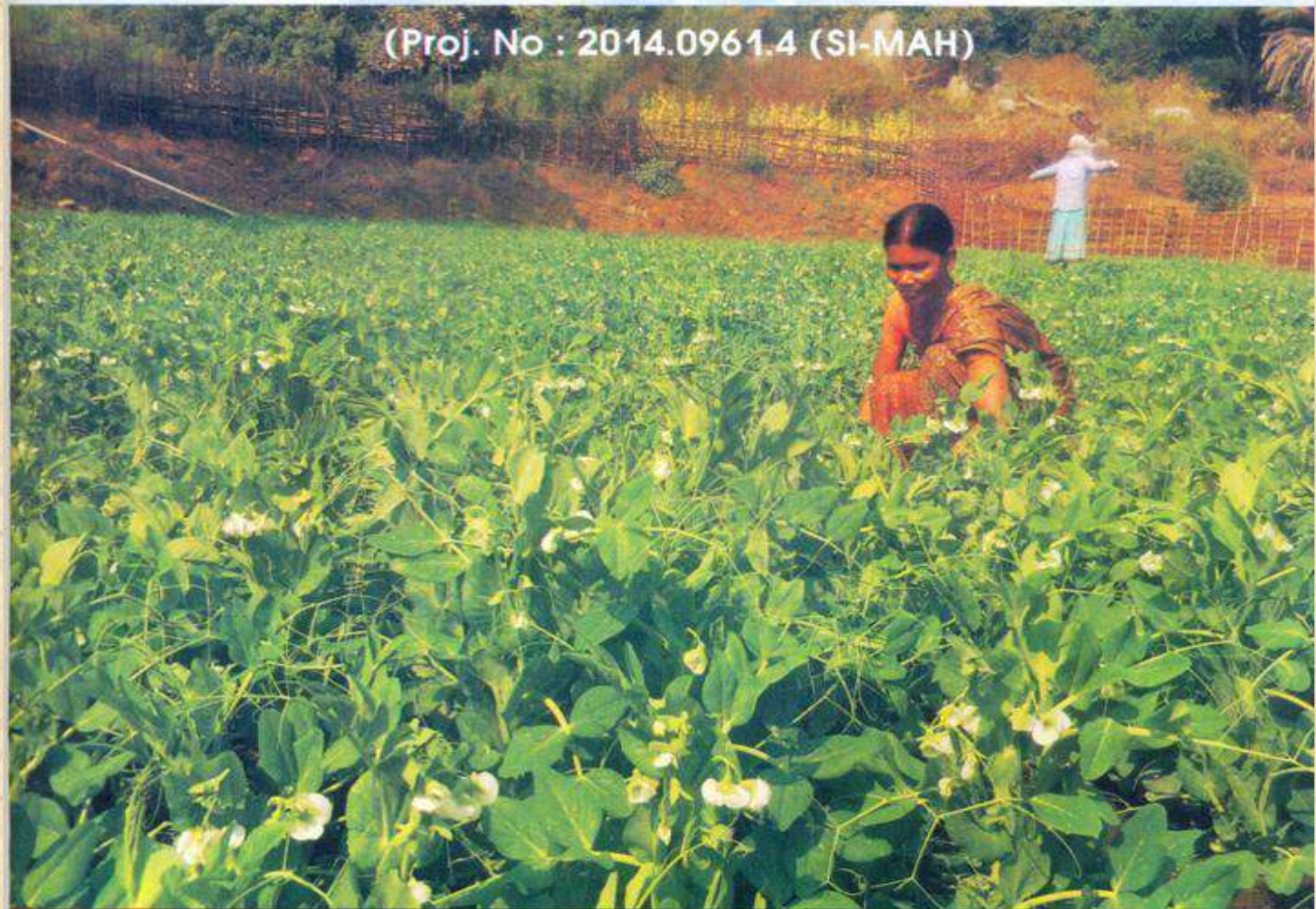


BASELINE REPORT

Enhanced Livelihood Security for Marginalized Tribal Population and Labour Migrants through Innovative Agriculture in Indian State of Odisha

(Proj. No : 2014.0961.4 (SI-MAH))



Report by:

MADHYAM FOUNDATION
Bhubaneswar, Odisha, India



International e.V.

Supported by:

AWO International,
Germany

Report on

BASELINE STUDY

(SI- MAH, Kandhamal Project)

**Enhanced Livelihood Security for marginalized Tribal population
and labour migrants through innovative agriculture in Indian
State of Odisha**

Report By:



Supported By:



ACKNOWLEDGEMENT

This baseline study was undertaken over a period of three months starting from April, 2015 to establish a starting point on which the impact of the current program will be measured on long term basis in the target operational areas. The study gathered and assessed quantitative and qualitative data from a small, but diverse sample of 7 villages and 302 households in Kandhamal district of Odisha. Its findings represent a true picture of the operational area under SI-Kandhamal Project to gain a deeper understanding of food security, livelihood and income security, social security, gender equality and other developmental issues.

Madhyam intend to move forward while taking clue from the past experience of different projects in Odisha. We also intend to build our future attempts on the basis of our past learning as this will give required enthusiasm and temperament needed to whiz past on the track of development and socialization.

The purpose of this brief document is to share our learning and findings of the base line survey undertaken in the operational area in Kandhamal district. We look forward to receive relevant information and support from other agencies concerned about improving the quality of life among people in the project area. This is also helpful to us as it will strengthen our efforts, resources and skills to improve socio-economic well being of the target population.

We sincerely hope that the findings of the study will be extremely useful to the various stake holders of the project as well as to all those who are involved in preparation of policy and programs for resource poor and marginalized communities.

We would like to convey our heartfelt thanks to AWO International e.V and Mr. Felix Neuhaus, Head Representative (Ex), AWO Regional office South Asia and Mr. Arjun Gurung, Programme Coordinator for providing their valuable feedback and suggestions during finalization of the report.

We are also thankful to the project staff, Community Resource Persons, members of Panchayatiraj Institutions of all operational GPs, community members and respondents who have given their valuable time to make the survey participatory and meaningful.

Lastly I must thank my team members for completing the study process in stipulated time frame.

Subrat Kumar Singhdeo
Executive Director
Madhyam Foundation, Odisha, India
August, 2015

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GLOSSARY OR ACRONYMS

ABBREVIATION	STANDS FOR (in National Language)	TRANSLATION/DESCRIPTION (in English)
AWW	Angana Wadi Worker	The village level service provider for nutritional security of infants
ANM	Anti Natal Mother	Village level health worker under Government of Odisha
BPL	Below Poverty Line	An indicator of poverty, laid for identified households by Govt. of India during 1994
BKKY	Biju Krishak Kalyan Yojana	An insurance scheme for BPL Households by Govt. of Odisha
CRP	Community Resource Person	
CTCRI	Central Tuber Crops Research Institute	A research institute exclusively for tuber crops, under govt of India
CHES	Central Horticultural Experiment Station	A research institute exclusively for vegetables and fruit crops, under govt of India
GP	Gram Panchayat	A cluster of villages coming under the local self government under Panchayati Raj system of India, divided on the basis of population.
Gol	Government of India	
GoO	Government of Odisha	
HH	House Hold	
IAY	Indira Awas Yojana	A housing scheme for poor households by co-funding of Gol and GoO.
ITDA	Integrated Tribal Development Agency	A district level body for SC and ST development under GoO.
KVK	Krishi Vigyan Kendra	A research institute for agri-horticultural crops
LAMPCS	Large Size Adivasi Multi Purpose Cooperative Society	A Multi Purpose Cooperative Society for rural people under NABARD
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act	A scheme for providing 150 days employment guarantee by Govt. of India for the rural poor
MFI	Micro Finance Institution	Financial Services Provider Institution
NABARD	National Bank for Agriculture and Rural Development	It is an apex bank in India for agriculture and rural development, set up by the Reserve Bank of India (RBI)
NHM	National Horticulture Mission	A mission of Gol for horticultural development
NGO	Non Governmental Organization	Voluntary Organization
PDS	Public Distribution System	The distribution of food and other basic material by the Government agency
PRI	Panchayati Raj Institutions	Local self government of Rural India
PO	Program Officer	
RSBY	Rastriya Swasthya Bima Yojana	National Health Insurance Programme is government-run health insurance scheme for the Indian poor
RKVY	Rastriya Krushi Vikash Yojana	National Agriculture Development Scheme
SHG	Self Help Group	Village level saving and credit institute of the people (mostly women)

EXECUTIVE SUMMARY

Madhyam Foundation, with support from AWO International e.V, Germany is implementing a project entitled “Enhanced Livelihood Security for marginalized Tribal population and labour migrants through innovative agriculture in Indian State of Odisha” in 5 Gram Panchayats of Kandhamal district. The project period is three years starting from January, 2015. The focus of the project is to enhance household level food and income security of small and marginal farmers and to reduce their vulnerability to distress migration, domestic violence and trafficking. This project has two new additional focus areas in addition to our usual SSF project. The key additional focus are increased social security of labour migrants, reduction of gender based discrimination, domestic violence and women trafficking. This project is solely funded by AWO International, Germany which sanctioned a project to Madhyam Foundation to replicate our best practices among 3,000 farmers' families in the new project area in Kandhamal district.

As the first phase of the SI-Kandhamal project was launched in January, 2015, it was mutually decided by AWO International and Madhyam Foundation to undertake a Base Line Survey in sample number of project villages. As a conscious strategy, it was also decided to undertake this survey in a participatory manner with active involvement of all stakeholders of the project area. Towards this, two orientations were conducted in April and May, 2015. The first orientation was regarding the aims and objectives, project log frame, purpose of baseline survey, sampling, tools of data collection, timeline etc. In the second orientation, sample data collected by project staff were analyzed by the participants, doubts were cleared and format of the survey report was finalized with clear cut assignment of roles & responsibilities.

Major findings of the Base line survey:

The baseline survey findings showed that majority of the respondents belong to the most productive age group (26 year- 60 years). The land holding patterns of respondents is mostly in the range of half acre to two acres which validate the unique targeting of small & marginal farmers by the project. As far as the sources of livelihoods are concerned, paddy, turmeric and vegetable cultivation are found to be the important source in the project area. This is in tune with the overall focus of the project on agri-horticulture as a potential economic activity for increasing household income.

However, clear trends emerged from the project area regarding non-prevalence of sustainable agricultural practices such as soil testing, soil treatment, crop planning seed treatment, use of organic manure and pesticides, post-harvest measures like sorting, grading & marketing linkages. On various indicators of other two thematic focus areas (Labour migration and gender/trafficking issues) of the project, no significant development was found over a decade in the project villages. Awareness of respondents about various social security schemes among respondents was found to be very specific to their needs. Similarly, awareness about gender based discrimination in the project area was not significantly different among villages.

The findings of the baseline survey in the project area clearly demonstrated that with appropriate design, vegetable cultivation has huge potential for enhancing household income of small & marginal farmer households. Such findings amply corroborate the need to replicate all the best practices & learning from the past experiences (SSF and other projects of Madhyam Foundation) in the SI-Project area to achieve better outcomes. Such a strategy has been duly incorporated in this project.

As far as the finding about two new focus areas such as enhanced social security among labour migrants, reduction of gender based discrimination and women trafficking are concerned, level of awareness in the project area was found to be at similar level as before a decade. So, rightfully, the new SI-Project (2015-17) has incorporated strategies and specific activities to focus on these issues.

Moreover, in this baseline study, the team tried to gather all contextual information and prevailing situations related to all the indicators as envisaged in the project proposal. The findings of the base line survey do not warrant any drastic change in the project design which has been mutually agreed between AWO International and Madhyam Foundation for this project.

CHAPTER-1 INTRODUCTION AND BACKGROUND

Introduction

AWO International e.v (worker welfare international) is a German Non-Governmental Organization (NGO) founded in 1998 as a professional international entity of AWO Germany for Humanitarian aid and Development cooperation (which has been implementing international projects since 1960). As a multi donor agency, AWO international is committed to enhance livelihood of socially and economically marginalized sections of society such as women, child, youth, minorities, migrants and other people in need.

With the support of German Federal Ministry for Economic Cooperation and Development (BMZ), AWO International recently implemented a programme called “ Sustainable Initiative Program in South Asia” (2015-2017 through its state specific partners in South Asia. The programme aimed to capacitate marginalized communities in rural areas to access development opportunities for livelihood security, empowered migration and gender indiscrimination through self- determined process.

Background

The project “Enhanced Livelihood security for marginalized tribal population and labour migrants through innovative agriculture in Indian State of Odisha” has been launched in Kandhamal district of Odisha with support from AWO International, Germany. Madhyam Foundation, Bhubaneswar is the key implementing agency. The project has been sanctioned for a period of three years starting from January, 2015 covering 35 villages in 5 Gram Panchayats of G. Udayagiri block, Kandhamal district.

The major objective of the project is to increase the livelihood security among the small and marginal farmers and labour migrants, ensuring income and social security to the target families (small/marginal farmers, migrant labourers, landless families), reducing vulnerability of labour migrants, women trafficking and gender discrimination among the community.

Brief background of the district and the project area

Kandhamal is one of the most backward district of Odisha which came into existence on 1st January, 1994. Phulbani (the previous name of the undivided district) was divided into 2 districts, namely Kandhamal and Boudh. The District lies between 19° 34' to 20° 36' north latitude and 83°34' to 84°34' east longitude. The district is covering a geographical area of 8021 sq kms with 76.54% of the entire area under forest cover. The district is bounded by Boudh district in the North, by Rayagada district in the South, by Ganjam and Nayagarh districts in the East and Kalahandi District in the west. The entire district lies in high altitude zone with inter spreading inaccessible terrain of hilly ranges and narrow valley tracts, which guides the socio-economic conditions of people.

Kandhamal districts has 2 sub-divisions viz. Phulbani, and Balliguda, 12 Tehsils (revenue divisions), 12 blocks and 153 Gram Panchayats. The total population of the district is 7,33,110 comprising 49% Male and

51% Female population (Sex ratio-1037 females per 1000 male- Census, 2011). The Scheduled Tribe and Scheduled Caste population percentage of the district is 53.58 and 15.76 respectively.

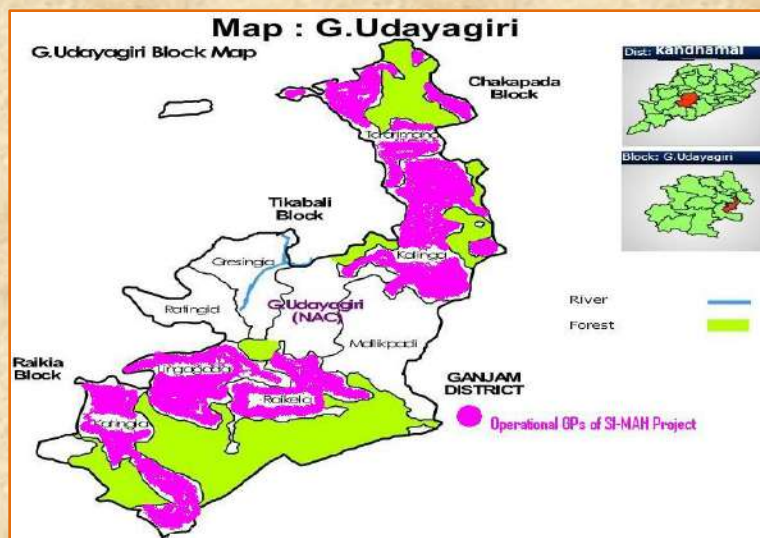
PROFILE OF KANDHAMAL DISTRICT



The climate of the district is sub-tropical with prolonged cold and dry winter. The district has an average annual rainfall of 1427 mm. distributed over 74 days in a year. The cultivated land in the district has a high percentage of high land (75%). The economy of the district, dominated by tribal population, revolves around rain fed agriculture (paddy, pulses, maize, millets, vegetable, horticulture crops, and turmeric) and collection and sale of non-timber based forest produces. The district does not have any big industry.

Within Kandhamal district, G.Udayagiri is one of the sheer backward blocks as per the human development indicators. The block, like the district as a whole' is characterized by high incidence of poverty due to many factors.

This is the context for which Madhyam Foundation has been implementing an integrated livelihood promotion project in 35 villages of G.Udayagiri block, Kandhamal district. The project has



been planned for a period of 3 years. Broadly the project is based on four major outcomes such as food security, income security, reduction of distress migration, reduction of gender based discrimination, domestic violence and women trafficking. The targeted communities are land less, small and marginal farmers having less than 2 acres of cultivable land, labour migrants and distressed women victims of trafficking and domestic violence.

About the study

There are a total of 3683 households in the project villages according to the survey conducted by Madhyam Foundation during the 1st quarter of FY- 2015. The basic socio-economic status of the project community, especially with respect to the project outcomes were to be mapped at the beginning of the project implementation so that it would be a referral document for assessing the impact of the program at any point of time.

For this purpose, a baseline study was conducted during the second quarter of the 1st year covering a sample of 10% of the entire target households from the project community.

Specific objectives of the Base line study:

- To capture the socio- economic profile of the small and marginal farmers.
- To assess the existing livelihood pattern and identify various sustainable agriculture practices in the community.
- To figure out the coverage of villagers, especially women farmers, under various social security schemes of the government.
- To analyze the prevalence of domestic violence, other social issues and various forms of gender based discrimination that affects the decision making and empowerment of women.
- To capture the trends and magnitude of migration in the project villages.

Prior to the study, a comprehensive household survey was conducted in all 35 project villages during the beginning of the project intervention. Most of the household level information regarding demography, socio-economic condition, household level possessions and migration was captured in the survey. However there were some gaps in the overall data such as community behavior and responses to various socio-economic issues, community awareness level, resources data, wellbeing ranking, institutional set up, seasonality, common practices of the community, people's participation in community activities, indigenous knowledge, gender, domestic violence and trafficking issues etc.

The Baseline Study was conducted during the second quarter of the project to objectify the scenario of the operational area prior to the project intervention, so that, at the end of the project period, we can quantify, measure and highlight the visible changes in life and livelihoods of the people in the operational community.

Sampling of villages

Seven out of 35 villages were taken as sample villages on the basis of following criteria. Representation of all caste and tribe, presence of households following agriculture, vegetable cultivation and NTFP as their livelihoods options, known cases of migration, domestic violence and trafficking issues. The names of the villages are Bearpanga, Retudi, Kilapanga, Kuhuguda, Kundanaju, Jakamaha and Kasirkhol. About 300 households covering the entire 7 villages were selected for the baseline survey. All these villages belong to 5 Gram Panchayats and represent a true picture of the entire operational area.

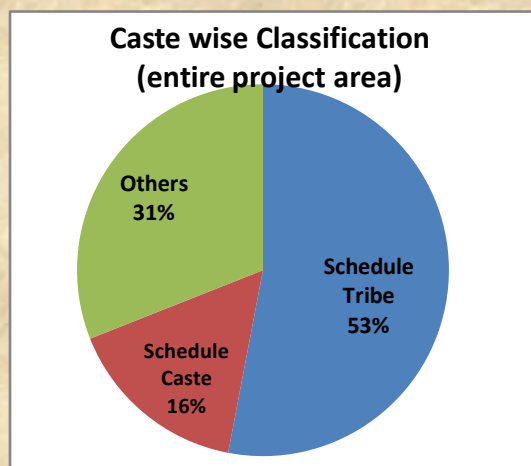
Methodology

The survey was conducted through FGD with community members, Meeting with SHGs and interview with household members. The Program Officers of the project facilitated the data collection and data entry process with the support of CRPs. The data were compiled and the report has been prepared at the central level during the month of July-2015.

For this purpose, three sets of questionnaire (Annexure-2,3 and 4) and a checklist were in a participatory approach to administer before different stakeholders (as above) in the sample villages.

Basic facts about the district and the operational area:

Kandhamal district is having a total population of 7, 33,110 out of which 53% are schedule tribe and 16% are schedule caste (source, 2011 census). The district is spread over 8021 sq. km out of which 5709sq km (71.17%) covered by forest. The cultivated land in the district has a high percentage of high land (75%). The economics of the district revolves around rain fed agriculture like paddy, pulses, maize, millets and vegetables. Whereas turmeric and horticultural plantation crops are the major source of agricultural income followed by NTFP collection.



Within the district, G. Udaygiri block is one of the most backward blocks as far as human development indicators are concerned. The block is characterized by high incidence of poverty, skewed distribution of land holding, unproductive and eroded upland, lack of irrigation facility, non-remunerative prices for agricultural products, absence of primary producer groups, inadequate access to credit, lack of technical knowhow and market intelligence. Against this backdrop Madhyam Foundation has selected 5 Gram Panchayats and 35 villages of G. Udaygiri block in Kandhamal district to implement the project.

CHAPTER- II STUDY FINDINGS

A comprehensive study was made on the socio-cultural-economic-resource aspects of the villages through the team members of Madhyam Foundation. The major findings of the study are as follows.

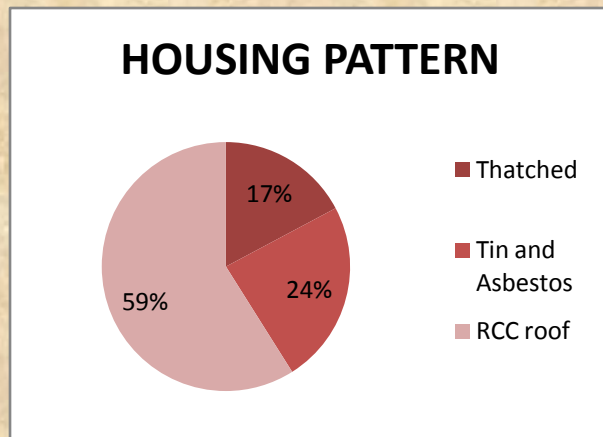
About the sample villages

There are seven villages under the baseline study which represent the true picture of the entire project area in terms of demographic distribution, caste and community, resources, housing pattern and other community infrastructures. The name of the villages are **Bearpanga, Retudi, Kilapanga, Kuhuguda, Kundanaju, Jakamaha and Kasirkhol**. All these villages belong to 5 Gram Panchayats and within our operational area.

The political scenarios of the villages are governed by the traditional leaders called Mukhia. In some cases, the Grampanchayat representatives also vested with the leadership responsibility.

Housing pattern

The housing patterns of the villages are very diversified owing to the economic strength and accessible to the government housing schemes like Indira Awas Yojana and Mo Kudia Yojana. There are 17% thatched houses, 24% tin and asbestos-roof houses and 59% RCC roof houses in the project area. Most of the RCC roof houses are single room houses availed through the government housing schemes like IAY, Biju Pucca Ghara Yojana and Mo Kudia Yojana.



Roads and communication:

Only 30% of the villages are communicated with all weather road where as others are inaccessible during rainy season. Telephone (mobile) network is fairly available in 15% villages, partly available to 45% villages and not available in other 40% villages. No other means of communication is available in the sample villages.



A typical road to the project villages

Basic facilities available in the village:

Apart from one Jakamaha village, 90% villages do not have facility for safe drinking water to meet the need of the entire habitation. 60% villages have one tube well each which is not sufficient to meet the drinking water requirement of the populations. Only 16% households have access to safe drinking water.

In the other hand, all the villages have no drainage system and sanitation facility. Personal toilets are available with 3% households only. The villagers have regularly habituated with open defecation.

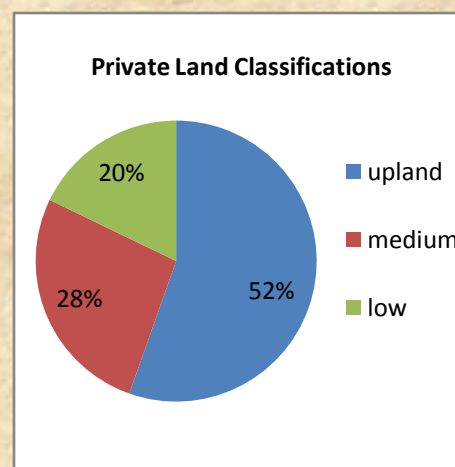
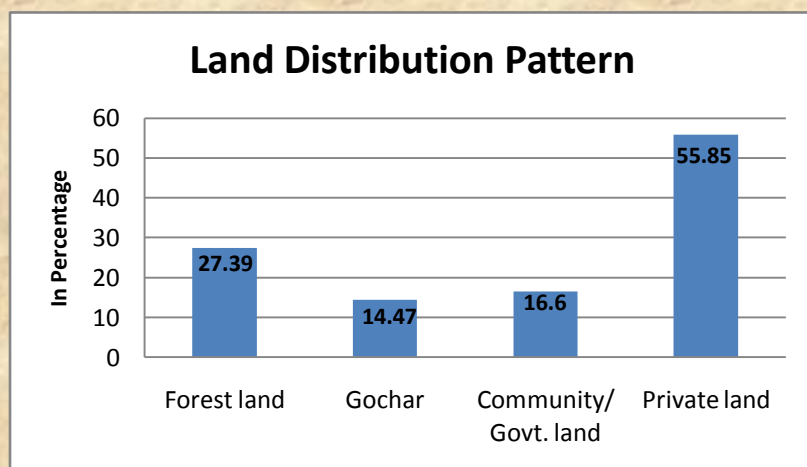
Electricity is available to 48% households, out of which 47% households are connected with Government rural electrification schemes to BPL households. Television is available with 22% households only owing to no network coverage due to natural hilly landscape.

Access to basic facilities:

Attributes	% of villages	% of population
Safe drinking water	10	16
Household toilet	3	3
Electricity	48	45
Television	22	20
Mobile network	15	16

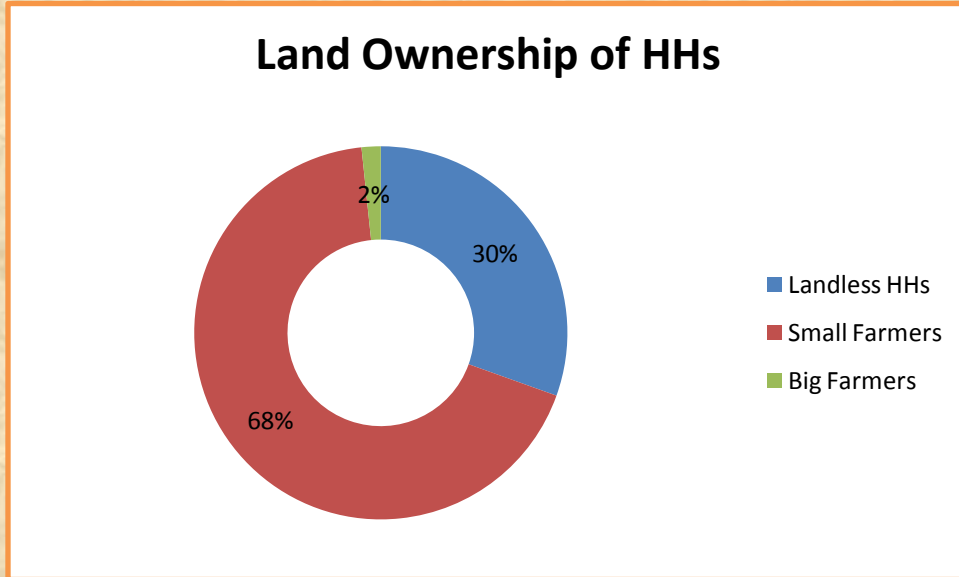
Land distribution pattern of the villages

There is 1409 ACs of total land in all 7 sample villages. Out of which forest land is 27.39%, Gochar - 14.47%, Govt./Community owned other land -16.6% and privately possessed/owned land- 55.85%. From the 55.85% of private land, 52% is up land, 28% is medium land and 20% is low land. About 60% of the private upland is uncultivated. About 388 (27%) acres of the entire agricultural land are under Kharif irrigation only. Others are rain fed in nature. Most of the low land are paddy growing whereas the medium and upland are used for seasonal vegetables (5.4%- 43.2 ac) and other crops like maize, turmeric, millets etc covers about 5.6% of the privately owned land (44.5 in Ac).



Land ownership:

There are 30% landless families in the sample villages (who have only homestead land and no other agricultural land). There are 68% small farmers in the survey area who have cultivable land less than 2 acres. There are 2 % of big farmers in the survey area having land holding more than 5 Acres.

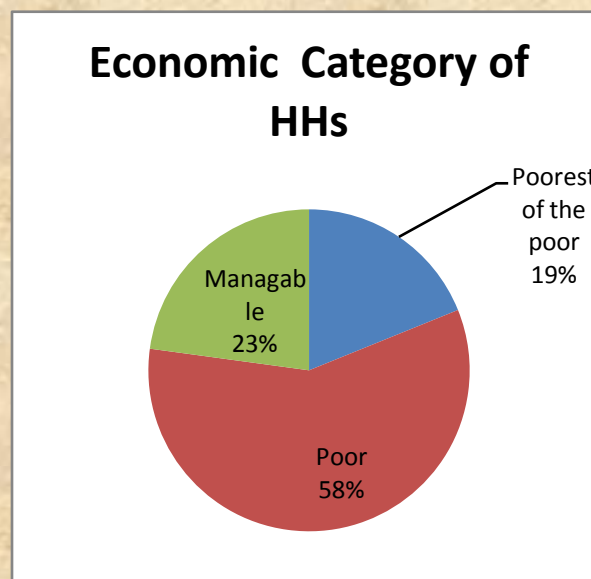
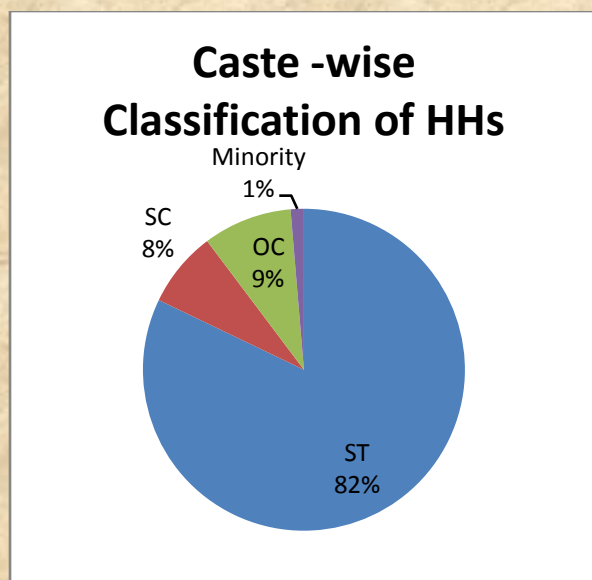


Land holding pattern:

Land Holding	Acres	Percentage HHs	No of HHs
Less than 0.5	41	30	91
0.5 to 2	385	68	206
2 & above	360	2	6
TOTAL	786	100%	302 HHs

Demography and socio-economic classification

Among the total households in the sample villages, 58.27% are poor households and 18.87% are poorest of the poor. Other 23% though not rich, are relatively in better living conditions as compared to others. Caste wise there are 82% scheduled tribes (mostly Kondh tribes), 8% scheduled caste, 9% upper caste and 1% minority (Christian) households in the sample villages.



Age group of the respondents:

It is evident from the following table that majority of the respondents i.e. 58%, belong to the most productive age group (26-60 years). Only 9% of the respondents are more than 60 years of age. The productivity of the work force is usually found to be low. But as commonly found in Odisha, women farmers belonging to this age group from rural area tend to work in the agriculture field to supplement their meager household income.

Age Group Wise Respondents

Age group	Numbers	%age
Below 18	0	0%
19-25	57	19%
26-35	83	27%
36-45	93	31%
46-60	39	13%
Above 60	27	9%
Total	302	100%

(Source: Primary Data)

Similarly, percentage of respondents belonging to the age group of 19-25 years are very low in both old and new area as very few young women prefer to take up agricultural activities and generally look for non-farm, home based activities as potential sources of livelihood.

Educational status

In tune with the prevalent scenario across the state, especially in rural areas, 35% of the respondents in the project area have never been to any school. It is also a matter of great concern that a high percentage of respondents (41%) have dropped out of school after primary classes.

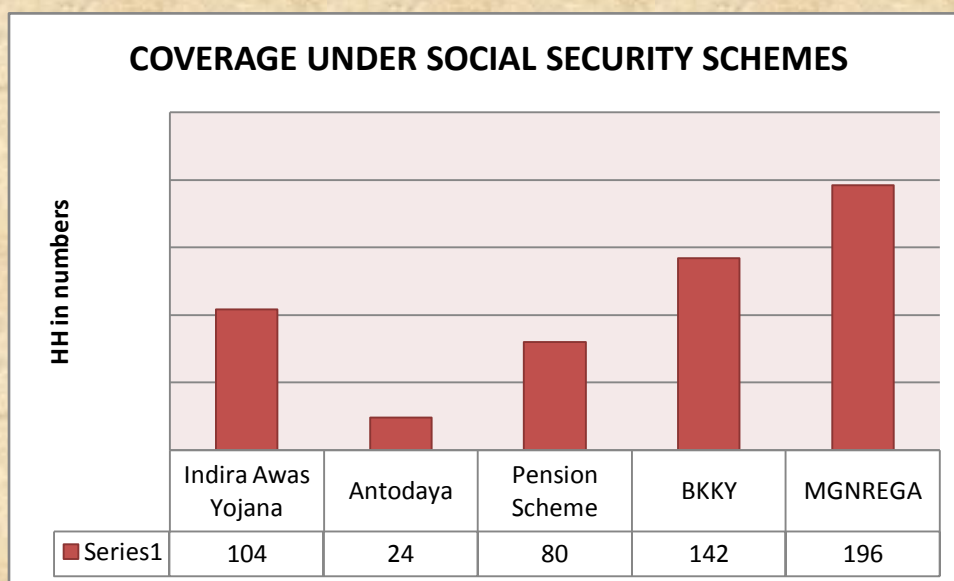
The literacy percentage among men & women in the state are 79.6% and 60% respectively in rural areas which are much better than the status in project area.

Coverage under social and economic security schemes

The following picture explains how the populations in the sample villages are covered under different socio-economic security schemes of the Government. 142 numbers (47% HHs) of households have accessed various schemes of the Govt. **However no individual claim for the land entitlements has been settled under Forest Rights Act in the survey area till date.**

The people in the survey villages are accessible to some of the grass root service providers of the govt. like Anganwadi, ASHA and ANM. But the service providers under agriculture department (VAW) and community development department (VLW) are at far reach of the people. The PRI representatives help people in many ways to avail services from different Government schemes such as PDS, pensions and wage based services etc.

The baseline data envisages that 34% of the households of the survey area are covered under Indira Awas Yojana (A Govt. housing scheme for poor households). Apart from this 47% of the households are covered under health and accidental insurance scheme (BKKY) of Government of Odisha, 26% under old age and widow pension and 7% under Antodaya Yojana (A govt. scheme for food support to the poorest of the poor HHs). About 65% of the households are accessing benefits under MGNREGA.

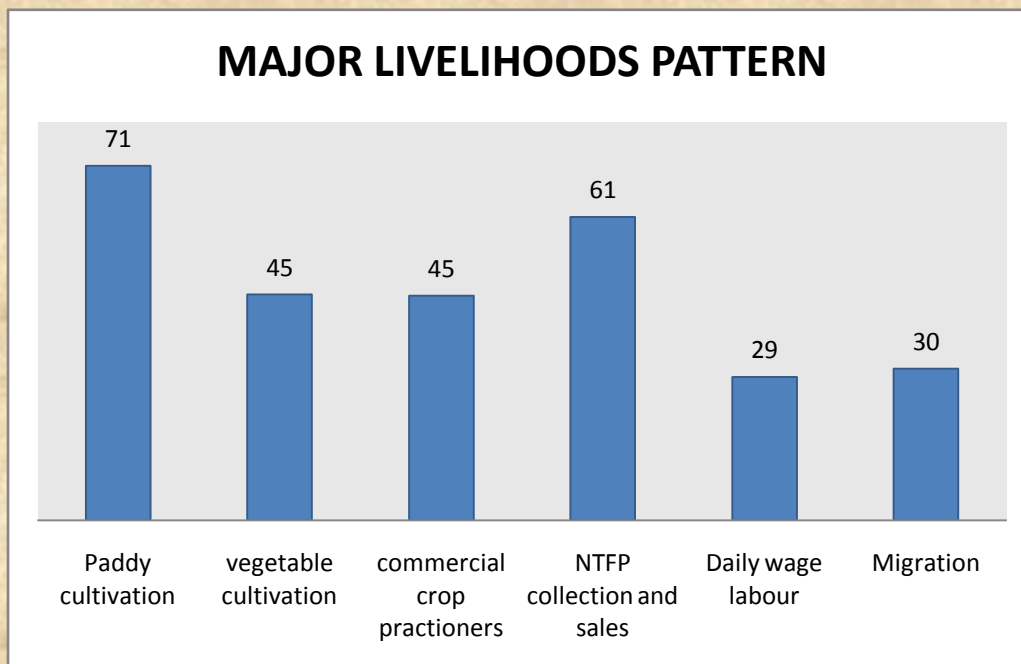


*BKKY-Biju Krishak Kalyan Yojana, Antodaya- Food support to utterly poor families.

Occupational pattern

Agriculture is the major source of livelihoods of the households followed by daily wage labour. Out of 302 households in 7 villages, 71.2% HHs are solely dependent on agriculture as their single source of livelihoods. Whereas, 29% households depend on daily wage. As far as sources of livelihood are concerned, paddy cultivation is the single major source of food grain followed by maize and millets.

For years, vegetable cultivation has been proved to be a viable livelihoods option in most of the households in the sample villages. Total 45.36% HHs in the sample villages practice commercial vegetable cultivation during Kharif season. Turmeric is the major cash crop of the area and it contributes significantly to the household income. About 45% of the households in the area go for turmeric cultivation during Kharif season. 60.92% of households have seasonal dependency on non-timber forest products (NTFP) like Khali leaves, Mahua, Mango, Broom grass, Latex, Sal seeds and 18 other minor products. Remittances from migration is one of the major sources of household income for about 30% HHs in the survey villages.



Livestock rearing is another occupation of most of the households. Amongst the total HHs under baseline survey, cows are reared by 28% HHs, buffalos by 24.5 % HHs, small ruminants by 74.5% HHs and poultry by 68% HHs.

Food/nutritional security Issues in the village:

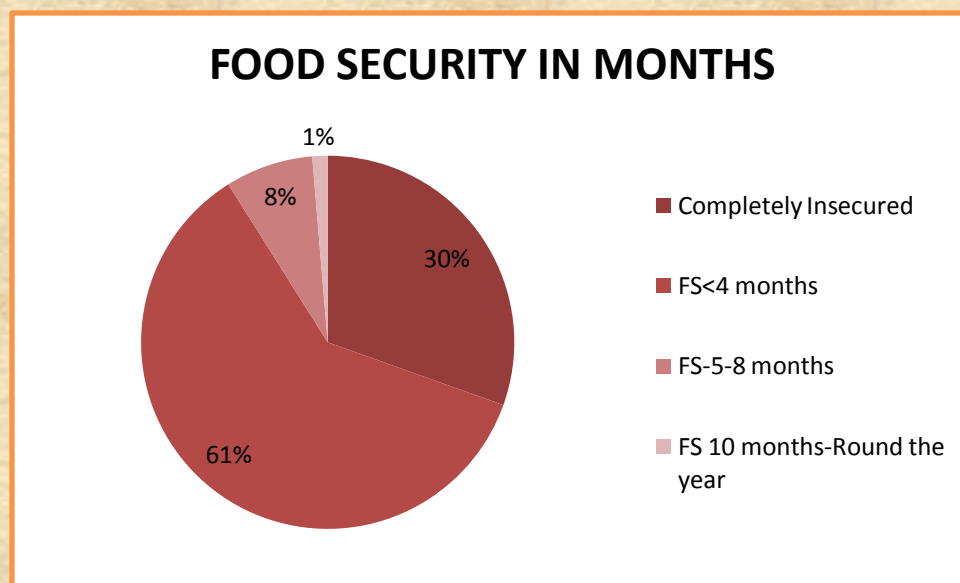
Paddy is the staple food of the people and is cultivated in almost all type of land, irrespective of its low productivity and land un-suitability. Paddy is followed by maize, millets, turmeric and vegetables in the cropping pattern. Paddy is mainly grown in traditional methods and in mono cropping practices. The traditionally grown paddy crop gives **a yield of 3-5 quintals per acre in upland and 6-8 quintals per acre in the low-medium/low land**, as informed by the villagers during the FGD in the sample villages. The total income from one acre of paddy land shows a big variance ranging from Rs. 3000.00 to Rs 8000.00 depending on the land types and climatic factors. Whereas, the cost of cultivation of paddy varies from Rs.3000.00 to Rs. 6000.00 per acre showing a minimum/nil profit. Even though the people go for paddy cultivation in the rain fed upland because of no other alternatives. Maize and millets are yet considered as non-remunerative crops and are practiced in the rain fed upland. **Adoption to modern technologies in paddy cultivation such as SCI (SRI in case of paddy)/line sowing is nearly zero and is confined to sporadic patches under demonstration/schematic coverage by Government departments only.**

Kitchen garden is a practice by almost all HHs to meet the daily kitchen need of the HHs. They grow different seasonal vegetables in the kitchen garden like greens, Egg plants, okra, chilli, Sem, Papaya etc, but in a un-planned way. Papaya and drumsticks are limited to very little number of households. The produces from kitchen garden do not always suffice the household need of majority of the respondents. It is seasonal due to the fact that, most part of the year remains in water stress condition. Hence they are dependent on market for vegetables. The produces from kitchen garden is used for household consumption only and rarely sold. So, no definite yield and income record is kept at household level with any of the respondents.

Vegetable is grown commercially only where assured irrigation is available, mostly during Kharif and pre-Rabi season. Total **31% of the HHs** in the survey villages are involved in commercial vegetable cultivation during the Kharif season. The post Kharif season are almost dry and no vegetable crop is grown owing to the water stress. The entire populations are dependent on out sourcing of vegetables (usually from Berhampur) during dry periods of the year. Use of chemical fertilizers and pesticides are rampant in many vegetable growing villages and occasional in paddy and turmeric. Vegetable during Kharif season is grown in 43.2 acres of land of the survey area. This shows that the per-family vegetable cultivation area during the peak farming season is about 0.14 acres.

Cultivation of tuber crop is sporadic and confined to kitchen garden only as a supplementary food item. Only yam in some places is grown in the boundaries of the back yard in individual pits which trail around the fences of homestead. The yield cycle of yam is usually 2-3 years in the survey villages. The productivity of yam in 2 year cycle is about 2-2.5 kg per pit. Other tuber crops like potato, arum are grown commercially by very less percentage of farmers (0.8%). Tapioca is not found in any of the villages. No systematic cultivation of tuber crops is made for commercial purpose, though the agro-climate is very much suitable.

As far as food and nutritional security is concerned, following trend is observed in the sample villages. The survey data says that only 1% of the households in the survey villages have round the year food security where as 30% households are completely food insecure. Majority of the households have food security less than 4 months a year (61%) and 8% HHs have food security for about half of the year.



Agriculture scenario

The agriculture in the project area is primarily rain fed. Paddy is the major food crop grown in the area followed by pulses and oilseeds. The cost of production of different crops are given in the table below.

Cost of Production of important crops:

Area	Irrigated	Un-Irrigated	Irrigated	Un-Irrigated	Irrigated	Un-Irrigated
Crops	Paddy		Pulses		Oil seed	
Area of Cultivation in Acres	41.0	475	59.7	25.45	16.25	8.5
% of HHs cultivating different crops	2	91	134	58	42	20
Avg costs of seeds in Rs.	450	450	600	600	1200	1200
AVG COSTS OF FERTILIZERS in Rs.	1500	1800	391	498	1500	1800
Avg costs of pesticides	561	750	482	523	600	640
Avg cost of labour & misc. In rs.	9007	9006	3300	3750	9000	9000
Avg cost of cultivation Per Acre in Rs.	11518	12006	4773	5370	12300	12640

The cost of major crop cultivation basically during khariff season, as shown in the table above, varies significantly. However, the rate of return from pulses is higher than paddy and oilseeds. But the farmers are bound to do go for these crops due to their consumption practices.

Vegetable cost of Production:

Vegetable wise Cost of Production

Vegetables	Area	Area of Cultivation in Acres	NOS OF HHs	TOTAL COSTS OF SEEDS in Rs.	AVG COST OF SEEDS in Rs.	TOTAL COSTS OF FERTILIZERS in Rs.	AVG COSTS OF FERTILIZERS in Rs.	TOTAL COSTS OF PESTICIDES in Rs.	AVG COSTS OF PESTICIDES in Rs.	TOTAL COST OF LABOUR & Misc. in Rs.	AVG COST OF LABOUR & Misc. in Rs.	TOTAL COST OF CULTIVATION in Rs.	AVG COST OF CULTIVATION Per Acre in Rs.
Potatoes	Kharif	25.58	46	460440	18000	36835	1440	10232	400	498810	19500	1006317	39340
	Rabi	6.4	16	134400	21000	23040	3600	5120	800	124800	19500	287360	44900
Onion	Kharif	16.23	57	38952	2400	19476	1200	3246	200	121725	7500	183399	11300
	Rabi	5.7	15	18240	3200	19550	3430	6840	1200	68400	12000	113030	19830
Cabbage	Kharif	35.82	109	14328	400	64476	1800	8955	250	429840	12000	517599	14450
	Rabi	6.04	22	3020	500	27180	4500	6040	1000	108720	18000	144960	24000
Cauliflower	Kharif	18.34	54	7336	400	44016	2400	4585	250	247590	13500	303527	16550
	Rabi	3.95	14	1975	500	18455	4672	5925	1500	71100	18000	97455	24672
Tomato	Kharif	15.7	64	31400	2000	28260	1800	4710	300	235500	15000	299870	19100
	Rabi	6.51	24	39060	6000	18749	2880	7812	1200	126945	19500	192566	29580
Brinjal	Kharif	26.98	53	53960	2000	48564	1800	6745	250	364230	13500	473499	17550
	Rabi	4.9	25	17640	3600	15412	3145	3920	800	91875	18750	128847	26295
Pumpkin	Kharif	14.35	75	12915	900	20664	1440	3588	250	86100	6000	123267	8590
	Rabi	5.4	35	20250	3750	13608	2520	4320	800	40500	7500	78678	14570
Bins	Kharif	4.9	42	18375	3750	4116	840	980	200	33075	6750	56546	11540
	Rabi	2.41	14	18075	7500	4338	1800	1446	600	21690	9000	45549	18900
Leafy	Kharif	20.4	136	6120	300	24480	1200	0	0	122400	6000	153000	7500
	Rabi	3.6	42	1350	375	7128	1980	0	0	24300	6750	32778	9105
arum	Kharif	8.3	55	99600	12000	9960	1200	830	100	74700	9000	185090	22300
	Rabi	4.6	22	82800	18000	9936	2160	1380	300	48300	10500	142416	30960
Bitter guard	Kharif	33.7	82	53920	1600	40440	1200	8425	250	353850	10500	456635	13550
	Rabi	4.65	20	14880	3200	11718	2520	2790	600	62775	13500	92163	19820
Okra	Kharif	13.2	82	23760	1800	19008	1440	2640	200	158400	12000	203808	15440
	Rabi	10.8	34	72900	6750	23328	2160	6480	600	162000	15000	264708	24510

Table 1 Vegetable wise output/income

		Area of Cultivation in Acres	NOS OF HHs	TOTAL HARVEST in KG	AVERAGE HARVEST in KG per acre (Total Harvest/A cres)	TOTAL CONSUMPTION in KG (Consumption per HH)	Average consumption in Kg (Total Consumption/HH)	MARKET PRICE OF CROPS in Rs. (Per Kg)	Marketable surplus in Kg (Total Harvest- Total Consumption)	Price realization (market surplus * market price) in Rs.	GROSS INCOME in Rs. (Total harvest * Market price)	TOTAL COSTS in Rs. (Referenc Table:11)	Avg cost of cultivation per acre (Total cost/acres) in Rs.	Net Income Per Acre in Rs. (Gross Income - Total Cost)/acre
Potatoes	Kharif	25.58	46	167700	6556	30960	673	12	136740	1640880	2012400	1006317	39340	39331
	Rabi	6.4	16	39680	6200	7680	480	12	32000	384000	476160	287360	44900	29500
Onion	Kharif	16.23	57	56805	3500	6492	114	15	50313	754695	852075	183399	11300	41200
	Rabi	5.7	15	18240	3200	2280	152	15	15960	239400	273600	113030	19830	28170
Cabbage	Kharif	35.82	109	286560	8000	71640	657	8	214920	1719360	2292480	517599	14450	49550
	Rabi	6.04	22	45602	7550	12080	549	8	33522	268176	364816	144960	24000	36400
Cauliflower	Kharif	18.34	54	137550	7500	36680	679	8	100870	806960	1100400	303527	16550	43450
	Rabi	3.95	14	28440	7200	7900	564	8	20540	164320	227520	97455	24672	32928
Tomato	Kharif	15.7	64	94200	6000	12560	196	10	81640	816400	942000	299870	19100	40900
	Rabi	6.51	24	35805	5500	5208	217	10	30597	305970	358050	192566	29580	25420
Brinjal	Kharif	26.98	53	159182	5900	26980	509	10	132202	1322020	1591820	473499	17550	41450
	Rabi	4.9	25	26460	5400	4900	196	10	21560	215600	264600	128847	26295	27705
Pumpkin	Kharif	14.35	75	78925	5500	14350	191	8	64575	516600	631400	123267	8590	35410
	Rabi	5.4	35	23760	4400	5400	154	8	18360	146880	190080	78678	14570	20630
Bins	Kharif	4.9	42	11760	2400	490	12	15	11270	169050	176400	56546	11540	24460
	Rabi	2.41	14	5061	2100	241	17	15	4820	72300	75915	45549	18900	12600
Leafy	Kharif	20.4	136	24480	1200	510	4	25	23970	599250	612000	153000	7500	22500
	Rabi	3.6	42	3960	1100	90	2	25	3870	96750	99000	32778	9105	18395
arum	Kharif	8.3	55	31540	3800	3320	60	15	28220	423300	473100	185090	22300	34700
	Rabi	4.6	22	16100	3500	1840	84	15	14260	213900	241500	142416	30960	21540
Bitterguard	Kharif	33.7	82	84250	2500	6740	82	20	77510	1550200	1685000	456635	13550	36450
	Rabi	4.65	20	10695	2300	930	47	20	9765	195300	213900	92163	19820	26180
Okra	Kharif	13.2	82	36960	2800	3960	48	20	33000	660000	739200	203808	15440	40560
	Rabi	10.8	34	28080	2600	3240	95	20	24840	496800	561600	264708	24510	27490

The cost of vegetable cultivation, as shown in the table above, varies significantly between Kharif and Rabi season in the project area. For example, cost of cultivating cabbage and cauliflower in one acre of land is Rupees 14,450 and 16,550 in kharif season respectively where as it is significantly higher (24,000 and 24,672) in Rabi season. Similarly, for brinjal (egg plant), it is Rupees 17,550 in Kharif against rupees 26,925 in Rabi. Such significant differences, as reflected in the table, are on account of less input cost (cost of irrigation and fertilizers) during the kharif season.

When one looks at the net income from vegetable cultivation (single crop) in one acre of land, it is significantly higher in Kharif. One farmer in Kharif season gets rupees 49,550 against rupees 36,400 for cabbage cultivation. From egg plant cultivation, a farmer gets net income of rupees 41,450 in Kharif season against rupees 27,705 in Rabi.

Income security issues:

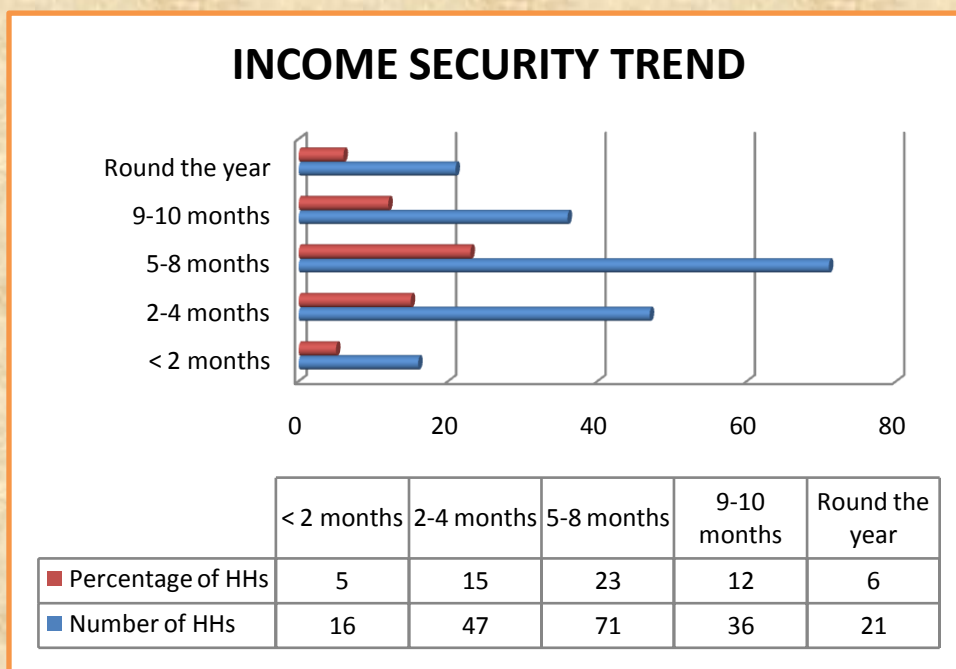
Income of the households come from varied sources, majors are farm income, collection and sell of NTFP, daily wage and migration. Apart from food items, the most popular commercial crop grown in the area is turmeric. Turmeric is a spice crop grown mostly in upland with zero management condition, best suited to the agro-climate. In practice, turmeric seed materials are sown in flat beds, behind the plough, without proper spacing and seed treatment, mostly in rain fed upland condition. Improved methods of plantation like raised bed, line sowing, inter cropping; seed treatment and application of organic manure is never done in turmeric crop. **Mulching is rarely done by Sal twigs, wherever available. The net income from one acre of turmeric crop in traditional method is about Rs. 8000.00 to Rs. 12000.00. About 45%HHs of the survey area go for turmeric cultivation regularly.**

Commercial vegetable cultivation is much appreciated vocation of the households where assured irrigation is available. About **31% of the HHs** in the survey villages are involved in commercial vegetable cultivation during the Kharif season. The post Kharif season are almost dry and vegetable crops are rarely grown owing to the water stress.

Vegetable cultivations are most often dependant on farmers' choice. Forecasting on market demand is not made possible at farmers end. The farmers do vegetable cultivation from their traditional experiences. No formal trainings are received by any of the respondents on vegetable cultivation, though a horticultural training institution is situated nearby at Kalinga village. The farmers are many a times guided by local input suppliers (seed, fertilizers and pesticides) for application of inputs and apply according to their resources. Use of chemical fertilizers and pesticides are rampant in many vegetable growing villages and occasional in paddy and turmeric. Application of organic inputs including compost is very rare. No standard POP followed by any of the vegetable farmers and no formal crop planning done at farmers end. Seed treatment is not done at farmers end before sowing. Vegetable during Kharif season gives a net income of **Rs. 8000.00-10000.00 per acre per year**, as calculated in the FGD.

NTFP are seasonal in nature and there is no definite range of income from this source. However it varies from Rs. 1000.00 to Rs. 3000.00 per household annually. Among the NTFP, collection and stitching of Sal and Siali leaves and selling it locally is a very popular vocation of the women in the survey villages. This is a household business and unorganized in nature. The rural women utilize their leisure time to earn an additional income from leaf stitching. However the vocation is purely seasonal and controlled by the business men/middle men. The rough stitched Siali leaf plates are sold @ Rs. 25.00 to 30.00 per bundle of 100 in local market, depending on size (diameter in inches) where as in case of Sal, it varies from Rs. 15.00 to 20.00. Value addition by fine stitching, machine stitching is possible to enhance the price by 20-30% and even more than that.

Most of the family income is spent for consumption purpose and meeting the need during festivals. Hardly there is any surplus for asset building in the survey area. The trend of income security of the survey area is as follows.



Migration as a major source of income

Migrants' remittance contributes significantly to the household income of migrants families. There are a total of 92 HHs (30%) in the survey villages who come under this category. Almost all of them are out state migrants who have been travelling regularly to states like Kerala, Karnatak and Andhra Pradesh to do labour work. Most of them work in unorganized sectors and having no security of their livelihoods and income. Almost all the migrants are not registered under the labour welfare board which is situated at the district head quarters-Phulbani. Income from migration varies from Rs.1000.00 to more than Rs. 10000.00. **Total 84 families out of 92 (91%) have reported receiving remittances from migrant members.** The amount of remittance amount is given in the table below:

Amount of remittance in Rs (Per year)	No of HHs	Mode of remittance
<3000.00	19	Banks
3000.00 to 10000.00	62	
>10000	3	

Problems encountered at the destinations of migration (Quoted from the migration study at the project area):

The migrants face a host of problems at destinations. As evident from the table, the major problems faced by the migrants pertain to basic services (Food, shelter, sanitation, health services and child education). Wage related problems were reported by 27.8 % (353 numbers out of 1270 in the entire project area) of migrants.

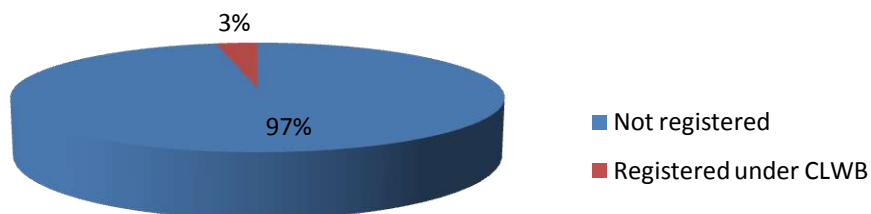
Sl. No	Problems encountered	Reported by Migrants
1	Overcrowded accommodation and unhygienic sanitation facilities	80.4%
2	Food related	70.0%
3	Language related problem	53.0%
4	Illness and health related problems	16.7%
5	Wage related problem	27.8
6	Communicating with families back home	2.8%
7	Children's' education related problem	19%

103 numbers (8%) of the migrants reported being affected by various diseases such as fever, malaria, Asthma and chest diseases, piles, stomach pain, jaundice, back pain, blood pressure, limb injury etc. 1% migrants reported permanent disability during migration.

Coverage of migrants under different social security schemes:

There are a number of social security schemes for the rural poor families such as BPL benefits, MGNREGA , Antodaya Anna Yojana , Biju Krushak Kalyan Yojana and so many. As far as destination is concerned, a few schemes are available to the migrants who have registered their name in the district labour offices/labour departments. The Construction Labour Welfare Board has declared a package of benefits for the registered migrants. Still a majority of the migrant community are ignorant about the schemes available for their benefit. Only 3.3% of the migrants in the entire project area are registered in the board (CLWB) only.

REGISTRATION STATUS OF MIGRANTS



Institutional membership of the people

It has been established from the household survey data that 45% HHs do possess their membership with women self help groups. Till now SHGs have been proved to be the most important institution for savings and credit for the people in the survey area. However, 7% households are members of leaf plate cooperative and multipurpose cooperative called LAMPCS. The membership is primarily for meeting their financial needs during requirement. There is only one producer cooperative in the survey area. The leaf plate cooperative is at Raipalli village (Gatungia Mahila Khali Utpadanakari Samabaya Ltd.) with membership of 280 members. The member HHs in the survey area sale their Khali leaves through that cooperative.

62% of the HHs have their savings bank accounts in commercial banks, most of them are under Pradhanmantri jan Dhan Yojana (PMJDY) of Govt. of India. 7% households have their savings account at LAMPCS where as only one HH at post office.

Resource mapping:

All the 7 villages are surrounded by forest and hilly terrains. 4 out of seven villages have seasonal small streams flowing outside the village. Almost all the village have very rich source of forest resources and hence comes under the PESA act (Panchayat Expention to Scheduled Areas). Animal resources are also a strength of the community.

In spite of the resource rich surrounding, the people are not able to extract much benefit owing to water stress situation in most part of the year.

Seasonality

Seasonality Matrix:

Analysis of the seasonality matrix of 7 villages shows that agriculture and allied sources make the people engage for 58.33% of days. During other times, the people depend on migration and NTFP collection.

Other seasonal trends are given in the table below.

Month → Factors ↓	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	N	Dec
Employment opportunity at village is more	---	---	---	---	---							
Festivals	---	---	---	---						---	---	---
Human Diseases are more						---	---	---	---			
Animal Diseases are more					---	---	---	---	---			
Income is more	---	---	---	---	---	---	---					---
Expenditure is more	---	---	---	---	---	---	---	---	---	---	---	---
Migration is more	---	---	---	---	---	-	-	-	-	--	---	---
Food availability is more	---	---	---	---	---							---
Debt is more						---	---	---	---	---	---	

Gender and domestic violence issues

Women are the major work force of the family in almost all the sample households. They do most of the labour work in and outside the house. Whereas, their contribution to the household economy is hardly recognized by the other members of the family. They have very limited role in decision making at household level and community level as well. Only 26 % of the women do participate in the Palli sabha of the village, but they hardly make any opinion and decision making. Violence against women due to alcoholism has been increasing over the last decade, reflects the serious decline in women's security. One in every five women in the sample villages has experienced domestic violence from very early age.

Even there is prevalence of domestic violence in 17% of the survey households. But, the actual figure of domestic violence is much higher than it is reported. Alcoholism is the major social stigma which leads to domestic violence, opined by majority of the respondents. So also in the case of women trafficking. This is due to the social stigma and family pressure. This will take time by changed strategy to bring out trafficking cases.

The case of women trafficking, though prevailing, is yet not disclosed by any of the community.

Role of PRIs and village level service providers in awareness building and addressing right based entitlements

The PRI members in the survey area are responsive, but ignorant about most of the schematic benefits, leaving a few. However they have a positive attitude towards positive changes and very much sensitive/reactive towards socio-cultural issues.

The people in the survey villages are accessible to some of the grass root service providers of the govt. like Anganwadi, ASHA, ANM. But the service providers under agriculture department (VAW) and community development department (VLW) are at far reach of the people. The PRI representatives help people in many ways to avail right based services from the Government schemes

Awareness level of the people:

According to the physical situation, awareness regarding personal and community sanitation is not up to mark.

Most of the respondents are unaware of the improved methods of organic farming and preparation/use of organic formulations. Though they apply chemical fertilizers to their crop fields, majority of them are unaware of the suitability, dosage, after impact of the chemicals they use.

Gender is another dimension to the process of social exclusion and discrimination. Although women enjoy a relatively equal status in tribal communities in Kandhamal district in general, women are subjected to extreme forms of exclusionary forms of social treatment and discrimination.

Alcoholism is treated as the major reason of domestic violence by the respondents. Yet no significant control mechanism has been initiated by the community to reduce/arrest alcoholism.

The analysis of livelihood pattern of the villages shows that people are unaware of most components rural development including improved agriculture practices, organic farming practices, farm mechanization, market prices and right based schemes.



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