

# BASELINE REPORT



UNDER  
*LAVS*  
*BBSR*

## MAHILA KISAN SHASHAKTI KARAN PARIYOJANA (MKSP)

“The extensive involvement of women in agriculture, their access to extension services and production assets is very much constrained. Most of them are not recognized as farmers for want of ownership of land, they

are not considered as beneficiaries of various government schemes.”

1. Introduction and Methodology.....	07-12
2. The village profile .....	13-20
3. Targeted households profile.....	13-27
4. Agriculture Status.....	28-39
5 .Agriculture income & expenditure .....	40-41
6. Govt. Scheme & Services.....	42-43
7. Institutions.....	44-46
8 Conclusion & Recommendations.....	47-48

## List of Tables

Table-2.1	Geographical Coverage under MKSP	13	
Table-2.2	Demographic Details of Selected HHs	14	
Table-2.3	Demographic Profile of Selected Program Blocks	14	
Table-2.4	Socio-Economic Status of Sample HHs	15	
Table-2.5	Land ownership		17
Table-2.6	Migration Status of Sample Area	19	
Table-2.7	Status of Livestock	19	
Table-3.1	Caste wise Household	21	
Table-3.2	Drinking water status	23	
Table-3.3	Education expenditure	24	
Table-3.4	Income from agriculture		26
Table-3.5	Training status	27	
Table-4.1	Annual crop calendar	28	
Table-4.2	Land holding status	30	
Table-4.3	Irrigation potential status	31	
Table-4.4	Ownership of Irrigation Equipment	32	
Table-4.5	Availability of Irrigation Structure	32	
Table-4.6	Chemical pesticides use status	33	
Table-4.7	Technical gap in paddy cultivation	36	
Table-4.8	SWOT analysis of agriculture	38	
Table-4.9	Key strategies and specific object	39	
Table-7.1	Status of institutional membership	45	

FGD: Focus Group Discussion

HR: Human Resource

INM: Integrated Nutrient Management

IPM: Integrated Pest Management

LRP: Local Resource Persons

MKP: Mahila Kisan Pathshala

MKPC: Mahila Kisan Producer Company

MKSP: Mahila Kisan Sashaktikaran Pariyojana

PG: Primary Group

PTD: Participatory Technology Development

PRA: Participatory Rural Appraisal

PRI: Panchayat Raj Institutes

SHG: Self Help Group

SRI: System of Rice Intensification

SWI: System of Wheat Intensification

WFPC: Women Farmer Producer Groups

WI: Women Institution

The primary focus of this baseline study was on current agricultural practices which include income from agriculture, linkages with the government schemes related to agriculture and relationships with primary and secondary institutions where the target groups are farmers. Keeping in mind this objective of the study, a total of 83 villages were covered across two blocks of the Koraput districts .The Baseline Study covered 300 households in Koraput. In each village one village profile was compiled and in each cluster, in the biggest village in terms of population, one FGD was also conducted.

In terms of demographic Profile, with respect to various castes residing in the all the villages of both of the blocks suggested that Scheduled Tribe seemed to be the pre dominant category as it formed 79 & 76 percent in Pottangi & Semeliguda respectively. The OBC formed a composition of nearly 13 percent in the sampled villages. The ratio of male and female is almost equal with male number is 697 and 685 in case of female.

The study indicated that maximum proportion of the targeted households were primarily involved in agriculture and contributed to about 76 percent of the total targeted households. Animal Husbandry also seemed to be a predominant occupation amongst the sampled villages and was executed by about 30 percent of the targeted households. Amongst other occupations practices were, Petty Trading, Government/Private Services, Landless Labour and Crafts work by Artisans.

With respect to the poverty status of the targeted households covered across the all villages, it was noted that 85 % of the targeted households were Below Poverty Line cardholders and about 15 percent of the targeted households belonged to the category of Above Poverty Line. Amongst the rest, about 9 percent reported to belong to the category of Antyodaya card holders.

The basic infrastructure was studied with respect to the villages and it was noted that electricity had penetrated only in 67 out of the 83 sampled villages. The situation with respect to road connectivity was not any more encouraging as it seemed to be present only in 53 out of 83

villages. It is important that the state of Primary Agriculture Cooperatives is strengthened in the area as its presence was noted only in 4 villages.

Also another standard for measuring the basic infrastructure would be the access to services that enhance the process of and the productivity from agriculture and allied activities i.e. agricultural facilities. Once again on further analyzing it can be established that in both the blocks have limited access to a canal, water reservoir/watershed and an extension officer. Most of the

Most of the respondents are having their own land which are subjected to traditional cropping where as almost 8 percent respondent have encroached the govt land for agriculture

respondents are having their own land which are subjected to traditional cropping where as almost 8 percent respondent have encroached the govt land for agriculture purpose.

An attempt was made to understand the main crops that are cultivated in the area. it was noted that the main crops included Paddy & Ragi. 90 percent respondents reported that the main crop that they cultivated was Paddy & maize and about 10 percent respondents reported that the main crop cultivated by them was Ragi. An important point to note here is that a single targeted household may grow more than one crop. Major crops grown outside of Ragi and

Paddy are Black Gram, Cotton and Gram which are grown respectively. Nearly 89 percent respondents used straight fertilizers, about 11 percent respondents used complex fertilizers and only a handful respondent practiced the use of micronutrients.

Nearly 17 percent of the farmers belonged to the marginal category and owned less than 1 acre of land. Nearly 26 percent farmers belonged to the category of small farmers with a land holding between one to two acres. About 45 percent respondents belonged to the category of medium farmers with a land holding of 2 to 5 acres and only about a handful were large farmers with land holding more than 5 acres.

It was reported that amongst the 300 targeted households surveyed, about 44 percent resided in Kachha houses, nearly 42 percent reported to reside in Semi-Pucca houses and only about 14 percent reported that their house was of the Pucca category. Thus, it can be concluded that

Kachha type of house is predominant in the area and this data seems to be consistent in relation to the predominance of BPL population in the study area.

98 percent reported that they resorted to rains for their source of irrigation facilities while dug well also seemed to be used by only 5 respondents, only 5 respondents have diesel pumps and 27 HHs have drip irrigation facilities for personal irrigation purposes. Use of pesticides was practiced by nearly 80 percent respondents in case of all important crops. It is important to promote the use of organic form of pesticides in the area as its penetration seems to be low.

The respondents were asked about whether they had received any agriculture extension services and it was noted that nearly 53 percent respondents had received these services, while the rest reported otherwise. With respect to the Institution from where these respondents had received the services included District/ Block level officials as reported by 68.3 percent respondents, agriculture department as reported by 37 percent respondents and private companies as reported by nearly 49 percent respondents. NGOs seemed to be more actively involved in providing these services as nearly 80 percent respondents reported this. Only about 15 percent respondents had received these services from Krishi Vigyan Kendra.

Out of the total MKs, 70 percent of them are enrolled in SHG but none of them are part of any federation, it also revealed from the compiled data that none of them are part of any PRI system which reflect their poor participation in local governance.

## 1.1 Background

Odisha has a mixed topography that consists of both hills and plains. The state has three predominant seasons: winter (November through February), summer (March through May), and the monsoon season (June through September). During the winter average temperatures range from 10° to 27° C (50° to 81° F). Summers are hot, with an average temperature of 29° C (85° F) and a high temperature that at times reaches 48° C (118° F). During the monsoon season temperatures average 19° to 30° C (66° to 86°). Odisha receives an average annual rainfall of about 1200 mm (nearly 50 in), of which 90 percent falls during the monsoon season.

About 74% population of Odisha resides in rural areas. Around 65 percentage of the total land holdings belong to small and marginal farmers occupying only 26 percent of the cultivable land. The net sown area is about 147.90 lakh hectares. The gross cropped area is 202.16 lakh hectares. The ratio of Kharif to Rabi crops is 1: 0.79 during 2006-07. The total irrigated area of the State is 43.3 % and remaining area is rain fed. The cropping intensity of the State is 136%.The State has about 70 percent rain fed farming area. Erratic and uneven distribution of rainfall is the major constraint for achieving targeted level of production. Due to failure of rains, drought condition also prevails almost every year in one part or the other. After the introduction of Soybean in 1980-81 some low value cereal crops have been replaced by Maize and the percentage coverage of cereals started declining. In case of Pulses some changes in the cropped area have been observed and the share of Odisha has been around 22.54% of national agriculture production. In spite of low level of irrigation, low fertilizer consumption, but due to better extension services and effective implementation of different agriculture programme. The major Kharif crops are: Paddy, Arhar, Maize, Black Gram, Moong, Niger, Groundnut and vegetables etc. The major Rabi crops are: Wheat, Gram, Lentil, Peas, Mustard and Linseed etc.

Despite such extensive involvement of women in agriculture, their access to extension services and production assets like seed, water, credit, subsidy etc is very much constrained. Most of them are not recognized as farmers for want of ownership of land, they are not considered as beneficiaries of various government schemes. Further due to multiple roles that women have to perform within the targeted household and in agriculture, her access to knowledge and information is also constrained and her opportunities get limited. Therefore, to improve the present status of women in agriculture, the GOI in MoRD announced MKSP as sub-component of National Rural Livelihood Mission [NRLM] with the primary objective to empower women in agriculture by making systematic investment to enhance their participation and productivity, as also create and sustain agriculture based livelihoods of rural women. Once the production capacities of women in agriculture improve, food security will follow for their families and communities.

In the tribal area entire family is engaged in Agriculture and women in most cases contribute more than male members of the family. However, as prevalent in our country, in this area also women do not get due recognition and empowerment through this activity as they are not recognized as farmer and so never given benefit. Rural poverty in general and backwardness of women in particular could be attributed to lower income from agriculture crops due to very poor yields and virtually no sustainability in agriculture activities compounded by very poor irrigation facilities.

Government of Odisha has massively promoted self help groups of women in the district. This is a very favorable opportunity to link these women members with agriculture based livelihood activities. Hence, the present proposal addresses the issue of women's' participation in sustainable agricultural development to enhance their livelihood in the proposed project area. With the promotion of proposed programmes by women and improve the yields of the crops by

**Agriculture, the single largest production endeavor in the country contributing around 16 percent of G.D.P. is increasingly being recognized as a female activity. Agriculture sector employees 80 percent of all economically active women, they**

intensification cropping pattern through the skilled women farmers. The soil health improvement is another important aspect of the proposal.

Agriculture (Para worker) Community Resource Person, men and women, will be groomed on institutional and technical aspects with a view that they will be serving as service providers in the local area. Training, exposure and constant handholding to the Women's institutions and Agriculture Para workers will be the key strategy of the project. The Women Institutes and the Local Resource Persons are expected to be leading the project implementation with facilitation support by the project staff.

To empower women in agriculture by making systematic investments to significantly enhance their participation and productivity thereby creating and sustaining agriculture based livelihoods of rural farm women, most of them being small and marginal farmers.

The objective of this project proposal is in line commensurating with the specific objectives of Mahila Kisan Sashaktikaran Pariyojana, a sub component of national Livelihood Rural Mission.

### 1.2 Purpose of the Study-

The purpose of the project is to collectivize women farmers at various levels for creating a strategic role for them in agriculture and creating sustainable agriculture based livelihood for them. The major components of the project include:

1. Building and nurturing farmers' groups at the primary and apex level
2. Planning and Implementation of agriculture based livelihood initiatives

The specific objectives of present proposal on MKSP are;

- i. To enhance the participation and productivity of women in agriculture.
- ii. To create sustainable agricultural livelihood opportunities for women in

3. Formation and development of Mahila Kisan Producer Company for market linkages and obtaining extension and knowledge services

The key activities to be undertaken as a part of the project would include:

1. Training, exposure and several capacity building interventions for Mahila Kisan groups.
2. Agriculture based livelihood interventions such as – trial and demonstration of Good Agriculture Practices (replacement of varieties, SRI, SWI, vegetable garden, seed production and dissemination, INM, IPM etc.), Land and Water Resources development (viz. Field bund, leveling, diversion based irrigation, stop dam, pond, dug wells, lift irrigation, sprinkler etc.)
3. Formation and development of MKPC, for which activities will include awareness building, drafting constitution, registration of the company, develop and establish system and procedures related to admin, accounts, HR, develop business plan and implementation, statutory compliance, etc.

In this contest, a baseline study undertaken to understand the current scenario which will serve as the base to mark changes during and post project implementation stages.

#### **Focus of the Baseline Study-**

The baseline study primarily focuses on current agricultural practices which include income from agriculture, linkages with the government schemes related to agriculture and relationships with primary and secondary institutions where the target groups are farmers.

#### **1.3 Methodology of the Study**

Sample selection- The determination of the overall sample size for the Baseline study is governed by several considerations, including key indicators, the availability of resources, and logistical considerations. This study is seen as providing data for a baseline that can be compared at mid-point and end of the project in terms of improved practices of agriculture, increment in agriculture income and improved status of women. The Baseline Study aimed to cover 300 targeted households.

In the baseline study three tools were used to collect information:

- 1) Targeted household Tool

II) Village Profile and

III) Focus Group Discussion

Training- Training for data collection was carried out with agenda and plan were prepared keeping in mind the information needed by the data collection team in order to gather relevant and robust data for successful completion of the study.

Interactive sessions used for the training helped participants to learn three tools thoroughly and they also participated enthusiastically in mock sessions. After each session/ tool, feedback was given to the participants and also clarifications were made if any doubts arise in between the session. Classroom training was followed by one day field practice which was very helpful the data collection team obtained hands on experience. The field training was conducted in a village near Bhopal on 6th June.

#### **1.4 Field Work and Data Collection-**

The entire field work was completed in around 30 days. In each village a team of two spent 3 days to complete targeted household selection and targeted household interviews. The PEs were involved in filling up of village profile and conduct Focus Group Discussion. Field Executives were doing monitoring and supervision of data collection. Scrutiny at village level was done by the data collection team under the guidance of Field Executives. The data then subjected to office level scrutiny and entered. Computerised checks were used to clean and validate the data, which was then analysed for table generation.

#### **1.5 Data Collection Techniques**

Focus Group Interviews (FG): The Focus Groups for each community are identified and formed based on the information obtained. Usually, these groups will be representative of the major livelihood systems identified in the particular community under study. Each FG constitutes a sample of targeted households which represent each livelihood system. Focus groups typically are formed on the basis of wealth ranking (WR) categories or livelihood groupings. They usually are desegregated by gender. The main objective of the FG is to be able to identify and

describe the common and shared characteristics among the community members that have the same livelihood system. In other words, the FG are targeted to identify and characterize similarities among targeted households. FG may also yield valuable information on trends on the livelihood systems and their security as perceived by the community members. Also important for FG interviews is information on sources of conflict within and among groups and communities, rights and responsibilities analysis, the local impact of national policies, as well as vulnerability and marginalization typologies. The discussions are flexible in time and structure, guided by a topical outline.

**Key Informant Interviews (KI):** Key Informant interviews could be conducted simultaneously to and/or right after the GI with the village's legal, political and/or natural leaders and authorities. If the HLSA has been properly planned, some of these key authorities should know ahead of time of the date and purpose of the visit and they should already be prepared to receive and collaborate with the survey team. Key informants may be other than local authorities, including persons noted for their unique perspective and/or high degree of vulnerability, such as widows, educated girls, ethnic minority leaders, elders, school teaches, and health post attendants. The result of these interviews should be a better design of the community profile and a wealth of information useful to cross-check that information obtained from GI and Focus Group Interviews (FG).

**Group Interviews (GI):** These are usually held with a large, but manageable, group of community members, sometimes gender segregated in order to capture differing views, and they are directed to obtain a general backdrop of the community. Group interviews are used to collect basic information about the community infrastructure and facilities (schools, medical posts, etc.), land tenure systems, markets, general trends on population movements and climate, cultural characterization and, very importantly, they allow the identification of the most prevalent livelihood systems. The GI are conducted based on a topical outline and sufficient time should be allowed for the free and open expression of community members.

**SWOT Analysis:** Building on the Institutional Analysis, a SWOT analysis identifies the internal Strengths and Weaknesses, and external Opportunities and Threats, shared by the organizations in question. By going beyond the listing of the most important factors or characteristics of each (SWOT) category, a SWOT analysis links each of the perceived “threats” to related

## Ch-2 Village Profile

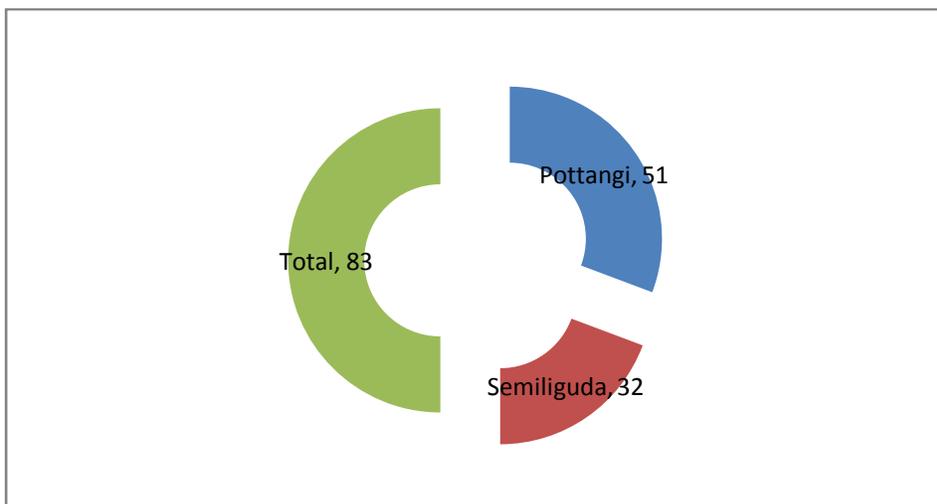
organizational “weaknesses”, the “weaknesses” to related “opportunities”, and the “opportunities” to related “strengths”. The items at which the most lines (links) converge indicate the priority threats to be mitigated, weaknesses to be corrected, opportunities to be seized, and strengths to be reinforced.

The objective of this chapter is to understand the demographic profile, infrastructural facilities and crops produced across the **83** villages covered under the sample of the study. The chapter is the result of the analysis obtained in the village profile tool.

The table below shows the geographical coverage of the Project.

**Table.2.1: Geographical Coverage Under MKSP**

Sl.No	District	Block	No. of Villages	No. of MKs covered
1	Koraput	Pottangi	51	199
2	Koraput	Semiliguda	32	101
<b>Total</b>			<b>83</b>	<b>300</b>

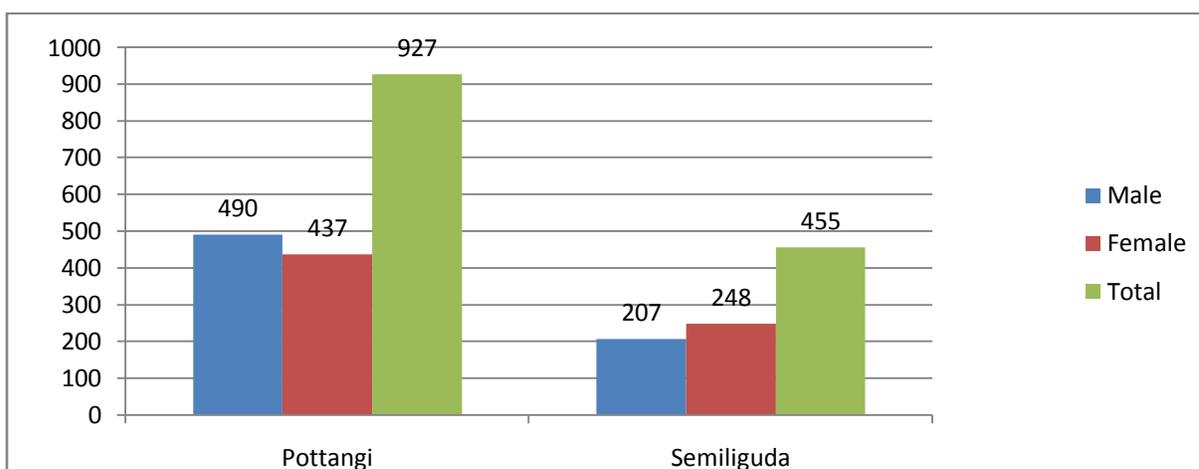


The above table is self explanatory. The targeted households of Potangi and Semiliguda block are from 51 & 32 villages respectively.

The total number of targeted households in all the villages combined was noted to be 300. In terms of demographic Profile, with respect to various castes residing in the all the villages of both of the blocks suggested that Scheduled Tribe seemed to be the pre dominant category as it formed 79 & 76 percent in Pottangi & Semiliguda respectively. The OBC formed a composition of nearly 13 percent in the sampled villages. The ratio of male and female is almost equal with male number is 697 and 685 in case of female.

**Table -2.2 Demographic Details of Selected HHs**

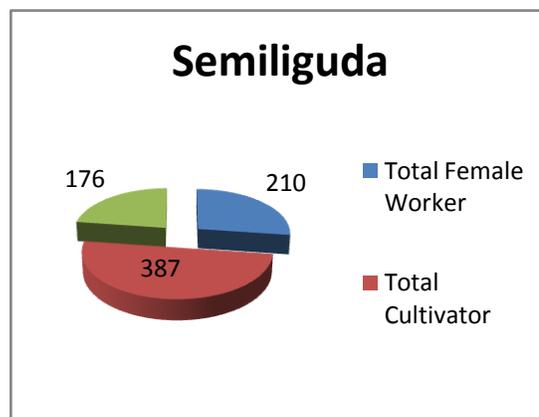
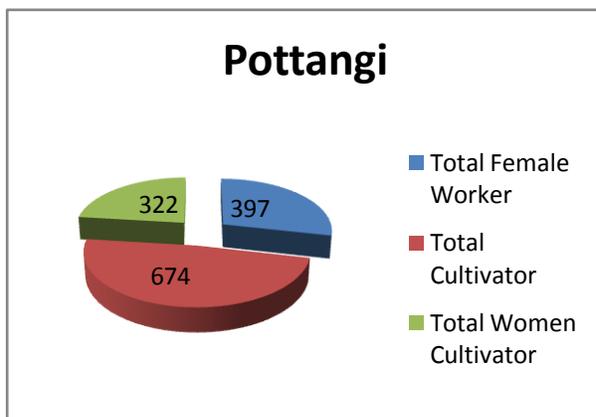
SI.No	Block	No. of MKs/HHs	Total Family Members		Total
			Male	Female	
1	Pottangi	199	490	437	927
2	Semiliguda	101	207	248	455
	<b>Total</b>	<b>300</b>	<b>697</b>	<b>685</b>	<b>1382</b>



**Table.2.3: Demographic Profile of Selected Program Blocks**

SI.NO	Block	Total Population	Total ST Population	ST as % of TP	Total Female Worker	Total Cultivator	Total Women Cultivator	Women Cultivator as % of Total Women
1	Pottangi	927	732	79	397	674	322	74
2	Semiliguda	455	345	76	210	387	176	71

<b>Total</b>	1382	1077	607	1061	498
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## 2.2 Primary Occupation-

The study indicated that maximum proportion of the targeted households were primarily involved in agriculture and contributed to about 76 percent of the total targeted households. Animal Husbandry also seemed to be a predominant occupation amongst the sampled villages and was executed by about 30 percent of the targeted households. Amongst other occupations practices were, Petty Trading, Government/Private Services, Landless Labour and Crafts work by Artisans.

## 2.3 Poverty Status-

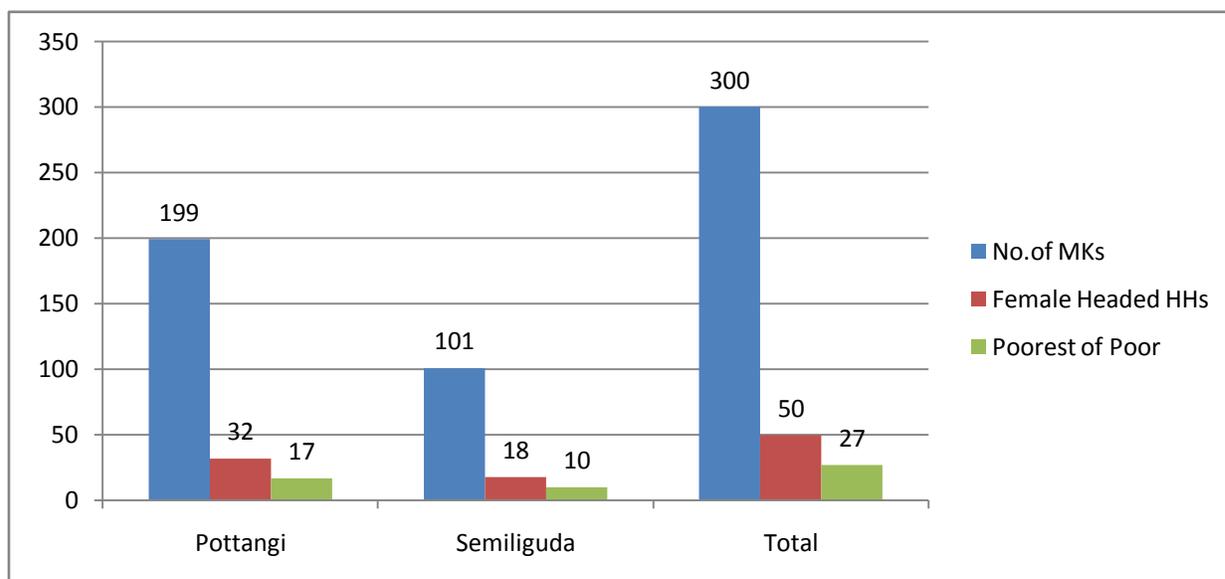
With respect to the poverty status of the targeted households covered across the all villages, it was noted that 85 % of the targeted households were Below Poverty Line cardholders and about 15 percent of the targeted households belonged to the category of Above Poverty Line. Amongst the rest, about 9 percent reported to belong to the category of Antyodaya card holders.

**Table 2.4: Socio-Economic Status of Sample HHs**

BLOCK/GP	APL	BPL	Grand Total
<b>Pottangi</b>			
Chandaka	15	48	63
Deopottangi	00	26	26
Kotia	2	9	11
Maliput	3	25	28

<b>Pukali</b>	3	32	35
<b>Sambai</b>	6	30	36
<b>Sub Total</b>	29	170	199
<b>Semiliguda</b>			
<b>Khudi</b>	2	21	23
<b>Kunduli</b>	4	20	24
<b>Pitaguda</b>	6	24	30
<b>Renga</b>	6	18	24
<b>Sub Total</b>	18	83	101
<b>Grand Total</b>	47	253	300

A large number of female member households (9%) were found to be poor. More than two fifths i.e 50 no of these are women headed households.



## 2.4 Basic Infrastructure-

The basic infrastructure was studied with respect to the villages and it was noted that electricity had penetrated only in 67 out of the 83 sampled villages. The situation with respect to road connectivity was not any more encouraging as it seemed to be present only in 53 out of 83 villages. It is important that the state of Primary Agriculture Cooperatives is strengthened in the area as its presence was noted only in 4 villages.

**In terms of market linkages, weekly markets were regularly set up in only 4 villages out of 83. Because of which the villagers find it hard to sell their product and produces on appropriate outlet with right price**

These basic infrastructure facilities can be further divided into three sub-facilities namely:

1. Basic Infrastructure facilities i.e. Road to the village, electricity connection to the village, presence of a post office in the village etc.
2. Agricultural facilities i.e. presence of canal and water reservoir/watershed for irrigation, whether an extension officer serves in this village.
3. Health facilities i.e. presence of a sub-centre and a veterinary centre in the village, is there a doctor/ Rural medical practitioner in the village.

### 2.5 Agricultural Facilities-

Also another standard for measuring the basic infrastructure would be the access to services that enhance the process of and the productivity from agriculture and allied activities i.e. agricultural facilities. Once again on further analyzing it can be established that in both the blocks have limited access to a canal, water reservoir/watershed and an extension officer. Most of the respondents are having their own land which are subjected to traditional cropping where as almost 8 percent respondent have encroached the govt land for agriculture purpose.

**Table-2.5 Land ownership**

Land ownership	Own land	Encroacher	No Land	Grand Total
<b>Pottangi</b>	178	14	7	199
<b>Semiliguda</b>	91	9	1	101
<b>Grand Total</b>	269	23	8	300

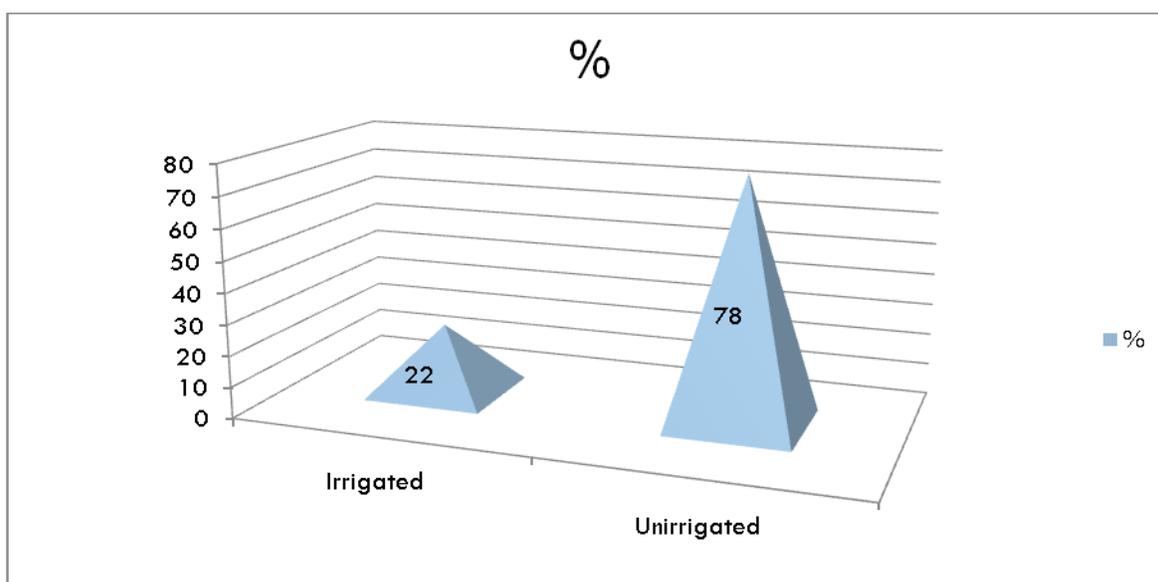
### 2.6 Health facilities-

Yet another standard for measuring basic infrastructure would be access to institutions and individuals that provide health facilities like sub-centre and doctors etc. Result shows that 46

villages have access to a doctor/rural medical practitioner, whereas 62 villages have access to a sub- centre and 47 to a veterinary centre.

## 2.7 Irrigation Facilities

With reference to irrigation facilities, it was noted that out of total cultivable land, maximum area under irrigation was reported in 5 villages where 65 percent area are under irrigation, whereas there are 8 villages that have reported that none of their cultivated area is under irrigation. If the data of all the villages are taken together then we find that more area in these 84 villages is un-irrigated than irrigated, 22 percent of total cultivated area in the 84 villages is irrigated whereas the rest (78 percent) is un-irrigated.

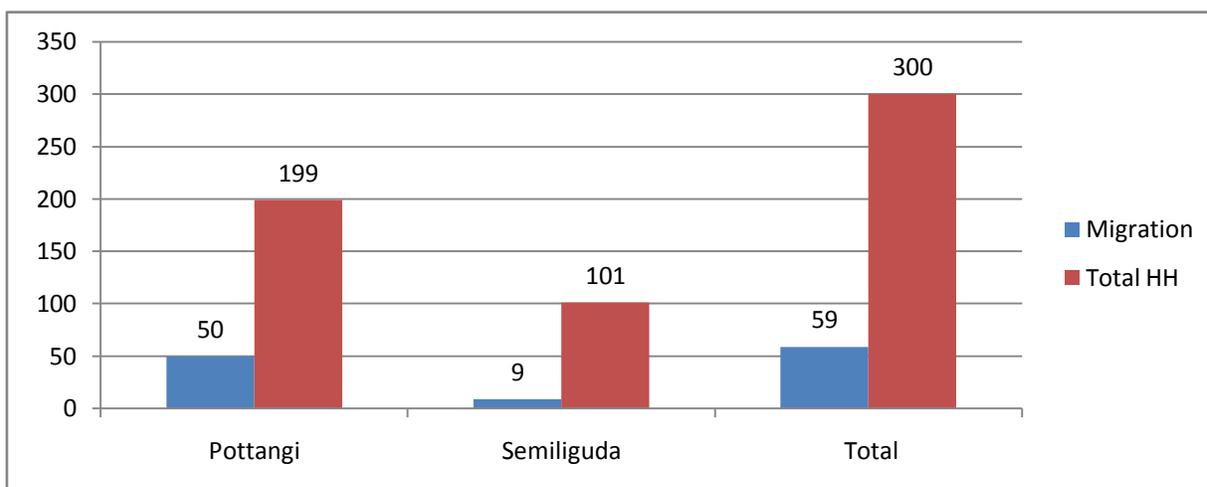


## 2.8 Migration status-

Yet another standard for measuring quality of life is migration status of the villages .Result shows that 59, roughly 20% of the respondents admitted migrating to other places during different periods of a year in search of work. These migrants even went to outside of the state for better livelihood opportunities.

**Table.2.6: Migration Status of Sample Area**

Migrate to other places	Yes	No	Total
Pottangi	50	149	199
Semiliguda	09	92	101
<b>Total</b>	<b>59</b>	<b>241</b>	<b>300</b>



## 2.9 Livestock

**Table- 2.7 Status of Livestock**

Parameter	Animal composition in Nos.		
	No of HH involved	Nos.	Remarks
Cattle			
Indigenous breed	92	231	
Cross breed	-	-	
Buffalo			
Local	3	28	
Improved	-	-	
Sheep	-	-	

Goat	69	260	
Poultry	49	327	
Others	-	-	

The Livestock is mostly handled by the small, marginal or landless labourers. Commonly the small animals (Goat, Sheep), birds are reared by the poor while the large animals (Cattle, Buffaloes etc.) by the comparatively better ups. The farmers are maintaining their livestock for drought purpose and getting negligible milk & meat products from it. They are lacking in management, feeding, breeding and disease control measures. As a result there is poor growth, non-descript offspring and huge mortality of animals/ birds due to out breaks.

**The farmers are facing difficulty in availing common minimum livestock services like restraining, wound dressing, administration of medicines, outbreak reporting etc. As a result there is heavy loss due to frequent morbidity and high mortality of animals/birds. Provision of doorstep services for these common problems can minimize the loss significantly. But the farmers are facing difficulties to avail such services as and when required at their doorstep due to remoteness and inadequate professional manpower in Livestock Department.**

### Ch-3 Targeted household Profile

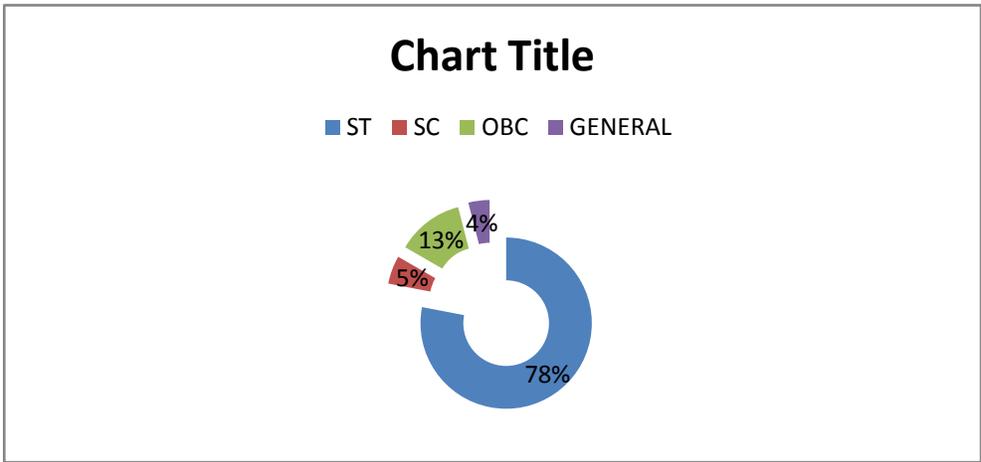
This section portrays complete information about the profile of the targeted households surveyed, i.e. different social category, economic status, type of houses that they reside in, availability of drinking water and toilet facilities. In addition to this, the chapter highlights on the educational profile of the targeted household member with special focus on women work participation. Here, it must be noted that analysis is done on the basis of the data that was captured in the tool targeted to survey the targeted households.

#### 3.1 Basic Profile

3.1.1 Targeted household Category With reference to the Social categories of targeted households surveyed in the study, it can be concluded that amongst a total of 300 targeted households interviewed, 78 percent belonged to scheduled tribe which is not surprising noting the fact that Koraput is a tribal dominant district. The Scheduled Caste composed nearly 5.3 percent of the population sampled and other backward caste composed nearly 12.6 percent. General Category was represented by about 4 percent amongst the sample studied in the project area.

**Table- 3.1 Caste wise Household**

Block	GP	ST	SC	OBC	GENERAL	TOTAL
<b>Potangi</b>	Chandaka	49	3	11	0	63
	Sambai	32	0	1	3	36
	Kotia	11	0	0	0	11
	Maliput	20	0	8	0	28
	Deopottangi	24	2	0	0	26
	Pukali	21	6	3	5	35
	<b>Semiliguda</b>	Khudi	23	0	0	0
	Pitaguda	19	3	7	1	30
	Kunduli	18	2	3	1	24
	Renga	17	0	5	2	24
		234	16	38	12	300



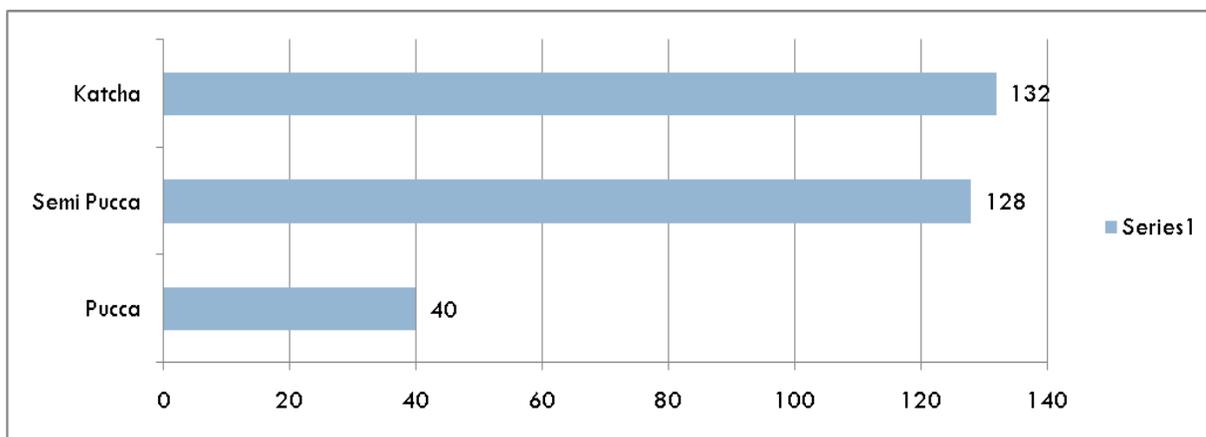
### 3.2 Economic Status –

In terms of the poverty status of the targeted households surveyed, it was noted that a little less than one sixth (about 47) fell in the category of Above Poverty Line. Quite a lot (253) of the respondents belonged to Below Poverty Line.



### 3.3 House Type, Drinking Water and Toilet-

In order to understand the profile of respondents covered in the study, certain other factors such as type of house that they reside in, availability of drinking water and sanitation facilities was also studied. It was reported that amongst the 300 targeted households surveyed, about 44 percent resided in Kachha houses, nearly 42 percent reported to reside in Semi-Pucca houses and only about 14 percent reported that their house was of the Pucca category. Thus, it can be concluded that Kachha type of house is predominant in the area and this data seems to be consistent in relation to the predominance of BPL population in the study area.



In terms of availability of toilet facilities, it was noted that despite the numerous sanitation programmes prevalent in the state, only about 4 percent of the 300 respondents reported to possess a in-house toilet and 9 percent on community toilet the rest did not.

**Table-3.2 Drinking water status**

Source of Drinking water	Own	Govt.	Private	Others	Total
<b>Pottangi</b>	11	122	20	46	199
<b>Semiliguda</b>	1	89	3	8	101
<b>Total</b>	12	211	23	54	300

The sources of drinking water available to the respondents was also studied and it was noted that public hand pump was the predominant source amongst the 300 respondents surveyed , as nearly 62 percent reported that it was their main source of drinking water supply. Amongst the other sources of water supply used were, Pipeline into the house, rainwater collection, stream/river, protected dug well, hand-pump at home and unprotected dug well.

### 3.4 Education Profile-

On the question of educational background of the Targeted household members surveyed (a total count of 300 members). Here, it was noted that a little less than half of the respondents 148

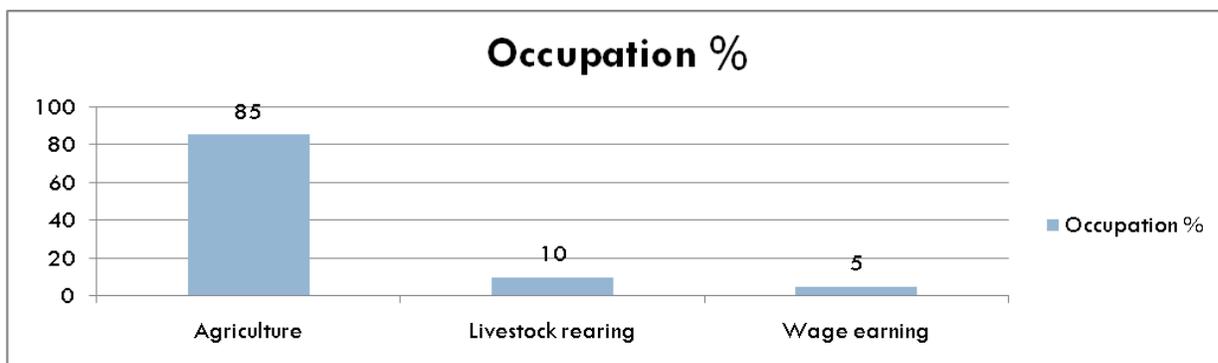
(about 44percent), were illiterate. A little less than one fourth (about 23percent) respondents, reported to have been educated till primary level. It was also observed that very few respondents reported to have been educated at and above Higher Secondary levels of education. The majority of the respondents revealed that their families are unable to meet expenditure on education of children which resulted in poor literacy rate among the respondents.

**Table-3.3 Education expenditure**

Family able to meet expenditure on education of children	Yes	No	Not responded	Total
<b>Pottangi</b>	44	132	23	199
<b>Semiliguda</b>	6	95	0	101
<b>Grand Total</b>	50	227	23	300

### 3.5 Activity Profile-

An attempt was made to understand various activities that the respondents and their targeted household members aged above 14 years, are involved in for the purpose of livelihood and their days of involvement in the same, which in turn would give a detailed understanding of the nature of activities and nature of involvement of the targeted household members covered in the study. Here, after studying the educational profile, and agriculture being the predominant occupation in the state, it was not surprising to note that amongst the 300 targeted household members above the age of 14, 85percent were involved in farming. Quite a few respondents (nearly 10 percent) also reported to be involved in livestock management & only 5% in wage earning.



### 3.6 Working Women-

It was noted that from a total of 300 women who were above the age of 14, covered in the sampled targeted households, 287 women (95 percent) reported to be working in agriculture related activities.

### 3.7 Details of non-wage generating activities by female members-

The non-wage activities performed by the female members of the family include cooking, cleaning, washing clothes, washing utensils, taking care of children, firewood collection, rearing and milking cattle, purchasing targeted household items and agriculture in own field. Very few women reported to perform activities such as teaching their children. Further, it is important to note that nearly 63percent women reported that they were involved in agriculture practice in their own field. In terms of the number of hours spent in a day on these activities, the women reported that on an average they spend 8.1 hours a day on these activities.

### 3.8 Details of the wage generating activities by female members-

An attempt was made to understand the wage earning activities of the women member covered under the study. It was interesting to note that amongst 340 women who reported to be involved in wage earning activities, only 37 percent were involved as agricultural daily wage labour for their source of wage, while non-agriculture-daily wage labour seemed to be more predominant as it was performed by nearly 58 percent respondents.

Further, in order to understand the profile of these working women, an effort was made to look at these women in terms of the Social and economic Category that they fall under. Here, it was

noticed that most of these women (nearly 69 percent), belonged to the category of Scheduled Tribes, about 16 percent belonged to the category of Scheduled Caste and about 15 percent were from the category of other backward caste. In terms of Economic Category, nearly, 58 percent were Below Poverty Line cardholders, about 6 percent women were Antyodaya cardholders and nearly 25 percent women were Above Poverty Line cardholders.

### 3.9 Details of women involved in agricultural activities-

Only two types of activities performed by women has been labelled as agricultural in nature namely agricultural daily wage labour (wage earning) and agricultural work on own field (non-wage earning). An analysis of data collected for the same points that out of a total of 300 respondents who claimed to have worked as either agricultural daily wage labour or performed some sort of agriculture related activity on their own field, 162 said that they were involved in the non-wage earning activity of working on their own field, only 125 said otherwise i.e. working as an agricultural daily wage labour.

On further analysis of this data, it was not surprising to find that the majority of the respondents from all two blocks were involved in doing agricultural work in their own field. 80 percent of women here involved in agricultural activities are interested to increase their income from agriculture through technology interventions.

**Table-3.4 Income from agriculture**

Interested to increase income from agriculture	Yes	No	Grand Total
Pottangi	140	59	199
Semiliguda	101	0	101
<b>Grand Total</b>	<b>241</b>	<b>59</b>	<b>300</b>

### 3.10 Decision making on choice of work by women-

Here, it is also important to understand whether the women made the decision to work as wage labourers on their own, or was the decision thrust upon them. In this context, it was noted that, nearly 43 percent targeted households reported that usually a joint decision was the one which guided them. It was also noted that 34 percent also reported that they made the decisions themselves. Other decision makers for these women included elder male members of the family

and elder female members of the family and the male member in the family. Here, it is important to note that despite the women being involved in earning activities considerably, only 42 targeted households received any training on agriculture.

**Table-3.5 Training status**

Received any training in agricultural	Received	Not received	Grand Total
Pottangi	41	158	199
Semiliguda	1	100	101
Grand Total	42	258	300

The objective of this chapter is to understand various agriculture practices prevalent among the community which in turn may give direction to the project to address the gaps and focus on area of improvement

#### 4.1 Agriculture

## Ch-4 Agriculture Status

Agriculture is the core predominate livelihood option and major occupation of the villagers in Kharlikani village. Paddy is the subsistence crop grown in the village in all type of land. Green Gram, Black gram and Arhar are the major pulse crops. During Rabi some pulse crops like Bengal gram, Khesari and Desi Pea are taken as Pyra crops to accelerate their income and annual basic need. Relatively very small area is covered under crops in Rabi and Summer seasons. Villagers are mainly using local variety seeds and less dose of fertilizer in crop fields. The cultivation of improved varieties or cash crop is not practiced by the villagers due to their poor knowledge and non availability of irrigation facility.

**Table- 4.1 Annual Crop Calendar**

Kharif	Type of Land	Crop	Variety	Yield Qt/Acre	Fertilizer	Pesticide
	Aat	Green Gram	Chikini, Black, Green	50 kg/ Ac	Nil	Rogor
		Black Gram	Chikini, Blak, Green	1 qt./ Ac	Nil	Rogor
		Paddy	Saria, Dani sarya	3 qt/ Ac	Urea, DAP	are using
	Mal	Paddy	Annapurna, Khandagiri, Parijata, Pathara, Luhungi Dhan	5-6 qt./Ac	Urea, DAP	Super Killer
	Type of Land	Crop	Variety	Yield Qt/Acre	Fertilizer	Pesticide
	Berna	Paddy	Ar-36, HMT, Lalat, 1010	8-9 qt/Ac	Urea, DAP	Super Killer
	Bahal	Paddy	Swarna, Bhulu, HMT,	12 qt/Ac	Urea, DAP	Super Killer

			1014, 1010			
	Vegetable	Tomato	Deshi, Hybrid(BT-2)	6 qt/ Ac	Urea, DAP, SSP, MOP	
		Brinjal, , Jhunga, Pumpkn, Ladies Fingure	Self consumption	Poor yield	Urea, DAP	Few farmers are using
Rabi	Mal, Berna & Bahal	Chili, Tomato Gram & Mustard	Self consumption	Poor yield	Urea, DAP	Few farmers are using
Zaid	No Crop					

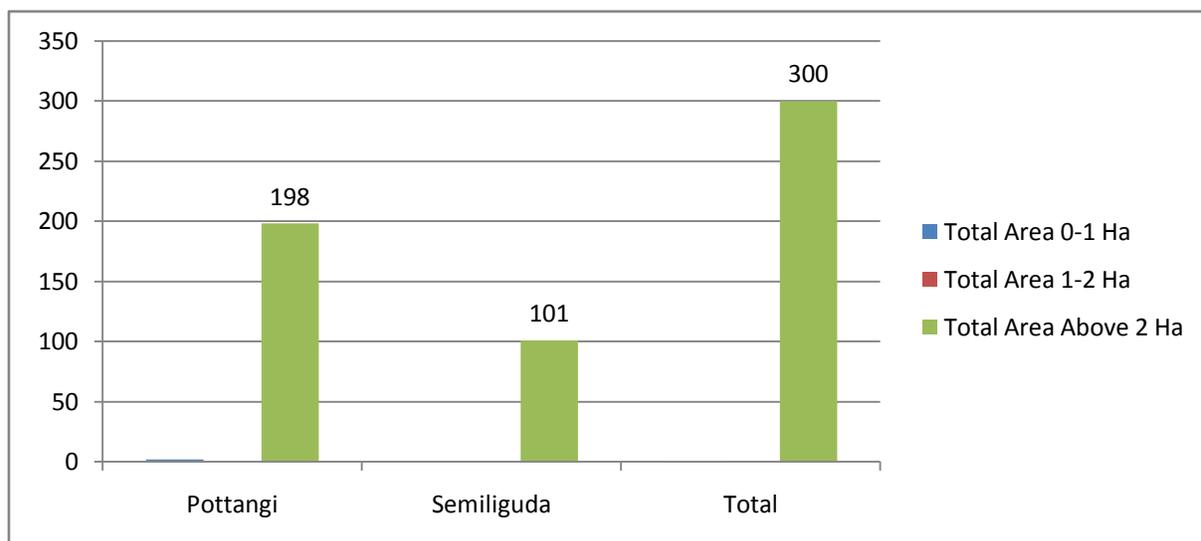
#### 4.2 Cultivated Land Size-

In order to understand the agricultural practices it is important to know the land size of the respondents. As the chart shows, nearly 17 percent of the farmers belonged to the marginal category and owned less than 1 acre of land. Nearly 26 percent farmers belonged to the category of small farmers with a land holding between one to two acres. About 45 percent respondents belonged to the category of medium farmers with a land holding of 2 to 5 acres and only about a handful were large farmers with land holding more than 5 acres.

**Table-4.2 Land holding status**

Sl.No	Block	No.of MKs	Total Area
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			0-1 Ha	1-2 Ha	Above 2 Ha
1	Pottangi	199	1	0	199
2	Semiliguda	101	0	0	101
	<b>Total</b>	<b>300</b>	<b>1</b>	<b>0</b>	<b>300</b>



#### 4.3 Main Crops-

An attempt was made to understand the main crops that are cultivated in the area. it was noted that the main crops included Paddy & Ragi. 90 percent respondents reported that the main crop that they cultivated was Paddy & maize and about 10 percent respondents reported that the main crop cultivated by them was Ragi. An important point to note here is that a single targeted household may grow more than one crop. Major crops grown outside of Ragi and Paddy are Black Gram, Cotton and Gram which are grown respectively.

It can be established that almost all the farmers grow at least 2 crops in their own field, which is to be expected. Also as one moves up the ladder of farm size ownership one finds that the percentage composition of farmers who grow 3 crops on their own field also steadily increases from 45.1 percent (as in the case of Marginal farmers) to 74.2 percent (as in the case of Medium farmers) and 67.9 percent (as in the case of Big farmers). Also as expected, the percentage composition of farmers that grow 5 crops is least in the case of Marginal farmers (9.9 percent) and most in the case of big farmers (28.6 percent).

#### 4.4 Irrigation-

Irrigation is very vital for better agricultural production, and for a state which largely depends on rain-fed water, adequate irrigation facilities are more important. Further, Paddy and Wheat being one of the main crops grown in the state, irrigation facilities become even more important because of the regular water supply that is needed for the crop to grow. Amongst the respondents, nearly 98 percent reported that they resorted to rains for their source of irrigation facilities while dug well also seemed to be used by only 5 respondents. Pond, river/stream, canal, tube wells and stop dams were amongst some other sources of irrigation that were resorted to by the respondents. Resorting to rains only as a source of irrigation is an alarming situation in the area, especially with the drastically changing climatic conditions across the country due to global warming. So, there should be more initiatives to form check dams and watershed to avoid such dependence in future.

**Table-4.3 irrigation potential status**

No of HH having irrigation(farm pond /Dug well) sources	Having irrigation sources	Having no irrigation sources	Grand Total
Pottangi	3	196	199
Semiliguda	2	99	101
<b>Grand Total</b>	<b>5</b>	<b>295</b>	<b>300</b>

The Focus Group Discussion emphasized on the findings obtained through the Targeted household Tool. In the study areas only 5 respondents have diesel pumps and 27 HHs have drip irrigation facilities for personal irrigation purposes and the problems faced here were reported to be the depleting levels of ground water table. This problem was more evident especially in the summer season.

**Table-4.4: Ownership of Irrigation Equipment**

Sl.No	Block	No.of	Irrigated Equipment	Total
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MKs							
			Diesel Pump	Drip	Sprinkler	Other	
1	Pottangi	199	3	16	0	0	19
2	Semiliguda	101	2	11	0	0	13
<b>Total</b>		<b>300</b>	<b>5</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>32</b>

**Table-4.5: Availability of Irrigation Structure**

Sl.No	Block	No.of MKs	Existing Structures				Total
			Check Dam	Gully Plug	Nala	Other	
1	Pottangi	199	2	12	6	0	20
2	Semiliguda	101	0	14	3	0	17
<b>Total</b>		<b>300</b>	<b>2</b>	<b>26</b>	<b>9</b>	<b>0</b>	<b>37</b>

#### 4.5 Nursery Raising and Transplantation-

Analysis of nursery raising and transplantation based on the findings from Group Discussions, it was observed that Nursery was not raised for any crops across districts, except Tomato in some villages. Further, it was observed that for all the other crops seeds are sown in rows. Here the land is drilled properly to maintain moisture and heat.

#### 4.6 Weeding-

As mentioned earlier, based on FGD findings, weeding was done manually across all crop categories in both blocks. Khurpa was used for the same.

#### 4.7 Fertilizer and Manure-

In agriculture, application of fertilizers and manure plays a very important role in the quality and quantity of the produce obtained, hence it is essential to understand the practices of the respondents with this respect. Here, the respondents were asked about the fertilizers that they used for the major crops that they cultivated. The results obtained indicated that nearly 89percent respondents used straight fertilizers, about 11percent respondents used complex fertilizers and only a handful respondent practiced the use of micronutrients. Here, it is important to realize whether the farmers actually understand the combination of the fertilizers that they are using and whether they are applying these at the right time and in right quantity. In terms of use of organic manure, it was observed that this practice was prevalent only amongst quite a few respondents. Amongst these, about 99 percent reported that in terms of organic manure they used cow dung. Amongst the other organic manure Vermi-compost was not used at all. Further analysis was done to understand the name of the fertilizers that were used by the respondents and it was noted that DAP, Urea, SSP and Potash were predominantly used.

#### 4.8 Pesticides-

An attempt was made to understand the practices with respect to the use of pesticides amongst the targeted household sample studied. The results obtained indicated that across the crops Maize, Black Gram, Paddy and Arhar, the use of insecticides seemed to be popular. Use of pesticides was practiced by nearly 80 percent respondents in case of all important crops. It is important to promote the use of organic form of pesticides in the area as its penetration seems to be low.

**Table-4.6 Chemical pesticides use status**

Using chemical pesticides	Yes	No	Grand Total
Pottangi	145	54	199
Semiliguda	98	3	101
<b>Grand Total</b>	<b>243</b>	<b>57</b>	<b>300</b>

#### 4.9 Harvest-

An attempt was made to study the machinery that is used by the respondents to harvest their yield, which would in turn help to comprehend the penetration of technology with respect to agriculture amongst the sample covered. Sickle was found to be the pre-dominant machinery used for the purpose of harvesting as reported by about 93percent respondents. Participants in the Focus Group Discussions also mentioned that harvesting was done manually across all crop categories in all the villages studied.

#### 4.10 Threshing-

In the Focus Group Discussions it was noticed that in the districts threshing was done manually however, in the some cases thresher machines were used. Here, participants also reported that whether to use machines or not is usually dependant on the quantity of yield too.

#### 4.11 Storage-

Storage also contributes to be an essential component of agriculture as it is one element which if executed properly may fix a good price for the yield. The respondents were quizzed about whether they stored the crop that they produced or directly transported it after the harvest. Here, it was noted that majority, nearly 89percent respondents reported that they did not store their crop and the rest reported otherwise. With reference to the enquiry on where exactly did they store the crop, nearly 70 percent respondents, of those who store the crop, reported that they stored it inside their house while the rest stored it in godowns. An attempt was also made to understand the reason for storage of crops as perceived by the respondents and here it was noted that about 49 percent respondents reported that they stored the crops for better prices. A little more than one fourth attributed the cause to family issues and about 17 percent reported that they stored in order to sell it at the time of need. It was also noted that nearly 2 percent stored that crops on account of no buyers in the market indicating that there were chances that yield may go waste in the long run. The respondents were also probed with respect to the place of selling and here, nearly 22 percent respondents reported that they sold their produce in their own village whereas about 9percent respondents sold it at a purchasing site near the village and interestingly about 49percent used Local Haats as the place for selling. Only a handful resorted to Mandi and other options. Focus Group Discussions confirmed the findings of the Targeted

household tool and revealed an interesting fact that quite a few seeds are also stored purposely for utilization as seed in the next season

## 4.12 MAJOR CONSTRAINTS

### Climate

Aberrations like late onset of South-West monsoon, dry spells immediately after sowing, and breaks during midseason and early withdrawal of rain are frequently observed in these districts leading to drought like situations. There is a general trend in rise of summer temperature. Loss of nutrients from soil due to soil erosion and moisture stress at critical crop growing period limit the crop production.

### Soil and Nutrients

The soils belong to red, laterite and mixed red groups. Red and laterite soils have low water and nutrient retention capacity, high permeability and susceptibility to drought because of frequent dry spells during the rainy season. Similarly, black soils have narrow range of soil water content for tillage, tendency to become water logged and low soil fertility. Crop production is limited in both types of soils as organic matter content is very low and moisture stress is usually noticed during the crop growing season.

### Lack of Timeliness and Precision

Timeliness in sowing and maintenance of adequate plant population are not ensured in majority of the cases. Sowing operations are usually delayed by 3-4 weeks and actual plant population is 50-70 per cent of desired plant population per unit area. Heavy weed infestation, unchecked pest problem, inefficient rain water management, subsistence nature of farming has led to serious yield gap in all the crops grown in the area. The yield gap of 25-50 per cent is observed in most of the crops due to lack of awareness, knowledge, skill, resource, conviction, motivation and non availability of critical inputs.

### Biotic and Abiotic Stress

Heavy weed infestation and non-adoption of integrated pest management, integrated nutrient management and inefficient water management along with subsistence nature of farming have led to significant yield gap in all crops grown in the region.

## Input, Marketing and Socio-economic Constraints

Critical inputs as per choice and requirement of the farmers are not available at appropriate time. The situation has been further accentuated due to low purchasing power of resource poor farmers. Due to want of favourable market price and distress sale in some commodities the agricultural productivity is also getting affected. More than 70 per cent of agricultural produces are utilized for domestic consumption while less than 30 per cent comes to market as surplus. Marketable surplus of food grains are hardly seen with small and marginal farmers. Inadequate transport facilities, lack of storage

**Table- 4.7 Technology Gap in Paddy cultivation**

Item of Package	Recommendation	Technology Gap
SOWING		
-Time	May/June	
-method	Transplanting/Line sowing	Transplanting/Line sowing
VARIETY	Jajati, Lalat, Sarathi, IR-36, Sarasa etc.	swarna.Lalat
SEED RATE	75 kg/ha.	100 kg/ha
SEED TREATMENT		
-Captan or Thiram	3 g.kg.	No seed treatment
ORGANIC MANURE	5 t/ha.	1 t/ha
FERTILIZER/NUTRIENT	(kg./ha.)	
-Basal (N.P.K)	20:40:40	
-Top Dressing (N.K.)	60:00:00	
Total	80:40:40	50:20:20
METHOD OF FERT.USE		
-Basal	Plough sole	Broadcasting
-Top Dressing	Broadcasting	Broadcasting

MICRO NUTRIENT (Zinc	25 kg/ha	No application
PEST MANAGEMENT		
-Stem borer	Monocrotophos 1 l/ha.	Improper dose of pesticides
-Case worm	Endosulphan 1 l/ha.	
DISEASE MANAGEMENT	Monocrotophos 1 lit/ha.	
-Blast	Hinosam-500 ml/ha	
BLB	Plantomycin (50g/ha.)	
WEED MANAGEMENT		
-Mechanical	Twice	Twice
-Herbicide	Butachlor 1 kg.ai/ha	No herbicide application
WATER MANAGEMENT		
-No. of Irrigation Method	15-20	
-Method	Cyclic submergence	
LAND MANAGEMENT		
-Acidity	Application of lime	No lime application
METHOD OF HARVESTING	at 80-90% ripening	at 80-90% ripening
AVERAGE YIELD		
-Grain	4-5 t/ha.	1.5 t/Ha

**Table-4.8 SWOT Analysis of Agriculture**

<b>Strengths</b>	<b>Weaknesses</b>	<b>Opportunities</b>	<b>Concerns</b>	<b>Threat</b>
<ul style="list-style-type: none"> <li>-Large sector with involvement of 70% HH</li> <li>-Wide variety of agri product</li> <li>-Land suitability to a range of cash crop</li> <li>-Rich diversity</li> <li>-Large arable land</li> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>-Traditional practices adopted</li> <li>- Lack of Timeliness and Precision</li> <li>-Low production &amp; productivity</li> <li>-labour intensive</li> <li>-fragmented holding</li> <li>- 5-10 per cent of cultivated land is irrigated.</li> <li>-Heavily depend on rainfall</li> <li>-Increase cost of production with stagnant productivity</li> <li>-Lack of capital</li> <li>- Critical inputs as per choice and requirement of the farmers are not available at appropriate time</li> <li>- low purchasing Power of farmers.</li> </ul>	<ul style="list-style-type: none"> <li>-provision of agril credit</li> <li>-introduction of new technology through extension services</li> <li>-Economic growth through increase in productivity</li> <li>-Increase in return through crop diversification</li> <li>-Market driven crop planning</li> <li>- Cultivation of off-season vegetables.</li> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>-vulnerability to market fluctuation</li> <li>-Susceptible to external weather condition</li> </ul>	

**Table-4.9 Key strategies and specific objectives**

<b>Objectives</b>	<b>Strategy</b>
<b>Increasing agricultural Productivity.</b>	<ul style="list-style-type: none"> <li>-Use of compost, green manures and bio- fertilizers.</li> <li>-Improving soil Productivity</li> <li>-Promote crop Diversification</li> <li>-Promotion of root &amp; tuber Crops</li> <li>-Introduction of improved crop varieties.</li> </ul>
<b>Improving Crop Management</b>	<ul style="list-style-type: none"> <li>-Improved Seed Selection practices and storage.</li> <li>-Developing seed banks.</li> <li>-Improved seed production</li> <li>-Introduction of IPM practices</li> <li>-Training on improved techniques</li> </ul>
<b>Institutional development and capacity building</b>	<ul style="list-style-type: none"> <li>-Encouraging SHGs to provide productive loans.</li> <li>-Strengthening the SHGs to handle input supply</li> <li>-Improved access to agricultural input supply</li> <li>-Creation of local resource person(CLW)</li> </ul>
<b>Improving market linkages, processing and value addition.</b>	<ul style="list-style-type: none"> <li>-Improving storage facilities.</li> <li>-Promote formation of grain banks.</li> <li>-Processing of produce for added value</li> <li>-Outlets for locally produced goods</li> </ul>
<b>Improving targeted household nutrition</b>	<ul style="list-style-type: none"> <li>-Introduction and expansion of Existing vegetable kitchen gardens.</li> </ul>

## Ch-5 Agriculture Incomes and Expenditure

The objective of this chapter is to analyse agriculture income and expenditure with respect to respondents covered in the study. An attempt was made to study this through the Targeted household Tool.

### 5.1 Major Crops grown in the district-

300 targeted households were included in the sample out of which all targeted households reported to be growing Paddy & Maize, (96.1 percent) and a very significant proportion cultivated Niger, however Ragi being one of the most popular crops, was only cultivated by 42 percent of all targeted households here.

### 5.2 Productivity-

An attempt was made to understand the productivity of the crops cultivated by the respondents. The findings are interesting, from the sample who reported to grow the respective crops of Niger, Arhar, Maize and Paddy, an overwhelmingly large proportion reported that the productivity was below 10 quintal per acre across all crop categories. This is not surprising to note owing to the practice of sowing traditional seeds rather than hybrid and high yielding varieties as observed earlier. In fact not a single respondent reported to have a production of more than 20 Quintal for any of the four major crops.

### 5.3 Targeted households that do not sell-

From the table below it is clearly visible, that only 120 out of 510 targeted households do not sell any produce, out of which as expected most of the farmers have marginal and small landholdings, also some medium farmers i.e. owing land between 2-5 acre reported to not selling any produce. Also from the table below we can get an estimate of the percentage distribution of those farmers across the six districts, from this table it is clear that most of these farmers are situated in the district of Mandla, whereas in district Alirajpur hardly anyone could be found that did not engage in selling agricultural produce.

### 5.4 Targeted households that sell produce-

The respondents were also asked in the targeted household tool about the sale of the produce to understand their income cycle, as major proportion had reported to be dependent on agriculture for their daily bread and butter. When considering all the crops that were sold in all the targeted households, it was noted that composition of all the crops sold above 80 percent were 52.8percent of all crops sold. Similarly crops sold between 60-79 percent were 17.9percent of all sold crops.

#### **5.4 Buyer and Reason for choosing buyer-**

An attempt was made to understand the market linkages with respect to agriculture prevalent in the sample covered through both the targeted household questionnaire and focus group discussion. The table below shows the sale of all crops by all farmers (selling their produce) evaluated from the targeted household tool. As can be seen from the table, getting paid immediately emerges as the major reason for selling the produce (picked 298 times by respondents), getting a higher price is second in the list of reasons for selling produce, however a buyer located nearby doesn't seem to be high on that list of reasons, (that reason was selected only 20 times), which points to the fact that the buyers are not distantly located.

When considering the most important reason for selling the produce, it can be established from the table that 46.3 percent of this produce (i.e. sold because price is paid immediately) is sold in a local market/ shop , crops sold because they fetch higher prices are mostly sold to a wholesale market in the village (38.3percent), also almost all who sell produce because small quantities are accepted sell so in the village itself, similarly people who sell produce because they have no other option all sell so in a local market/shop.

## Ch-6 Government schemes and services related to agriculture and food security

This chapter aims to give an understanding about the Government schemes and services available with respect to agriculture in the study area and those being availed at the ground level by the communities. This is important from the perspective of the study, as it forms a factor, which may promote agricultural practices and motivate use of technologies and advanced agricultural techniques.

### 6.1 Agricultural services receive-

The respondents were asked about whether they had received any agriculture extension services and it was noted that nearly 53 percent respondents had received these services, while the rest reported otherwise. With respect to the Institution from where these respondents had received the services included District/ Block level officials as reported by 68.3 percent respondents, agriculture department as reported by 37 percent respondents and private companies as reported by nearly 49 percent respondents. NGOs seemed to be more actively involved in providing these services as nearly 80 percent respondents reported this. Only about 15 percent respondents had received these services from Krishi Vigyan Kendra.

The respondents were also asked whether they had attended any demonstration on Agriculture, and the results indicated that only a handful (..), nearly 11 percent had attended such demonstrations, while the rest reported otherwise. Amongst those who had reported to attend such demonstrations, nearly 4 percent reported that it was disseminated by District/ Block level Officials, nearly 74 percent reported to have attended those that were conducted by NGOs and a handful, about 19 percent stated Krishi Vigyan Kendra. With respect to attending these demonstration activities in the year 2011, it was noted that only a handful, about 6 percent reported to have attended it while the rest reported otherwise. Amongst those who reported to attend the demonstration, nearly 77 percent had attended those that were conducted by NGOs. Other Institutions such as Krishi Vigyan Kendra, Private Companies, District/ Block level officials and Private companies were not very popular in terms of demonstration.

Here, it can be concluded that though Krishi Vigyan Kendra created to disseminate knowledge to farmers with activities such as seminars and demonstrations on Agriculture services does not seem to be very active in this regard. Further, the work being done by the NGOs in this area is commendable, as their activities are being attended by most of the farmers.

## 6.2 Government schemes and services-

In order to gain a deeper understanding of whether the respondents were aware about the government schemes and programmes, the respondents were examined on their awareness with regards to the same. Here, it was noted that the awareness on all government programmes and schemes was very low, the highest awareness level amongst the respondents was for subsidy on seeds for which only about 9 percent of all targeted households were aware about, subsidy on drip irrigation was the second most aware scheme in the 30 villages for which only 6.3 percent of all targeted households were aware about, also only 3.7 percent were aware of subsidy on fertilizers. The awareness levels with respect to other schemes were even lower. The awareness level amongst the villagers seemed very low and it is thus extremely important that awareness about schemes and services be promoted with vigour. An attempt was also made to understand whether amongst those who claimed to be aware about the respective schemes were actually benefitting from these schemes or not. Here, it was noted that amongst those aware, a large number of respondents were also availing the schemes. Hence, it can be implied that if the awareness of schemes is raised amongst the people then availing the benefits of those schemes will automatically follow.

This chapter basically aims to lay a focus on the village level group, Primary and Secondary Groups and its meetings and participation of the members. In the context of this study, it is very important to understand the kind of community groups that exist in the study area which may in turn be helpful with respect to catalysing the objective of the programme.

### 7.1 Membership of Village Level Groups-

The respondents were asked whether they were part of any village level groups. It is important that the communities are participative in such groups as these may help them in development of their own personality, awareness, exposure, solve occupational and other problems through discussions in groups and take up group initiatives. However, it was also noted that amongst the 300 targeted households only about 37percent reported to be part of village level groups. Amongst the respondents who reported to be part of village level groups, most of them (nearly 69 percent respondents) were members of Self Help Groups. Water user and Watershed groups were not very popular amongst the respondent group and none of the respondents reported to be part of such groups (Refer to Annexure Error! Reference source not found.).

More support from government and other organizations is required to form such groups and to encourage participation of the community members.

### 7.2 Participation in SHG-

In order to understand the membership in SHGs and its impact on the development of members, being mere members of the group may not be enough. It is important that these members also participate in the group activities. Hence, an attempt was made to study the factors with respect to this context wherein, it was noted that the participation in the group meetings was reported by only about 73 percent of the respondents, however awareness about the meetings was reports by nearly 91 percent members and nearly 87 percent reported that they attended the meetings. Thus, it can be said that counselling is needed to motivate the respondents to participate in the meetings as mere awareness and attendance does persuade them to participate in the decision making. Most of the respondents, about 82percent reported that they participated in the election process of the groups. It

is interesting to note that in Madhya Pradesh, SHG group activities have a deeper penetration amongst those who are members of these groups, opening up an avenue to disseminate information through these groups.

**Table-7.1: Status of Institutional Membership**

Sl.No	Block	No.of MKs	Institutional Membership		
			SHG Members	Federation Members	PRI/Others
1	Pottangi	199	138	0	0
2	Semiliguda	101	95	0	0
<b>Total</b>		<b>300</b>	<b>233</b>	<b>0</b>	<b>0</b>

Out of the total MKs, 70 percent of them are enrolled in SHG but none of them are part of any federation, it also revealed from the compiled data that none of them are part of any PRI system which reflect their poor participation in local governance.

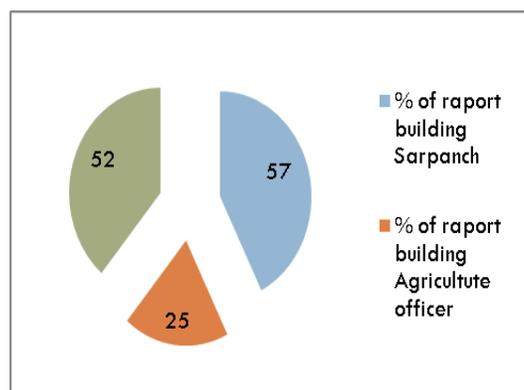
### 7.3 Participation in Other Groups-

An attempt was made to understand the participation of the respondents who reported to be members of other groups, in the group activities. Amongst these (Refer to Annexure Error! Reference source not found.), all the respondents reported that they were aware about the meetings in the group and also that they did attend the meetings. However, with respect to participation, also merely 60percent respondents reported that they participated in the group meetings. 92percent respondents reported to participate in the election process of the group. Here, though other factors such as elections, awareness about meetings and attending meetings are popular amongst the respondents, participation in the meetings is limited to 60 percent despite high awareness about group meetings, indicating that the decision making power might be in the hands of few and the other members of the group remain as followers of these decisions. Hence, empowerment, with respect to this is essential.

Participation of SC and ST targeted households in SHGs and other groups is given in the table below, the data shows that the reach of SHGs among both SC and ST is low, however it is still much better than the reach of Producer's group.

#### 7.4 Personal Rapport with Panchayat Members,

Village and Block Level Officials Various selected and elected members are present at the Panchayat, Village and Block levels in order to promote agriculture and agricultural practices using advanced technologies. It is important that the communities share a rapport with these members, which in turn may provide them with know-how in the deeds occurring in the agricultural sector. The government has appointed Agricultural



officers, Development and Administrative officers who also maintain Agriculture and development with respect to this sector in their portfolio. In this context, it was noted that the rapport of the communities with these officials was not that great, in fact, only about 57 percent reported to have a rapport with the Sarpanch, and this is surprising to note as the Sarpanch usually resides in the village itself or nearby village and all the respondents may be expected to share a rapport with him. Further, only about 25 percent respondents reported to share a rapport with the Agriculture Officer and nearly 52 percent shared a rapport with the BDO. These results indicate that a lot of work needs to be done in this area.

**Table- 7.2 Rapport Building**

Block	Sarpanch(No)	Agriculture officer(No)	BDO(No)
Patangi	95	50	98
Semeliguda	49	25	52

#### 7.5 Role of PRI and NGOs in Agriculture-

An attempt was made to understand the role that PRI plays in agricultural practices and productivity. This is important as it may help in the development of this sector and give an entire new perspective to the work being done in this sector. Here, it was noted that, nearly 96 percent respondents

## Ch-8 Conclusion and Recommendation

reported that Panchayati raj Institutions don't play any role in respect to this and only 3 percent respondents reported that they teach them techniques on cultivation.

An attempt was made to understand whether, apart from decentralized Institutions such as PRIs, any effort was being put in by other private and local institutions with respect to agriculture. Here, it was noted that 61percent respondents reported that NGOs were working in this area and the rest reported otherwise . When studied in detail, with respect to what activities were being executed by the NGOs in this area, it was understood that work was being done with respect to seed replacement, seed treatment, balanced use of fertilizers, sowing methods, PVSP and ICM in order to their popularity as reported by the respondents.

It is revealed from the study that a large number of targeted households covered in the sample report had an overall negative income i.e. have experienced loss. In fact around 38 percent of all targeted households have reported a negative net agricultural income. According to the findings given in the report we believe the reasons for the same could be the following:

**Low land holding:** Most of the farmers covered in the sample had a very low land holdings, in fact almost 89percent of all farmers had land holding of less than 5 acres. Thus it is no surprise that nearly 92percent of all targeted households (that have experienced loss in the year 2011) are small ,marginal and medium farmers **Less agricultural produce:** Targeted households that do not sell any produce are nearly 24percent of sampled targeted households, these are the targeted households that practice agriculture just to squarely feed themselves and their families, hence their net agricultural income is negative. Also as stated above around 38percent of all targeted households report to having a negative net agricultural income, thus around 14percent of all targeted households, all of which sell some agricultural produce, also reported loss. Thus a very considerable proportion of targeted households that have sold their produce also have lost money as a result of agricultural activities. **Variety of seeds used:** In the six districts high yield seed variety was not the most popular choice, in fact except for in district Barwani, in all the other districts the majority of people reported to be using traditional seed varieties. Thus this could be another reason why so many targeted households experienced loss in 2011. **Lack of awareness about government schemes and programs:** the status of awareness of government schemes and programs was very poor in all the six districts. **Poor relationships with primary and secondary institutions:** only about 37percent all targeted households were members of SHGs, which is an abysmal figure. Being part of SHGs not only enhances the knowledge and skill level of the participants, but it also acts as a financial net for its members and helps addressing issues related to livelihood.

In accordance with our study Mandla district is clearly worse off than the other five districts, almost all the farmers in this district reported to have a net negative agricultural income (82.3 percent). Also it was the district (along with Jhabua and Tikamgarh) where still traditional seeds variety are overwhelmingly preferred over other types of seeds.

Actions that need to be taken:

Farmers need to be educated on the use of high yield and hybrid variety seed, the usage of which is very low as compared to traditional variety; Farmer should be trained through demonstrations and training on the land preparation, seed treatment, application of manure and fertilizers, etc.; Watershed promotion needs to be explored which can perhaps then assist in reducing the dependence on other existing and natural sources of irrigation; Women participation in agricultural activities should be encouraged; Crop diversification can provide better yield and gain for the farmers, hence it should be promoted, and technical support should be provided to them ;

There is low awareness level on government schemes and service, hence, benefits of the existing schemes and services should be informed to the farmers; Primary and secondary groups can work as catalyst for improvement in agriculture, so village level groups like SHGs, producer groups, water user groups, etc. to be formed and nurtured; Linkages with cooperative society and banks should be strengthened so that farmers can avail credits more easily which is very weak at this stage; Community participation in distribution of food articles through PDS should be encouraged to enhance the coverage which in turn will reduce the food insecurity during lean season; Mandla needs a special attention as it is lagging behind the other districts;

Among the social categories the vulnerable groups, SC and ST are performing very poorly and they would need special attention.