cutting, brick querying, road construction and goods transportation. Few of the families are involved in bidi making activity. While others are involved in bamboo craft making

Households do more than one activity to earn livelihood. Animal husbandry was most common activity among sampled HHs.

### Sources of Income

Among the following sources of income agriculture became the major source of income for every category of HH. The variation is only in terms of the land holding and output. Wage labour is the second major source of income. The activities which generally are paid as labour work are brick making, house construction, road construction, sweets making etc. Majority of the population is engaged in labour activities as the agriculture is rain fed and the other source of incomes are also limited. Few job holders are also present in the villages who are working in either government or in private sector.

Source	Income source (good)			Income source (ok)			Income source (not ok)		
	Total No. HH	Income	Average income	Total No. HH	Income	Average income	Total No. HH	Income	Average income
Agriculture	33	338700	9677.14286	30	102000	2756.756757	22	338700	7056.25
Vegetable cultivation	0			5	48000	1297.297297	0		
Small shops	2	81600	2331.42857	1	24000	648.6486486	2	81600	1700
Animal raring	31	50000	1428.57143	7	26400	713.5135135	8	32000	666.666667
Lobour	17	327150	9347.14286	3	104025	2811.486486	31	713150	14857.2917
Business	6	819600	23417.1429	2	24000	648.6486486	6	819600	17075
Job	5	1032000	29485.7143	15	373200	10086.48649	0	0	0
Bidi making	6	72400	2068.57143	2	33000	891.8918919	17	93400	1945.83333
Pottery				1	20000	540.5405405			
Cycle repairing				1	24000	648.6486486			
Pandit				1	12000	324.3243243			
Carpenter				1	7200	194.5945946			
Bamboo products				1	36000	972.972973			

**Table 7: Production, Consumption and Surplus for 70 HH**

Sub Activity	Duration	Total Production	Domestic Consumption	Marketing Surplus	Unit price	Sale Value in Rs
<b>Agriculture</b>						
Paddy	04 month	1376.5 Qnt.	963.5 Qnt.	413 Qnt	700/ Q	289100
Potato	04 month	104.5 Qnt.	77.5 Qnt	27 Q	600/ Q	16200
Green Veg	08 month	125 Qnt.	55 Qnt	70 Qnt	1200/ Q	84000
Maize	03 month	30.45 Qnt	10.45 Qnt	20 Qnt	1200/Q	24000
<b>Animal Husbandry</b>						
Dairy/ Milk	09 month	55.5 Ltr	13 Ltr	42.5 Ltr	25 /Ltr	1063
Goat rearing	12 month	63 Nos.	--	63 Nos.	1100	69300
Poultry	12 month	2 /Qnt	--	2 Qnt	4500/Q	9000
Business (Different type)	12 month	--	--	--	--	796800
Govt/Pvt job	12 months	--	--	--	--	1562400
<b>Labor</b>						
Agri – Labor	1.5 month	3125 M/D	--	--	60/MD	187500
Ag +Daily La	3.5 month	7872.5 M/D	--	--	80/MD	629800
Daily Labor	02 month	12657 M/D	--	--	100/M D	1265700
<b>Migration</b>	Avg. 6 mon.	57600 M/D			100/M D	5760000
<b>Total</b>						10694863 Rs

### Access to Capital

Among the surveyed HH, 30% respondent reported to have savings accounts with banks. 1.1% HH has got Kisan Credit Cards from banks. 47% HH reported to have loans from local money lenders, even on adverse terms and high rate of interest. 30% have bank loans also. The formal sources of credit are generally accessed by the big farmers and job holders while the need of the poors is undetermined so they mostly prefer the informal sources of credit.

**Table 8: Access to Credit**

Source	No. of HH	%
From Bank	37	30.8
From Mahazan	56	46.7
From SHG	13	10.8
From others	25	20.8

- *Few of the families have loan both from SHG and moneylenders.*

## **4.2 List of livelihood options**

Household study indicates that:

- Land Based Activity specifically farming is the main source of livelihood in study area.
- Farming provides larger income, engagement and employments at local level.
- Average income from farming is comparatively higher and it requires lower investment.
- Animal husbandry and backyard poultry are subsidiary activities for majority of HH.

Considering above facts, following livelihood activities can be considered for detail analysis:

### **1. Paddy Cultivation**

Paddy is the main agriculture crop in the area. It is being cultivated on each type of land. The variety of paddy differs in each category of land. Paddy cultivation is completely dependent on monsoon. Farmers follow traditional cultivation practices. Use of seeds of high yield variety, hybrids and fertilizer is gradually increasing. The yield of paddy is low. In a good monsoon year, yield of improved varieties is around 15 quintals per acre while yield of local varieties is around 10 quintals per acre.

Around 20-25% farmers attain food security and produces marketable surplus. Another 25-35% are close to food security level and produces grain for 9-12 months. For rest of the farmers attaining food security level is a big challenge. It was assessed that the improved cropping techniques can be helpful in increasing productivity and production of paddy. The input supply chain is well developed in the case of paddy. Even the families have optimum production but due to lack of other income sources they generally sale it. So, there arises a condition of food insecurity during the later months. So there arises a need



to increase the production per acre so that each family generates surplus amount of paddy which can be sold to fulfill other requirements during the need or lean period.

## **2. Cultivation of Green Vegetables**

The area is now developing as vegetable hub. Presently 5 villages are fulfilling the major part of the market, while the production is very much scattered. During the season more or less each HHs grows vegetables for their own consumption. The vegetable growers have established the market both in Deoghar and Giridih. The road connectivity of the area is also good.

## **3. Goat Rearing**

Area is well known for traditional goat rearing. Mostly local breed is reared at household level. Around 48% HH rear goat. Common herd size is of 1-3 goats. Goats mainly depend on grazing. Agro\household waste is provided as supplementary feed. The marketing linkages for the goat are very well developed. At present 50% of the demand is fulfilled by another market called Mohanpur. This activity can be further supported. During the durgapuja festival it becomes a high source of income. At that time the price per unit varies from Rs 1500-3600.

## **4. Poultry Farming**

Poultry farming is less developed in the area but during the market survey it comes out that there is a local demand in the market for poultry which is increasing day by day. At present the demand for poultry is 3 MT per week which is supplied from outside. So those families which have less of land and do not possess and skill can be involved in this activity. People have experience of poultry farming but due to effect of flue the activity is decreased. However people are doing it commercially in one village mostly the broiler. But normally the HHs rear poultry birds for their own consumption and also to give it to ojha and baba during jhar phunk. So, it can be a good livelihood option for the families.

## **5. Dairy Farming**

Dairy farming is growing but the speed of it is slow. Few of the families are involved in commercial production of milk but the amount is small. As this activity is caste specific and the population of such caste is quite good in the area so this can be promoted as a livelihood option for them. More or each and every family has the knowledge of rearing milching animals and has shown their interest in animal husbandry during the survey and FGD. The availability of grass and the waste land are also suitable for development of pasture land to support the activity. The high demand in the local and near by market is highly suitable for extension of the activity.

## **5 Resource Mapping**

### ***5.1 Overview of the village***

Resource mapping was carried out in 12 villages. Major findings of the resource mapping exercise have been presented in detail.

### ***5.2 Overview of Physical Resources***

Available irrigation infrastructure and basic amenities in sampled villages were studied in detail.

#### *Irrigation Infrastructure*

Well, pond and rivers are the main source of irrigation in study area. There were 85 well and 32 Ponds in 12 villages selected for the study. Most of the wells have low water retention capacity and the water lasts mostly till February. The wells which are now constructed under NREGS are big in size and are retaining water in summer season also. Generally water is used by all farmers who comes under command area of well. Available irrigation is mainly used for cultivation of potato and other green vegetables.

#### *Basic Amenities*

All villages which are surveyed have different status of basic amenities. More and less each village has developed well connectivity in terms of good roads and over bridge. Every village has aanganwadi and primary school. Few villages have middle schools. The drinking water facility is not well developed and most of the population of the villages is using well water as drinking water. Each and every village has religious place according to the caste residing there the veterinary service is not well developed and govt. doctor is the only available professional. Only two villages Dahua and Pichhi have got bus stand. Irrigation systems are also in the stage of development.

### **5.3 Overview of Natural Resources**

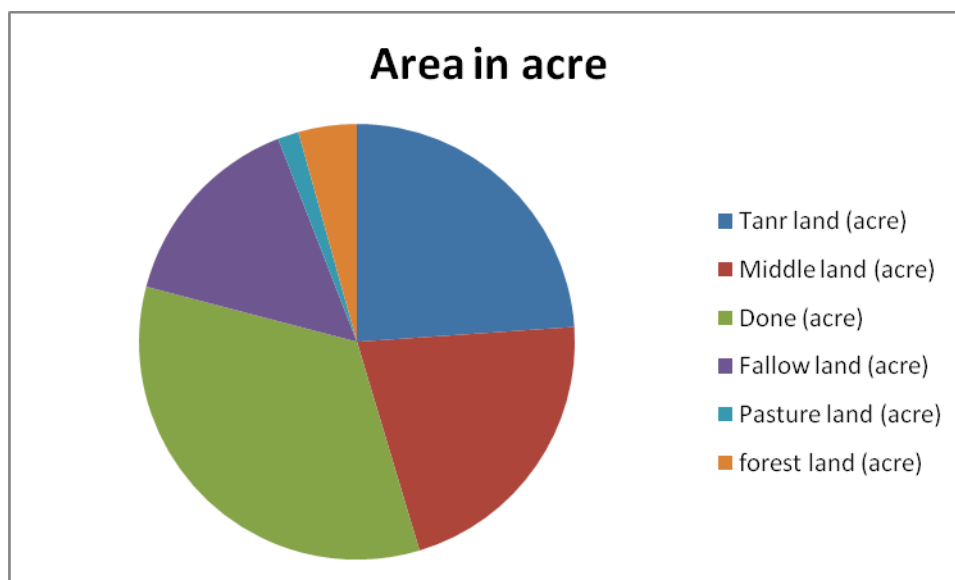
#### **Land**

In surveyed villages, 98% land was cultivable out of which 78% land was being used for farming. Around 9.8% of the cultivable land was irrigated. The land is less fertile with moderate moisture retention capacity.

**Table 9: Land use pattern**

Total Geographical Area	1975 Acre	
Land in forest area	85 Acre	
Total Cultivable area	1842 Acre	98% out of the total area
Land under use	1548 Acre	78% out of the total area
Wasteland (Cultivable)	294 Acre	19% of the total cultivable area
Irrigated Land (Cultivable)	192 Acre	9.8% of the total cultivable area

The nature of land available within the villages: -



### Water

Study area has got 02 river namely Ajay and Patro. Both the rivers are seasonal in nature. Water from the river is used mainly for agriculture. During March-April and at the time of rabi crops the sand of the rivers are put aside water is used for vegetable cultivation. Wells are the major source of irrigation water which is used for drinking and vegetable cultivation.

### Forest

Total forest area in 12 villages studied was found to be around 85 acres. Sals, Sagwan, were reported to be the main timber of the forest besides mango, acacia and other herbs. Villages which are surveyed are mostly far from the forest. The requirement of fodder and firewood are met by the forests. In few villages the plantation work is going on in the wasteland.

### Livestock

Livestock was part and parcel of village livelihood. Animal rearing was very common in households. The choice of animal depends on economic status, household need, interest and available assets. Cow, ox and goat are the most preferred animals. The variety of animals is of local variety. The productivity of the animals is also not optimum. During

summer there arises the shortage of green fodder. At that time the mortality of animals are seen.

### **Mineral / Mines**

Villages studied have not got any mines or mineral reserve; however, in near by villages there are availability of stones.

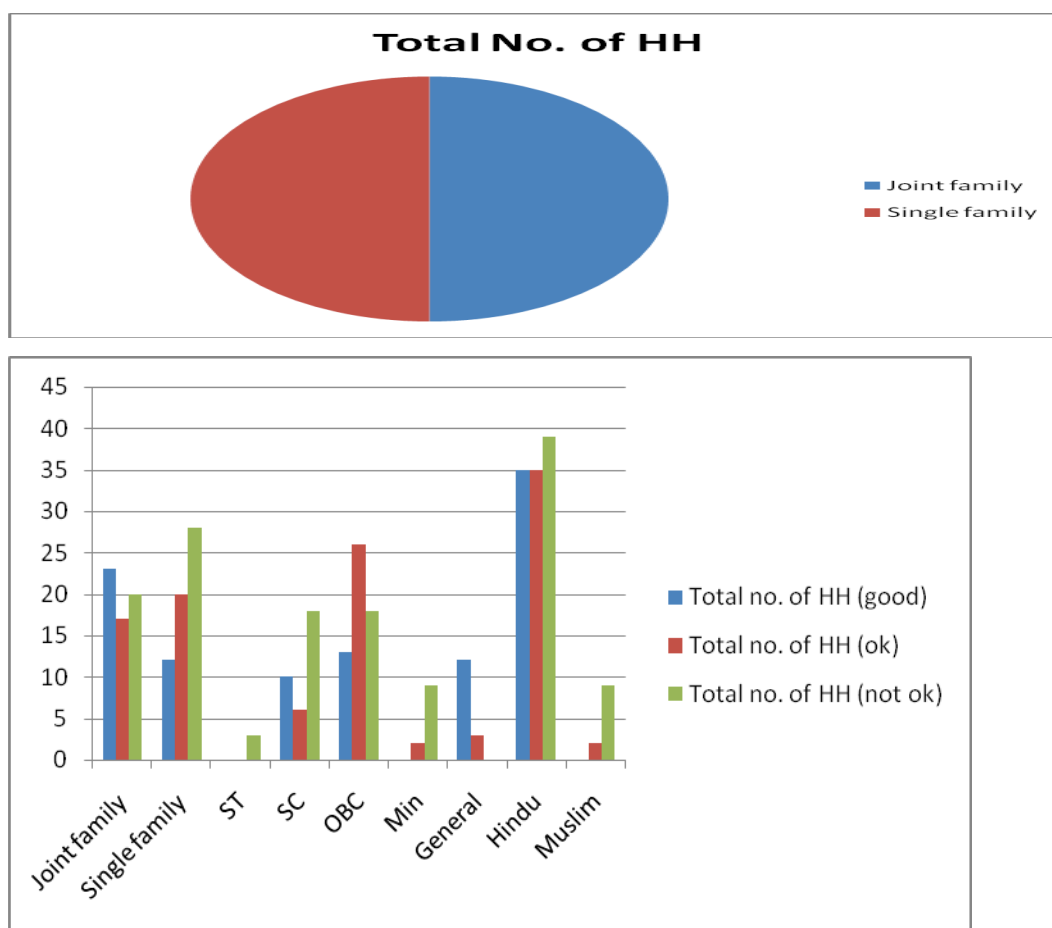
### **Fuel /Fodder**

Most of the villagers were using firewood for fuel purpose which was collected from local forest. Cow dung and agro waste was also used as fuel. Use of coal also seen in few villages where the forest resource is not available. Few of the HHs have there own trees which they use for firewood purpose. Paddy straw, wheat and other waste part of the agriculture produce are also used as firewood.

## **5.4 Overview of Human Resources**

Total population of the surveyed villages was around 5934. The population ratio was not favorable to women (1000:963). The population of general and OBC was found to be highest, followed by SC, ST, and Muslim. Both type of families are present and are in equal ratio.

<b>Type</b>	<b>Total no. of HH (good)</b>	<b>Total no. of HH (ok)</b>	<b>Total no. of HH (not ok)</b>	<b>Total No. of HH</b>
Joint family	23	17	20	60
Single family	12	20	28	60
ST	0	0	3	3
SC	10	6	18	34
OBC	13	26	18	57
Min		2	9	11
General	12	3	0	15
Hindu	35	35	39	109
Muslim		2	9	11



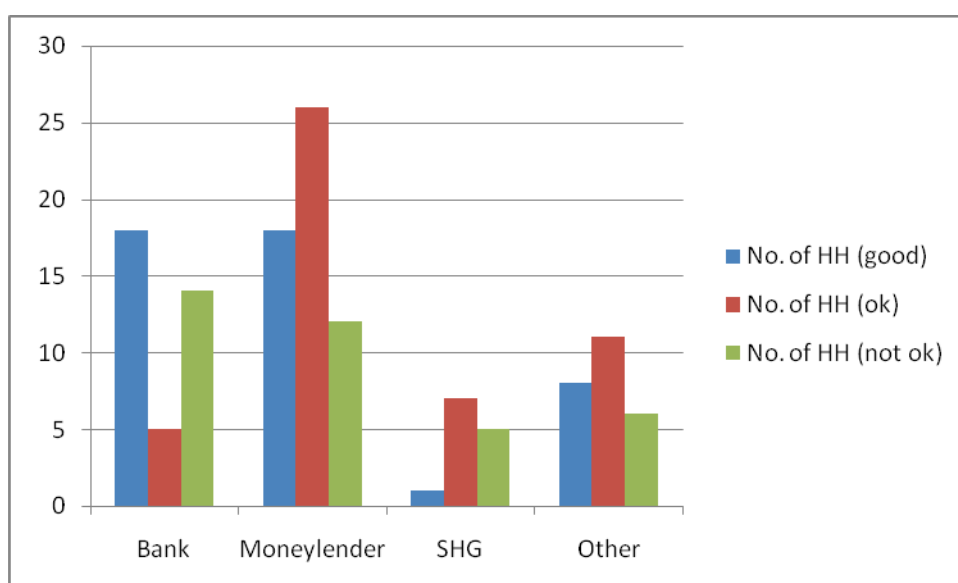
### 5.5 Overview of Social Resources

The social institutions within the villages are present but their level is different in each village. Those villages where some works are done through these are more aware and are in a state of functioning. But in few villages they are the groups only documented in the papers. Women groups are also present in few villages and are in functioning stage. The women are also organized than before due to the SHG intervention. Each and every village has aanganwadi centre and are well working. Only few villages have panchayat centre. Every village has primary school but few of the village has middle school. Every village has electricity. The roads of the villages are mostly PCC but the connecting road within the tolas of villages is kutch or cemented. None of the village possesses the veterinary services, cold storage, PACS/LAMPS.

## 5.6 Overview of Financial Resources

The over all economy of the study area appears ok but are mostly controlled by the big farmers. Most the HH which falls under the category of good and ok possesses the BPL, Ration card, KCC, insurance and bank accounts, while the poor do not have the BPL cards. The area has got both formal and informal sources of credit. But formal source of credits are preferred by the big farmers and educated one while the poor have more accessibility to the informal sources i.e. mahazans.

*Mahajan* serves majority of the credit needs followed by relatives, SHGs and Banks.



### *Credit Need in Village*

For Farming	:	52%
For Business / Animal Husbandry	:	16%
For Marriages / Social Obligation	:	18%
For Consumption needs	:	14%

Villagers reported to borrow for production as well as consumption purposes. The share of production as well as consumption need was

reported to be 50-50. 18% borrowings were reported for fulfilling social obligations like marriages and other rituals. 52% borrowings were reported for farming and 16% for animal husbandry and poultry.

### **5.7 List of livelihood options**

After analyzing the HH and village resources following are visible:

- Area has got large amount of unutilized land which can be used for paddy and vegetable cultivation.
- Agro climatic conditions are favorable for rainy season and *rabi* vegetable cultivation. Also the developing markets support the same.
- Large tract of cultivable wasteland is available in study area which can be used for fodder cultivation which in turn will help in developing animal husbandry as an alternative source of income.
- Most the migrating families are doing skilled job so small credit support will help them to start their own business here.
- The demand of milk in the near by market will also help to sustain the dairy activity. Presently there is a huge gap exists between the demand and supply.
- The area is well connected with road network which can be very useful for marketing of agriculture and other products.

Considering the above facts, following activities are suitable as livelihood source in study area:

- Paddy cultivation
- Vegetable cultivation (potato, tomato, other green vegetable)
- Fodder development
- Poultry farming.
- Goat rearing
- Dairy



## **6 Market Survey**

### ***6.1 General idea and observation about the haat***

The markets of this block are mostly of small type and can be termed as hatt. Each hatt generally caters the need of 20-30 villages. The frequency of occurrence varies from weekly to thrice a week which generally depends upon the availability of the volume of products from surrounding areas. Sarwan and Ghasko become the two big markets of the area. These two markets are well developed and are well linked with other markets. The transportation facilities are also well developed. The markets of the area are dynamic and growing rapidly but are mostly dependent on the local production. The gaddi or permanent traders' shops/wholesale is not present in these markets. Green vegetable, tomato, potato, paddy, poultry and goats are the major agriculture and allied produce which are sold by villagers. Traders from neighboring blocks and districts visit these hats to procure vegetables and other products. Brief description of all studied market/hatt has been provided below. Some mud made and bamboos made articles are also sold in the markets. Forest products are sold during the season of forest produce.

#### **Ghasko Bazar**

This Bazar is a well known haat of Sarwan district, is situated 31 km far from Deoghar and near about 13 Km far from Sarwan block. It is situated 8 Km far from the main road but is well connected by mettle road. It is also well connected to Madhupur block and Giridih district. The market situated in a private land and the area is 3 acres. This market

has the highest impact of paikar and in seasons more than 100 paikars come to this market. This is a biweekly market. A person from more than 50 villages belongs to 8-10 panchayats come to this market. The rate of the vegetable is bit higher in this market due to the impact of paikars.

#### **Sarwan market**

This is a relatively old and well developed market of the Sarwan block, situated about 1.5 Km away from the main road and is connected to the main road by kutchha road. The market has well developed infrastructure in terms of market shed, availability of electricity, labour, place for loading and unloading etc. The area of the market is quite small and is only 1.5 acres. This market occurs thrice a week.

#### **Lakhodiya more**

This is the oldest market of the area. This is the main market for vegetable growers of Khutra & Karimati villages. It the wholesale market for all the grocery shops at 75 -100 villages of the block. Goat and poultry is also the important item of this market.

#### **Manigarhi hatt**

It is the small market but is well connected to the road. The area of the market is also very small. The market occurs once a week and lacks basic infrastructural facilities. More or less all the produce which is sold in other markets is sold here but the volume is less.

#### **Binjha:**

This is generally a very market and caters the need of 8-10 villages. The produce is of local type and is in small volume. This market is small and has less effect of paikars. This market occurs twice a week.

## **6.2 Findings from Survey**

**Table 10: Details of Surveyed Haat / Market**

General Information of the markets
------------------------------------

Sl. No.	Name of the market	Freq. per week	No. of shops		Coverage			Specific market
			Temporary	Parmanent	No. of villages	Dist. (Km)	Buyers No.	
1	Ghasko	2	40	135	40-50	13	1200	Mahua & Paddy drink
2	Lakhodiya	2	30	50	20	20	900	Goat selling during Durgapuja
3	Manigarhi	1	42	70	13	17	400	
4	Binjha	2	30	45	18	10	400	Rice
5	Sarwan	3	60	40	55	10	700	Goat selling during Durgapuja

**Table 11: Facilities available within and nearby market area**

Sl. No.	Name of the market	Road	Transportation facility	Shed	Electricity	Labour availability	Diesal/patrol KM	Place for loading and unloading
1	Ghasko	Pucca	NA	Yes	NA	NA	16	Yes
2	Lakhodiya mode	Pucca	Yes	Yes	Yes	NA	22	Yes
3	Manigarhi	Pucca	Yes	Yes	Yes	NA	15	No
4	Binjha	Kutchra	NA	Yes	Yes	NA	15	Yes
5	Sarwan	Kutchra	Yes	Yes	Yes	Yes	16	Yes (2KM from the market)

**Table 12: Details about the local produce which comes in the market**

Sl.No.	Produce	Unit	Ghasko		Lakhodiya mode		Manigarhi		Binjha		Sarwan	
			Local demand	Goes out	Local demand	Goes out	Local demand	Goes out	Local demand	Goes out	Local demand	Goes out
1	Tomato	Qtl	150	320	72	180	80	30	160	40	700	6000
2	Cabbage	Qtl	150	350	65	90	75	35	104		400	500
3	Cauliflower	Qtl	400	700	100		150	80			400	500
4	Carrot	Qtl	40	100	4		12	10	3		12	12
5	Ridge guard	Qtl	160	500	60		18	15			25	35
6	Potato	Qtl	400	0	520						7000	
7	Bottle guard	Qtl	180	300	65		50	45	20		120	50
8	Bamboo produce	Rs	225000		50000		100000		26000		200000	

9	Mud produce	Rs	85000		65000		40000		36400		55000	
10	Poultry	Rs	700000		80000		150000		80000		728000	
11	Cucumber	Qtl	500	1500							20	15
12	Goat	No	1800		1000		300		250		10000	
13	Watermelon	Qtl	35	80							10	500
14	Onion	Qtl	250		150		120		104		350	
15	Radish	Qtl	65	195	10		15	20	12		25	30
16	Spinach	Qtl	35	100	30		10	8	10		12	18
17	Coriander	Qtl	25	40	15				26		10	25
18	Rice	Qtl	600				300		520			
19	Mustard	Qtl	40	60		15			15		30	40
20	Paddy	Qtl										
21	Peas	Qtl	250				7				35	50
22	Fish	Qtl	100		60		85		40		120	

**Table 13: Details about the products which come in the market (imported):**

Sl. No.	Produce	Unit	Ghasko			Lakhodiya mode			Manigarhi		
			Season	Place	Amount	Season	Place	Amount	Season	Place	Amount
1	Pawel	Qtl	4 months	Deoghar/Madhupur	450	3 months	Giridih	50			
2	Mahua	Qtl	Entire year	Bihar	400	6 months	Sarwan	160			
3	Ginger	Qtl	Entire year	Deoghar	40	whole year	Deoghar	100			
4	Potato	Qtl	6-7 months	Deoghar	700	6 months	Deoghar/Dumka	300	8-10 months	Deoghar	350
5	Goat	Number	2 months	Deoghar/Madhupur / Mohanpur	1200	Entire year	Palojori/Mohanpur/Dumka	1000			
6	Fertilizers	Rs	Entire year	Deoghar	3800000	July-Aug	Kolkata	600000	July-Aug,	Kolkata,	1000000

									Nov-Jan	Deoghar	
7	Seeds	Kg	Entire year	Bhagalpur /Deoghar		July-Aug	Kolkata		July-Aug, Nov-Jan		
8	Bekri items	Rs					Madhupur		Entire year	Madhupur	30000
9	Poultry	Qtl	Entire year	Deoghar	300	Entire year	Deoghar	30			
10	Onion seedlings	Qtl	2 months	Giridih	500	2 months	Giridih	100	2 months	Giridih	100
11	Rice	Qtl	Entire year	Deoghar/ Madhupur	800		Kolkata		Entire year	Deoghar	650
12	Brinjal	Qtl	6 months	Madhupur	250		Giridih, madhupur		5 months	Deoghar	40
13	Chilly	Qtl	4 months	Deoghar	50	6-8 month	Deoghar/Sarwan	26			
14	Papaya	Qtl					Deoghar				
15	Kanda	Qtl	2 months	Deoghar, giridih	30	2 months	Deoghar, giridih	15	2 months	Deoghar, Giridih	10
16	Garlic	Qtl	Entire year	Deoghar	40		Deoghar	80	10 months	Deoghar	45
17	Carrot	Qtl					Deoghar	50	2 months	Deoghar	25
18	Onion	Qtl	Entire year	Deoghar	120		Deoghar	100	8 months	Deoghar	60
19	Kerosin Oil	Ltr	Entire year	Deoghar	7500	Entire year	Deoghar,	150			
20	Beetle leaf	Rs				Entire year	Asansol/Bardwan	60000	Entire year	Asansol/Bardwan	90000

Sl.No.	Produce	Unit	Binjha	Sarwan
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			Season	Place	Amount	Season	Place	Amount
1	Pawel	Qtl				3-4 months	Deoghar	2000
2	Mahua	Qtl				Entire year	Bihar	300
3	Ginger	Qtl				Entire year	Deoghar	60
4	Potato	Qtl	6 month	Deoghar/Sarath/Bardwan	416	8-10 months	Bardwan	5000
5	Goat	Number				2 months	Dumka/Madhupur	10000
6	Fertilizers	Rs	July-Aug	Sarwan, Deoghar	500000	Entire year	Kolkata	40-50 Lakh
7	Seeds	Kg	July-Aug			Entire year	Kolkata	10-20 Lakh
8	Bekri items	Rs				Entire year	Madhupur	1 Lakh
9	Poultry	Qtl				Entire year	Dumka/ Deoghar	3500
10	Onion seedlings	Qtl	2 months	Giridih	50	2 months	Giridih	350
11	Rice	Qtl	Entire year	Palojori/Deoghar	520	Entire year	Deoghar	800
12	Brinjal	Qtl				4 months	Deoghar	250
13	Chilly	Qtl	6-8 month	Deoghar/Sarwan	52	4 months	Deoghar	50

14	Papaya	Qtl	4 month	Deoghar	40			
15	Kanda	Qtl	1 month	Deoghar	4	2 months	Deoghar, giridih	30
16	Garlic	Qtl				Entire year	Deoghar	35
17	Carrot	Qtl						
18	Onion	Qtl				Entire year	Deoghar	1000
19	Kerosin Oil	Ltr	Entire year	Palojori/Sarwan	720			
20	Beetle leaf	Rs				Entire year	Asansol/Bardwan	1-1.5 Lakhs

Table 14: Details about the shops and avrage selling in the markets/per market day

Sl. No	Produce/ products	Ghasko		Lakhodiya mode		Manigarhi		Binjha		Sarwan	
		No. of shops	Average sale	No. of shops	Average sale	No. of shops	Average sale	No. of shops	Average sale	No. of shops	Average sale
1	Vegetable	90	130-150 Qtl	45	40-50 Qtl	55	80-100 Qtl	40	3-4 Qtl	80	80-100 Qtl
2	Kerosin	7	70-80 Lts	0		1	60-80 Lts	3	30-40 Lts		
3	Fish	6	70-80 Kg	8	50 kg	7	100-120 Kg	4	30-45 Kg	4	40-60 Kg
4	Rice	2	3-4 Qtl	0		6	10-12 Qtl	2	1-1.5 Qtl		
5	spices	4	25-30 Kg	12	25-30 Kg	3	7-8 Kg	3	8-10 Kg	8	10-12 Kg
6	Medicinal shops	1	400-500 Rs	0		2	500-600 Rs.	2	300-400 rs	2	700-800 Rs
7	Cosmetics	12	600-700 Rs	3	300-500 Rs	8	800-1200 Rs	5	250-300 Rs	11	500-700 Rs
8	Pakoda shops	16	1200-1400 Rs	7	400-500 Rs	7	300-400 Rs	6	100-120 Rs	6	300-500 Rs
9	Snacks shops	8	100-200Rs	2	200-300 Rs	4	300-400 Rs			4	200-300 Rs
10	Liquor shops	40	2000-2200 Rs	0		0		8	200-250 rs		

11	Bamboo products	9	1800-2000 Rs	6	500-700 Rs	7	500-550 Rs	3	200-250 Rs	4	600-800 Rs
12	Pot shops	2	800-1000 Rs	12	1200-1500 Rs	3	200-300 Rs	1	150-200 RS	6	300-400 Rs
13	Poultry	6	800-1200 Rs	2	500-800 Rs	6	400-500 Rs.	3	300-500 Rs	8	2200-2500Rs
14	Cloths	19	1000-1200 Rs	5	900-1000 Rs	4	1000-1200 Rs	5	1000-1200	6	1500-2000
15	shoe shops	3	300-400 Rs	1	500-600 Rs	3	700-800 Rs	1	300-400	3	800-1000
16	Cobbler	3	50-80 Rs	2	30-40 Rs	0		3	50-80	3	100-110 Rs
17	Bettle shops	0		1	400-500 Rs	3	500-700 Rs				
18	Mahua shops	4	2000-2500 Rs	3	3000-3500 Rs	2	1000-1200 Rs	2	800-1000	4	2500-3500 Rs
19	Paddy shops	0		0		1	10-12 Qtl				
20	Seed	0		0						2	2000-3000

**Table 15: Traders**

		<b>Ghasko</b>	<b>Lakhodiy a more</b>	<b>Manigarhi</b>	<b>Binjha</b>	<b>Sarwan</b>
A.	During Season	100	0	20	0	40-50
B.	Lean Season	60	0	07	0	20-25

### **6.3 List of livelihood options**

From the market survey it is revealed that most of the transaction or the economy of the area is mostly dependent upon agriculture and allied activities. Vegetable occupies the major source of income and also has major export and import quantity. Paddy is also one of the important agriculture produce. Among another activities goatry and poultry has a



well developed and growing market demand which is highly fulfilled by the external markets. Bamboo and mud produce is also an important element of the market and the volume is quite low regarding the demand. It is also confined to specific caste.

<b>Item wise Sellers in studied market</b>			
•	Vegetable vending	:	310 (43.97%)
•	Goat seller	:	Seasonal at the time of durga puja
•	Bamboo Basket seller	:	29 (4.1%)
•	Mahua / Grain	:	26 (3.6%)
•	Grain vendors	:	11 (1.56%)
•	Poultry	:	25 (3.6%)
•	Liquor shops	:	48 (6.8 %)
•	Clothes	:	39 (5.5%)

Market survey indicates that among the permanent shop keepers, percentage of vegetable seller is highest which comprises near about 44 % of the entire market which is followed by the liquor shops and bamboo products shops. Presence of big traders in the market is not seen in any of the surveyed markets. Only paikars are seen present in the markets. The concept of commission agent is also not present in the hatts. Some of the big traders or commission agents are there in the village that come directly to the farmers and purchase the produce. They are generally local agents who have linkages with the traders of big markets.

Demand for potato, tomato and green vegetable is seen throughout the year. There is huge demand for potato, tomato and green vegetable during months of September, October and November. Demand for paddy exists round the year but most of the trade takes place during December-June. The price offered by trader is always below. Demand for broiler is round the year which increases during marriage season. Likewise the demand for bamboo products also gets increases at the time of Chhatt and Sawan. Based on analysis of

demand, supply and price trend, it is inferred that the market for following items is well developed and growing rapidly:

- Paddy and Green Vegetables
- Goat
- Poultry
- Dairy

Production of these items can be further promoted as livelihood enhancement activity in the study area.

## **7 Triangulation Table and Analysis**

Skill mapping, resource mapping and market study helped in understanding local economy and identifying potential activities for livelihood promotion in area. Initially a list of more than 16 potential activities was generated out of which 9 activities were selected for detail analysis. In order to select most suitable livelihood activity for the area, triangulation exercise was carried out. For triangulation exercise, 5 parameters were selected. For each parameter relevant indicators were selected. Study team assigned score (out of 10 points) for each activity after rigorous discussion. The result of the exercise has been presented in table 15.

### **Indicators for the Selected Parameter**

- Employment Potential: no. of days, caste and gender
- Market: sellers, buyers, facilitators and market system
- Risk: Production risk, Market risk, Price risk
- Resources: physical, natural, social, financial and human
- Profit\ return: whom, capital, investment

Among the 5 potential activities, three activities with top score are paddy cultivation, poultry and goat rearing. Other two farm activities got 35 and 34 points respectively. These activities can be promoted as supplement to farming activities.

**Table 15: Triangulation Table**

Sl. No.	Activity	Employment Potential	Market (Demand )	Resources (factors)	Profit/ Return	Favourable for Poor (Risk)	Score
1	Paddy	10	10	09	8	09	46
2	Potato	07	09	05	08	05	34
3	Green Vegetable	09	09	06	06	05	35
4	Goat Rearing	07	10	07	08	05	37
5	Poultry	08	09	06	08	06	37
6	Dairy	06	08	05	08	06	33

**Analysis of the Result****Paddy**

Paddy is a labour intensive crop; potential for employment generation is good. Around all the cultivable lands are used for paddy i.e. in all type of lands different varieties of paddy are cultivated during the monsoon season. Normal rainfall is sufficient for paddy cultivation. Demand for paddy and its product are stable. Due to increase in purchasing power of the people due to NREGS is continuously increasing the demand. It has both local demand as well as demand from rice mill (there is no rice mill in production area). The production cost is low and profit margin is good. Lack of irrigation facility is major problem. Farmers have to incur heavy loss in case drought.

**Poultry**

Majority of the population have small land holdings and the production is insufficient for the throughout the year. As poultry rearing is the activity for which the population has experience so, this can be promoted and supported further to develop as the livelihood activity. The market demand for the poultry is also growing and it is sufficiently high also. The demand is mostly fulfilled by the outside market. The local demand is also high. As it is a small duration product so a good source of income for the people who are doing labour works.

### **Goat rearing**

Goat rearing is the supportive livelihood activity already practiced by the HHs. They generally rear goat for credit support. The market demand for the goat mostly the pattahs is quite high during the durgapuja season. More than 50% demand is made available through outside market. During the peak hour the cost per unit varies between Rs. 2000-5000. So, this activity has a high potential. Household waste can be used as food and fodder for goat.

## **8 Conclusions**

This study has been very useful in getting insight of local area economy and hence identifying suitable activity for livelihood promotion. The local economy of the area is primarily agriculture based. Agriculture and animal husbandry are the main source of livelihood in the area. Agro-climatic conditions are favorable for the agriculture especially for rainy season vegetable cultivation. The study area has got good connectivity to developed markets like Mohanpur, Giridih, Patna, Asansol, Ranchi, Bardwan etc.

### **Critical Intervention Areas**

Productivity and sustainable use of natural resources are the major concern in farm and off-farm sector. In order to promote paddy cultivation as livelihood enhancement activity following steps can be taken:

#### *Paddy*

Productivity of paddy is major concern in area. In a good monsoon year, yield of hybrids is around 18-20 quintals per acre, that of improved varieties is around 15 quintals per acre and yield of local varieties is around 10 quintals per acre. For the farmers to attain food security level is a big challenge. It was assessed that the improved cropping techniques can be helpful in increasing productivity and production of paddy. Following steps can be taken for sustainable enhancement of productivity:

- Introduction of improved variety and standard seeds for better production.

- Better way of land preparation and use of weeder.
- Seed treatment
- Use of FYM, vermin compost, fertilizers and manure.
- Use of System of Rice Intensification (SRI) techniques.
- Collective marketing through SHG group specifically for small holders.

### *Poultry*

Poultry farm of 300-400 chicks per unit can generate an income of Rs. 1800-2500 per month. The market demand is always high. The occurrence of flue is the major risk which can be handled. The surplus labours which are involved in unskilled works can be utilize in this sector.

- Training to the participants on poultry rearing in initial stage
- Organize the SHGs for collective purchasing and selling.
- Credit support specifically for small holders.
- Bank linkages under SGSY to support the BPL families.

### *Goatry*

High mortality may be the major risk and factor of concern related to Goatry in the area. Fodder is easily available in local area. The vet nary services provided by the Govt can be well linked for disease control. As the people have first and long experience of goat rearing so this activity will be a good livelihood option for them.

- Introduction of improved and low mortality rate varieties in the area
- Training on disease control and hygiene will decrease the mortality
- Credit linkage to financial institution
- SGSY linkage to help the poor families

## ANNEXTURE

**Table 1: Land Availability and its uses in 12 Villages**

Sl. No.	Village Name	Tanr land (acre)	Middle land (acre)	Done (acre)	Fallow land (acre)	Waste land (acre)	Irrigated land (acre)	Unirrigated land (acre)	Pasture land (acre)	forest land (acre)	Total land (acre)
1	Binjha	35	25	115	10	20	25	180	3		205
2	Dahua	30	40	25	20	8	6	117	3		123
3	Jogiatikur	40		60	100		25	175	4	15	200
4	Manjhladih	40	70	35	10		30	125			155
5	Kolhariya	33	30	10	7	5	15	70			85
6	Hariraidih	20	50	25	25	20	8	132			140
7	Dhnaith	45	35	55	20	25	6	174	2.5	60	180
8	Manigarhi	40	45	60	7	15	30	137		10	167
9	Pichhi	20	50	25	25	20	25	115			140
10	Beltikri	50		150	25			225	18		225
11	Uparbaghdabra	35	25	40	20	15	10	125			135
12	Dondia(Dubjora)	80	50	60	25	5	12	208			220

**Table 2: Distance and no. of families in villages**

Sl.No	Name of the village	Panchayat	Total no. of Families	Distance from block
1	Binjha	Binjha	33	22
2	Upar bagdabra	Binjha	70	25
3	Hariraidih	Sonaraithar	40	13
4	Kolhariya	Binjha	140	23
5	Dahua	Dahua	80	6
6	Pichhi	Dahua	92	6
7	Manjhladih	Sarwan	44	1
8	Dhanait	Dhanait	70	12
9	Dubjora/Dondia	Dondia	225	7
10	Belthikri	Ratura Paharia	250	8
11	Manigarhi	Dakai	80	8
12	Jogiatikur	Dakai	35	10

**Table:3 Different category of farmers in villages**

Sl.No	Name of the village	Big farmers	%	Medium farmers	%	Small farmers	%	Sharing Agri	Total
1	Binjha	7	21.2	17	51.5	6	18.18	3	33
2	Upar bagdabra	3	17.6	4	23.5	7	41.18	3	17
3	Hariraidih	10	25	15	37.5	15	37.5	0	40
4	Kolhariya	10	7.14	70	50	30	21.43	30	140
5	Dahua	5	6.25	25	31.3	45	56.25	5	80
6	Pichhi	12	13	50	54.3	30	32.61	0	92
7	Manjhladih	3	6.82	12	27.3	24	54.55	5	44
8	Dhanait	0	0	5	12.5	5	12.5	30	40
9	Dubjora	1	1.54	8	12.3	50	76.92	6	65
10	Belthikri	6	4.26	90	63.8	45	31.91	0	141
11	Manigarhi	10	14.3	5	7.14	30	42.86	25	70
12	Jogiatikur	1	2.86	12	34.3	10	28.57	12	35
		<b>68</b>		<b>313</b>		<b>297</b>		<b>119</b>	

**Table 4: Different occupation within the villages**

Sl.No	Name of the village	animal raring	Small busin ess	Govt. job	Priv ate job	Stichi ng	Drive r	Mas on	Mecha nic	Ricks haw pulle r	Hauk er	Labour		Ot her
												Skilled	unskill ed	
1	Binjha	29	2	5	4			2			1	7	28	
2	Upar bagdabra	12	4	1	1					1			25	
3	Hariraidih	40		4	1	3	1			5			70	
4	Kolhariya		22	10	5	5	0	10	1	0	0	40	100	
5	Dahua						3	2		5		2	80	
6	Pichhi	92	2	5			13	1		2		20	35	4
7	Manjhladih			2	1	2	1			2	2		10	
8	Dhanait			1	1					1			30	
9	Dubjora	0	0	1	0	8	20	15	25	10	12	25	38	2
10	Belthikri	0	5	0	0	0	1	0	0	0	0	0	200	2
11	Manigarhi	3	25	1	10	2	8	0	2	5	0	0	14	
12	Jogiatikur	31	0	2	0	0	1	2	0	0	0	2	20	2

**Table 5: Status of Skilled worker in villages**

Sl.No	Name of the village	Carpenter	potter	Blacksmith	Barber	Goldsmith	Mason	Driver	Other
1	Binjha	0	0	0	0	0	2		26
2	Upar bagdabra	0	3						1
3	Hariraidih	0						1	
4	Kolhariya	12		1			10	0	
5	Dahua				1		2	3	
6	Pichhi	1					1	13	
7	Manjhladih							1	
8	Dhanait	3		1					
9	Dubjora				20		15	20	
10	Belthikri		7		2		0	1	20
11	Manigarhi		6		2		0	8	
12	Jogiatikur						2	1	

**Table 6: Migration status**

Sl.No	Name of the village	Average No. of HH	Place	Time of migration	Total no. of person migrates			Works they do				
					Male	female	Child	Servent	brick making	agri	La	
											Skilled	Unskill
1	Binjha	7	Kashmir	Jan- feb	7						Road constr	u
2	Upar bagdabra	2+16	Gujrat	Jan-July	18						Works in pharm acetica l compa ny,Roa d constr uction, Chair making	
3	Hariraidih	20	Delhi	Feb- Mar	26							Labour factory
4	Kolhariya	50	Delhi, Gujrat	Dec-jan, Mar-Apr	35	10		Females work in	10			Helper



								the houses				
5	Dahua	60	Delhi	Aug- Mar	10	10			15			Helper
6	Pichhi	70	Kolkata	Dec-jan, Mar-Apr	50	12		Home guard			Sweet making	Reza, t
7	Manjhladih	2	Delhi	Dec-jan,	2						Driver	
8	Dhanait	15	Kolkata	Feb	15			7	8			
9	Dubjora	85	Delhi, Gujrat, Kashmir	Summer	110			18	35		110	
10	Belthikri	35	Delhi, Gujrat, Maharastra	Throughout the year	45						45	
11	Manigarhi	12	Delhi	Aug- Mar	10	10						Helper
12	Jogiatikur	14	Delhi, Gujrat	oct-mar	14				5	6		

**Table7: Status of work under NREGS**

Sl.No.	Name of the village	Total No. of HH	No. of HH having NREGA cards	No. HH got work in NREGA cards
1	Binjha	33	33	32
2	Upar bagdabra	70	25	25
3	Hariraidih	40	38	38
4	Kolhariya	140	70	50
5	Dahua	80	35	20
6	Pichhi	92	50	35
7	Manjhladih	44	44	25
8	Dhanait	70	40	40
9	Dubjora	225	100	100
10	Belthikri	250	65	40
11	Manigarhi	80	94	94
12	Jogiatikur	35	18	18

**Table 8 : Economic status**

Sl.No.	Name of the village	Total HH	Rich	Medium	Poor
1	Binjha	33	5	13	15
2	Upar bagdabra	70	2	15	53
3	Hariraidih	40	3	20	17
4	Kolhariya	140	25	40	75
5	Dahua	80	0	10	70
6	Pichhi	92	12	50	30
7	Manjhladih	44	3	8	33
8	Dhanait	70	2	30	38
9	Dubjora	225	18	110	97
10	Belthikri	250	15	95	140
11	Manigarhi	80	10	10	60
12	Jogiatikur	35	2	14	19

**Table 9: Animal status**

Sl.No.	Name of the village	Ox	Kada	cow	calf	Buffalo	Buffalo calf	Goat	Pig	Poultry
1	Binjha	24		15	9	2	0	36	0	200
2	Upar bagdabra	34		52		3		22		
3	Hariraidih	84	20	38	20			60		180
4	Kolhariya	180	40	80	30	50	12	120		150
5	Dahua	80		15	13			100		35
6	Pichhi	200	20	100	100	20	20	60		100
7	Manjhladih	80	6	30	20	4		50		
8	Dhanait	60	4	40		3	2	80		30
9	Dubjora	130	30	160	90	30		120		120
10	Belthikri	100	20	150	60	20	10	100		50
11	Manigarhi	80	6	30	20			50		
12	Jogiatikur	36		60	50			40		40

**Table 10: status of water availability**

Sl.No.	Name of the village	River	Nala	Dadi	Pond	Well	Handpump
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		water availability	use	water availabil ity	use	water availability	use	water availabi lity	use	water availabi lity	use	water r avail abilit y	use
1	Binjha	1	Irriga tion					4	Irrigation and househol d consump tion	12	Irriga tion, drink ing	9	Drinki ng
2	Upar bagda bra	1	Irriga tion					5	Irrigation and househol d consump tion	7	Irriga tion, drink ing	4	Drinki ng
3	Harira idih							1	Househol d consump tion	1	Hous ehol d cons umpt ion		
4	Kolhar iya			1	irrig atio n			7	Irrigation and househol d consump tion	14	Most ly used for hous ehol d purp ose and anim al drink ing purp ose	16	Drinki ng
5	Dahua	1	irri gat ion , dri nki ng							5	Hous ehol d cons umpt ion and	4	Drinki ng

			pur pos e of ani ma ls								anim al drink ing purp ose		
6	Pichhi	1	irri gat ion , dri nki ng pur pos e of ani ma ls					4	Irrigation and househol d consump tion	15	Hous ehol d cons umpt ion and anim al drink ing purp ose	6	Drinki ng
7	Manjh ladih	1	irri gat ion					1	househol d use	11	Hous ehol d cons umpt ion and anim al drink ing purp ose	2	Drinki ng
8	Dhana it	1	irri gat ion	1	to irrig ate the khar if crop duri ng dry con ditio n			1	househol d use	7	Most ly used for hous ehol d purp ose and anim al drink ing	5	Drinki ng

											purpose		
9	Dubjora									5	Mostly used for household purpose and animal drinking purpose	6	Drinking
10	Belthikri			2	irrigation			1	Irrigation, household use, animal drinking purpose	7	Mostly used for household purpose	4	Drinking
11	Manigarhi	1	irrigation	0	0	1	Drinking	6	Irrigation, household use, animal drinking purpose	10	irrigation, drinking	10	Drinking
12	Jogiati kur	0	0	1	irrigation	0	0	5	household use, animal drinking purpose	14	mostly used for household	8	only 4 is in working condition, for

												d cons umpt ion and also used for irriga tion purp ose		drinki ng purpo se
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