Chapter 5

Impact of MGNREGA on Rural Livelihood: A Reflection of Village Level Study of West Bengal

The execution of MGNREGA works creates durable assets that enhance land and water resources, providing ecosystem services that make stronger the livelihood resource base of rural communities. MGNREGA works has an effect on natural resources and production systems where natural resources include soil, groundwater, surface water, and so on, and production systems include crop, livestock, and forests. Using the MGNREGA income as capital households can start any kind of business as per his capabilities. In addition the improved asset base has augmented the agricultural productivity which leads to increase in income and purchasing power of rural households. It will induce the demand for non-farm products and rural economy becomes a self-sustaining.

In this chapter we have analysed an empirical evidence-based evaluation of the potential of MGNREGA works in four villages of four districts to improve rural livelihood and reduce the incidence of poverty. For the empirical analysis, which examines the effect of MGNREGA on rural livelihood in terms of poverty reduction, we use the data of primary survey.

In this chapter section 5.1 presents the profile of the studied villages. Sources of livelihood in study area are discussed in section 5.2 with the use of data from primary survey. The performances of MGNREGA in the studied villages are dealt with section 5.3 based on household surveys. Section 5.4 discuses the asset creation in the studied villages. Section 5.5 analyses the income of household relating to MGNREGA. Impact of MGNREGA on status of poverty is discussed in section 5.6. Section 5.7 gives summing up of the chapter.

5.1   Profile of the Villages

A village has been selected randomly from each district. To choose a district we have formed a development index on the basis of twelve indicators which is not discussed here. The index has shown that Hooghly and Howrah are developed districts. On the other hand Twenty Four Parganas (South) and Birbhum are selected as less developed districts. The village named Dwaripara and Ramchandrapur Ditiyakhanda are selected randomly from Goghat-II block in district Hooghly and Amta-I block in district Howrah respectively. The village Bajesukdebpur and Manikpur are selected randomly from Mandir Bazar block in district Twenty Four Parganas (South) and Labpur block in district Birbhum respectively. So this is a purposively stratified random sampling.

Table 5.1.1: Distribution of population by sex

Main OccupationofHHs	Bajesukdebpur			Manikpur			Dwaripara			Ramchandrapur Ditiyakhanda		
	HH	M	F	HH	M	F	HH	M	F	HH	M	F
Farmer	96	243	209	152	350	277	57	113	111	5	12	7
AL	123	336	218	38	95	63	46	88	85	18	42	26
SENA	46	126	118	7	15	21	13	22	22	68	138	126
Regular Employed	42	108	119	10	21	17	5	13	9	8	15	15
OL	164	390	440	6	10	15	11	24	18	19	39	34
Total	471	1203	1104	213	491	393	132	260	245	118	246	208

Source: Primary Field survey, 2016-17

Table 5.1.1 describes the distribution of population by sex group in the villages. Bajesukdebpur is a large sized village; with a population of 2307 persons with 471 households among which

1203 are men (52.75 percent) and 1104 are women. Manikpur is a medium sized village with 213 households. Of the total population, 491 are men (55.54 percent), while 393 are women in 2016-17. Dwaripara is a small sized village; with a population of 505 persons with 132 households among which 260 are men (51.48 percent) and 245 are women in 2016-17. On the other hand Ramchandrapur Ditiyakhanda is a very small sized village, with a population of 454 persons with 118 households. There are 246 men (54.18 percent) and 208 women.

**Table 5.1.2: Percentage distribution of population by age group across Villages**

Age Group	Bajesukdebpur	Manikpur	Dwaripara	Ramchandrapur Ditiyakhanda
0-5	4.7	5.7	7.7	4.0
6 to 14	9.3	8.7	10.7	12.8
15-29	27.5	24.9	34.1	25.1
30-45	30.0	36.8	27.3	32.8
46-60	16.6	19.7	12.7	19.8
Above 60	11.8	4.3	7.5	5.5
Total	100.0	100.0	100.0	100.0

Source: Primary Field survey, 2016-17

The majority of the population belongs to low castes in most of the villages. But village Manikpur is exceptional. Only 37.54 percent of the population belongs to low castes in the village. The table 5.1.2 shows the percentage distribution of population by age group across Villages. About 14 percent population is below 14 years while 74 percent population is between 15-60 years and only 12 percent population is above 60 years in Bajesukdebpur. The dependency ratio is lower in Manikpur. The percentages of population below 14 years are 19 and 17 in Dwaripara and Ramchandrapur Ditiyakhanda respectively. Comparing with village Manikpur the

dependency ratio is slightly higher in Dwaripara and Ramchandrapur Ditiyakhanda. The working population for Dwaripara and Ramchandrapur Ditiyakhanda are 73 percent and 77 percent with respect to 81 percent in Manikpur.

Figure 5.1.1: Percentage Distributions of Population by Education across Study Villages
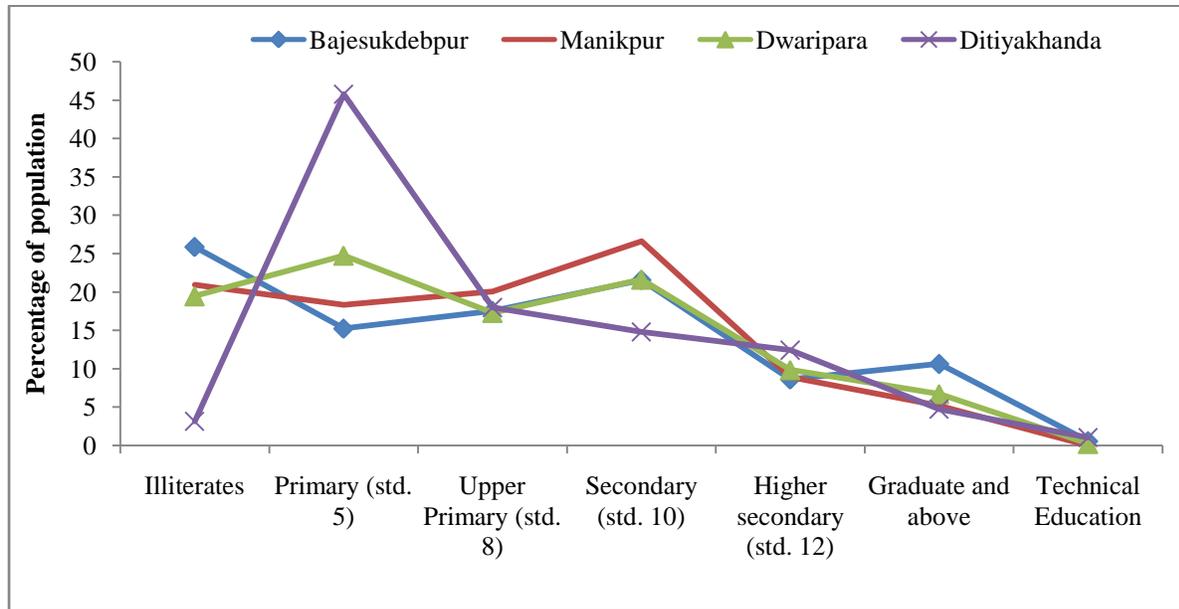
Source: Primary Data 2016-17 and Author's Calculation

Educational achievement reflects the quality of life enjoyed by people on the one hand and the level of their skill and productivity of workers on the other. The figure 5.1.1 deals with the educational level of the population across villages. The figure reveals that Bajesukdebpur is very poor in terms of educational achievements. 25.86 percent of adult population is illiterate which is highest among the villages. The figure is only 3.17 percent in Ramchandrapur Ditiyakhanda. From the figure we can see that majority of the population in Ramchandrapur Ditiyakhanda have been belongs from primary level educational group. But in case of upper primary education, the level more or less is same for all other villages except Manikpur (20.05 percent). Though the

basic educational attainment is lower in Bajesukdebpur, the level of higher education is quite high for that village. But the graph has depicts a common feature for the villages that the enrolment in school is high at primary level and it decreases with the increase in level of education. The percentage becomes insignificant at graduation and above. Technical education is mare nil to the villages.

Table 5.1.3: Percentage Distribution of Households by Income Group

Household income (Rs.)	Bajesukdebpur	Manikpur	Dwaripara	Ditiyakhanda
< 50,000	12	10	29	5
50,000–75,000	54	46	37	58
75000–100,000	20	33	19	15
100,000–125,000	8	8	6	14
125,000–150,000	2	0	5	4
150,000–175,000	0	1	2	2
175,000–200,000	0	1	2	0
225,000 +	4	2	1	2

Source: Primary Data 2016-17 and Author's Calculation

Data revels from table 5.1.3 that most of households are within the group of Rs. 50,000 to Rs. 75,000 classes across villages. But in case of Dwaripara village 29 percent of households belong to less than 50,000 income level which is highest among the villages. Ramchandrapur Ditiyakhanda is relatively better than other agriculturally developed villages. The data supports the evidence that the earnings from non-agricultural sector are relatively better than agricultural. Only 5 percent of households are below 50,000 income level.

5.2   Sources of Livelihood in Study Area:

This section provides a depiction of how rural people in the selected villages struggle to make their living and the livelihood activities they pursue. The livelihoods of people across villages were profiled through identification of the key income generation activities and sources of employment. It has been observed that different members of poor rural households search and find various sources of food, fuel, fodder, cash and any other support in various ways in various places at different times of the year. In order to survive and enhance the standard of living of the rural households, they depend on a frame work of diverse portfolio of activities and income generation sources which takes in account both farm and non-farm activities.

Table 5.2.1 presents the percentage of households engaged in different income generation activities in the selected villages. Study reveals that households are mainly dependent on labour sector, both as agricultural and non- agricultural labour.

Table 5.2.1: Distribution of Household as per the Main Source of Income

Main Occupation of HHs	Bajesukdebpur	Manikpur	Dwaripara	Ramchandrapur Ditiyakhanda
Farmer	20	71	43	4
AL	26	18	35	15
SENA	10	3	10	58
Regular Employed	9	5	4	7
OL	35	3	8	16
Total	100	100	100	100

Source: Primary Data 2016-17 and Author's Calculation

Manikpur and Dwaripara villages are agriculturally very sound. Dwaripara is located in Hooghly district at the belt of potato and vegetable production. On the other hand village Manikpur is located in South-East part of Birbhum district. This area is very fertile for paddy production and

paddy is produced for three times. So, most of the villagers are engaged in agricultural activity either as farmer or agricultural labour (AL). But the difference is that 71 percent of household belongs to farming community in Manikpur where as the figure is only 43 percent in Dwaripara. On the other hand 18 percent and 35 percent of households are agricultural labour in Manikpur and Dwaripara respectively. Since, Ramchandrapur Ditiyakhanda is agriculturally poor, 58 percent of its villagers are engaged in rural non-farm activity. The households of Bajesukdebpur have been depended on migration along with agricultural activity for their living. Regular employment is insignificant for the villages. They depend mostly on casual work. The next part of this section deals with the land holdings of the households across villages.

Table 5.2.2: Percentage Distribution of Households by Landholding

| Land Holding (acres)	Bajesukdebpur	Manikpur	Dwaripara	Ditiyakhanda
No land	41	14	2	52
0–2.5	49	46	97	48
2.5–5.0	10	37	1	0
5–10	1	4	0	0
10 +	0	0	0	0
Total	100	100	100	100

Source: Primary Data 2016-17 and Author's Calculation

From the table 5.2.2 we can see that land is evenly distributed to Dwaripara village. Only 2 percent households are land less and 97 percent households are marginal land holder. The percentage households having no land are 41, 14 and 52 in village Bajesukdebpur, Manikpur and Ramchandrapur Ditiyakhanda respectively. The data revels that about 50 percent households come from marginal land holder. Manikpur is blessed of cultivable land on the ground that 37 percent and 4 percent of household are belong to small and medium farmer. But in

Bajesukdebpur village small land holders are 10 percent and only 1 percent households belong to medium farmer.

In the overall scenario, Manikpur village have in better position than other villages in respect of education and land availability. Resources are distributed evenly in this village. Except Ramchandrapur Ditiyakhand, all other villagers depend on agriculture. 35 percent households in Bajesukdebpur are migrating for job. Lack of basic facilities like primary health centre, modern drainage system, opportunities of higher education, supply of drinking water and concrete or all weather roads are the common features of the villages. The communication with Kolkata is quite good to village Bajesukdebpur and the communication with Howrah is quite good to village Ramchandrapur Ditiyakhand. The worker can get employment on regular basis. So worker prefers Kolkata and Howrah for their job. Not only that they can make over time and total payment is much more than in agricultural. On the other hand households of Manikpur and Dwaripara depend on agricultural activity and their income generate from village economy. So we have to develop the rural infrastructure in such a way with the help of MGNREGA which have more multiplier effect in the village economy.

 Figure 5.2.1: Average Annual Income of Households within the Major Occupational Groups
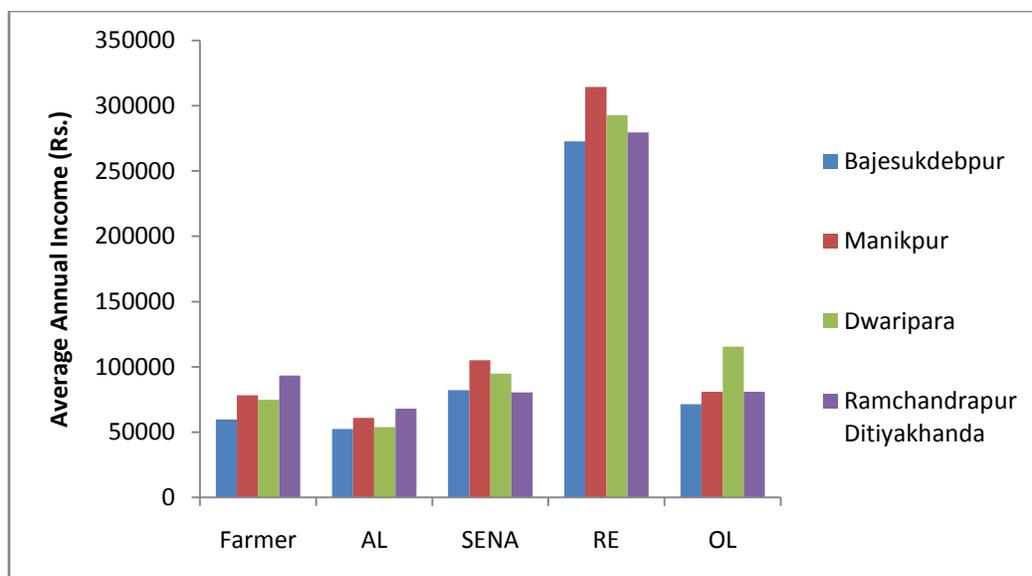
Source: Primary Data 2016-17 and Author's Calculation

From the figure 5.2.1 we can see the average annual incomes of farmers of Ramchandrapur Ditiyakhanda are higher than any other study villages though the Manikpur and Dwaripara village are agriculturally very strong. Our study has revealed that the farmers of Ramchandrapur Ditiyakhanda have diversified the farm in come along with non-farm income. So diversification of livelihood is most important of survival in rural area. We can see the same scenario in case of agricultural labour in the study villages and we can cite the same reason for the consequence. But the average annual incomes of Self-employed, Regular employed and other labour who have defined as migrant casual labour to our analysis are higher in Manikpur village followed by Dwaripara. We have already mentioned the main source of income in broad categories - income from labour, income from farm and income from non-farm activity.

5.3   MGNREGA in the Studied Villages

Implementation of MGNREGA in West Bengal started since 2006. But the introduction of MGNREGA to all districts in West Bengal was not simultaneously. MGNREGA was launched in district Twenty Four Parganas (South) and district Birbhum in first phase. MGNREGA was

launched in the Hooghly district in second phase. But it was started in the Howrah district in third phase. Implementation of MGNREGA in village Bajesukdebpur and Manikpur in district Twenty Four Parganas (South) and district Birbhum respectively started since 2006, when a panchayet assemblywas organized to inform people about the Act and the underlying scheme. The first work under MGNREGA started on 10th February 2007 and the first work under MGNREGA started on 12th March 2008 in village Dwaripara and Ramchandrapur Ditiyakhanda in district Hooghly and Howrah respectively. For the villages people started applying for registration under the Act after the meeting. Households were asked to get themselves photographed for getting registered. The village panchayat arranged this through a photographer who charged Rs. 15 per household (group) photograph. After registration, job cards were distributed to households. In most of the villages the numbers of job cards issued were more than the number of households. So far about 501 job cards have been issued in Bajesukdebpur and 265 job cards are issued in Manikpur. But number of household is 471 and among them 15 household is in government service in Bajesukdebpur. In case of Manikpur, the number of household is 213 and among them 10 households are in government service. 158 job cards have been issued in Dwaripara out of 132 households and among them 5 households are in government service. Number of job cards issued is less than the number of households in Ramchandrapur Ditiyakhnda. The figure is possible due to corruption. Either two or three job card has been issued against one household. Since computer enabled system does not allow this, some household are enrolled them self under different cast (SC and other) and some other household entitled different member under different job card. That is, about 90 per cent of households have a job card in study villages. Most of them demanded work orally, as there was no form to be filled to demand work.

Table 5.3.1: Project cost of MGNREGA and persondays generated in the studied villages

Villages	Project cost (Rs.)	Persondays		
		Male	Female	Total
Bajesukdebpur	1691360	5380	4230	9610
Manikpur	1312432	4747	2710	7457
Dwaripara	628672	2652	920	3572
Ramchandrapur Ditiyakhanda	245696	1039	589	1396

Source: Primary Data 2016-17 and Author's Calculation

The first work under MGNREGA started on 17th June 2006, four months after the Act came into being in Bajesukdebpur. Until 31st March 2017, forty two works were taken up under the scheme. Table 5.3.1 discuses about the allocation of fund and the persondays generation through MGNREGA.In all, Rs. 16, 91,360 was spent on the works. The entire cost is reported as labour cost, as the money was spent on wages. Total 9610 mandays have been created. Among these 5380 persondays were for male and 4230 persondays for female. On the other hand Rs. 13, 12,432 was spent on the works in Manikpur. Total 7,457 mandays have been created. Among these 4,747 persondays were for male and 2,710 persondays for female. For the FY 2016-17, in all, Rs. 6, 28,672 was spent on the works in Dwaripara and total 3,572 mandays have been created. Among these 2,652 persondays were for male and 920 persondays for female in the village. The expenditure under MGNREGA in Ramchandrapur Ditiyakhanda was Rs. 2, 45,696 and total 1,396 mandays have been created. Persondays for male and female in Ramchandrapur Ditiyakhanda were 1,039 and 589 respectively.

From the table 5.3.2 below we can see that the participation rate of household under MGNREGA is very low (26 percent) in Ramchandrapur Ditiyakhanda. Participation rate in Manikpur and Dwaripara are 67 percent and 69 percent which is quite good. But in the village Bajesukdebpur

only 40 percent households has been participated in the study period. Objective of MGNREGA was to provide support to the marginal sections in the rural area. The data revels that agricultural labour and farmer are the major participants in MGNREGA.

Table 5.3.2: Percentage of Household Participating under MGNREGA

Main occupation	Bajesukdebpur	Manikpur	Dwaripara	Ramchandrapur Ditiyakhanda
Agriculture	38	71	77	40
AL	55	74	70	61
SENA	52	0	23	22
Regular Employed	10	30	60	25
OL	34	67	82	5
Total	40	67	69	26

Source: Primary Data 2016-17 and Author's Calculation

MGNREGA was framed to boost rural economy through inclusive growth. According to UND Report gender equality signify smart economy. More gender equality can increase productivity, enhance development outcomes for the next generation and make institutions more representative. Among the chronically poor people Indian women constitute a major share. In most of their life span, they still pass away with deprivation and discriminatory attitudes. MGNREGA of India has created opportunities for gainful socio-economic inclusion of women. In this respect the act ensures 33 percent reservation for women. In the following table we will see how far the study villages have achieved to provide job to women.

Figure 5.3.1: Male and Female participation Rate in MGNREGA
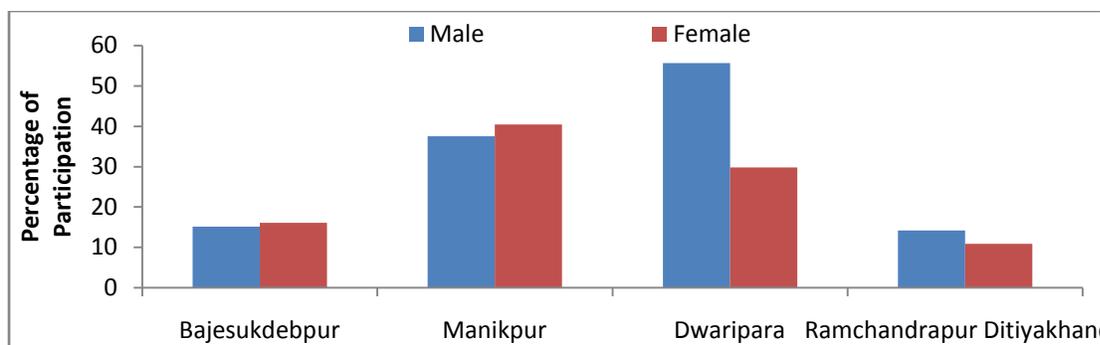
Figure 5.3.1 shows that participation is slightly higher for women (16.1 per cent in Bajesukdebpur and 40.45 percent in Manikpur) than for men (15.17 per cent in Bajesukdebpur and 37.53 percent in Manikpur) in villages. The women participation in Dwaripara and Ramchandrapur Ditiyakhanda is significantly lower than men. Village Manikpur is able to provide job more than one third women under the scheme. On the other hand Dwaripara and Ramchandrapur Ditiyakhanda are far below the government stipulation of minimum one third women employment.

Table 5.3.3: Average Person-days of Employment Generated for Male-Female

Main occupation	Bajesukdebpur		Manikpur		Dwaripara		Ramchandrapur Ditiyakhanda	
	M	F	M	F	M	F	M	F
Agriculture	46	31	31	20	22	17	33	33
AL	42	36	34	26	24	17	39	41
SENA	23	3	_	_	28	12	39	37
Regular Employed	45	20	17	_	17	_	_	22
OL	33	30	32	30	26	28	_	14
Total	37	30	31	21	23	18	38	35

The table 5.3.3 depicts average persondays of employment generated for male-female. In most of the villages farmer and AL has got maximum persondays among the other section of the community. But in Bajesukdebpur village RE has got a more persondays than AL. This proves some kind of corruption. Except Ramchandrapur Ditiyakhanda, average persondays of female are lower than male counterpart.

Table 5.3.4: Average Person-days of Employment Generated for Participating Households in MGNREGA

Main occupation	Bajesukdebpur	Manikpur	Dwaripara	Ramchandrapur Ditiyakhanda
Agriculture	52	50	38	66
AL	60	62	40	58
SENA	22	0	36	56
Regular Employed	32	22	23	22
OL	42	54	47	14
Total	48	52	39	54

Source: Primary Data 2016-17 and Author's Calculation

MGNREGA was framed to provide at least 100 days job to the rural households who are willing to work in a FY. But Manikpur and Ramchandrapur Ditiyakhanda are able to provide 52 and 54 persondays in an average. Bajesukdebpur and Dwaripara have provided 48 persondays and 39 persondays respectively in 2016-17. From the table 5.3.4, it is clear that all the villages are far below the minimum level of employment (100 days). It was enacted to pay unemployment allowances when the panchayet are unable to provide job up to 100 persondays in a household in a FY on the basis of demand for job of a household. But to avoid unemployment allowance panchayet are taking application for job when job are available.

5.4 Asset Creation under MGNREGA in the Studied Villages

To ensure sustainability of assets created under MGNREGA, adequate project/work selection, technical and organizational administration, maintenance and end use as well as quality and durability of assets is important. Perception-based questions were used to justify whether the assets are useful to the beneficiaries and are being used for the purpose they were created for. In all villages, the assets created under MGNREGA in 2016-17 were visited and based on first hand observation and discussions with the workers and panchayet member, the following analysis was drawn for randomly selected assets.

Table 5.4.1: An Account of Assets Created under MGNREGA in 2016-17 in Studied Villages

Description Of Work	Number Of Project			
	Bajesukdebpur	Manikpur	Dwaripara	Ramchandrapur Ditiyakhanda
Cross Bandh	10 (5,79,568)	_	_	_
Construction of ICDS Center	_	_	1 (7040)	_
Construction of CC Road	_	2 (3,31,232)		1(47,696)
Construction of House (IAY &GrihaSamridhi)	4 (66,880)	_	2 (26,400)	1 (3,696)
Land Development Work	_	5 (8,71,024)	_	3 (1,11,936)
Natun Khal Open To Baro Bill With Plantation Of Khal Bandh	_	_	_	1 (70,048)
Pond Excavation	9 (6,31,488)	_	_	_
Pond Pailing	2 (76,032)	_	_	_
Pond Re-Excavation	1 (54,032)	1 (20,592)	_	1 (12,320)
Re-excavation of Canal	_	_	2 (4,45,633)	_

Re-Excavation of drain	_	4 (89,584)	1 (1,49,600)	_
Road Site Strip Plantation	15 (2,56,080)	_	_	_
SuchiSikhyangan	1(27,280)	_	_	_
Total cost of MGNREGA assets in Rs.	16,91,360	13,12,432	6,28,672	2,52,032

Source: Primary Data 2016-17 and Author's Calculation

N.B: Within brackets the figure indicates cost in Rs. and outside brackets it indicates number of projects

❖ **Works related to rural connectivity**

1. The constructed road networks increased the inter village connectivity and mobility. These roads reportedly reduced the travelling time for villagers.

2. The respondents in Manikpur and Ramchandrapur Ditiyakhanda opined that compacted earthen roads (see Picture Plate 9) constructed through MGNREGA funds, also reduced water logging during rains and increase of malaria causing mosquitoes, indirectly benefitting their health. Village member of Manikpur got several internal village roads maintained through MGNREGA funds. He also claimed to have utilized some of the panchayat funds for paving of mitti murram roads. This resulted in draining of excess water on the constructed side channels and the roads remained dry without puddles, thus improving the general sanitary conditions in the village.

The durability of an asset depends on the soundness of its technical design to a large extent. In terms of quality, it was noted that in some of the internal village roads in Bajesukdebpur, proper dressing of the side slopes and compaction of the road were not given due attention, which resulted in water stagnation and early damage to the road. The sustainability of civil works on all weather roads could be low due to non-use of machines like road rollers which are necessary for compaction.

❖ **Works related to Water Conservation and Harvesting**

The dug out ponds, both newly constructed under MGNREGA and revived traditional water bodies were also visited. These excavated ponds not just cater to local human and livestock water needs of present but also play an important role in environmental service by recharging the ground water reservoirs for future usage. The ponds are to be deepened and dug out in a manner that excavated earth does not get washed back into it due to rains. Further the slope, catchment and proportion of surface area and volume needs to be technically sound.

1. In almost all the ponds site visited, a common observation was that the excavated earth was disposed off randomly and not stacked properly. The subsequent result was soil erosion during rainy season turned out to be the major cause of siltation in the pond thus reducing its storage capacity drastically over a lesser period of time. A case in point was the pond at Bajesukdebpur. This pond is located adjacent to grazing ground making it ideal for livestock usage. However, due to washing away of side slopes, the water retention capacity was significantly reduced and the water harvested during monsoons lasted for only 2-3 months. However, desilting of existing water bodies provided several sustained environmental services including a rise in the groundwater level and water availability, particularly for livestock owning households. The respondents in Manikpur and Bajesukdebpur reported that water harvested in ponds lasted 4-5 months and it was a multiple use asset being used for household purposes, groundwater recharge, livestock etc.

Certain ponds were also leased out to private individuals, contractors or large farmers for pisiculture, particularly in Manikpur and Dwaripara that contributed to panchayat funds, which were utilized for other development works. The pond usage was permitted to other villagers for livestock water and bathing needs since it contributed to organic matter that facilitated growth and multiplication of fish.

4. The community preservation of the ponds was however limited, possibly due to ambiguity over ownership and usage rights. All villagers, including those who were directly benefiting from the asset, told that it was the responsibility of the GP to regularly clean and maintain the assets. The panchayat member though said about the lack of separate asset maintenance funds as an obstacle. The pond at Kokond dighi in Dwaripara was full of filth and not being used at all.

❖ **Works related to land leveling**

Land leveling is another permitted work under MGNREGA. The funds from the programme were used for land leveling in school grounds in Bajesukdebpur in the name Suchi Sikhyangan. The respondents reported that these grounds had undulated land initially that constrained children's mobility and play activities within the school.

1. In Bajesukdebpur, the panchayat member reported that in absence of panchayat ghar and a designated community centre, the school ground was extensively used for multiple purposes.

2. The land development work was done in private land in Manikpur and Ramchandrapur Ditiyakhanda to improve fertility of land.

❖ **Convergence in MGNREGA**

Another most important development observed as a consequence of MGNREGA, was the construction of ICDS center in Dwaripara. For each of these works, the design specifications and unskilled labour and material components have been specified.

In the field survey, absence of pakka house was a significant observation. In Bajesukdebpur, Dwaripara and Ramchandrapur Ditiyakhanda, individual house were constructed under IAY & Griha Samridhi yojana with the labour cost of MGNREGA which reportedly improved women's and child health and safety to a great extent.

5.5   Generation of Income of the Household in Relation to MGNREGA

MGNREGA was introduced to generate a stable source of income and to protect livelihood for the poor, marginalized and vulnerable. There are many different way in which MGNREGA is likely to affect poverty, the most direct and distinct way being by generating additional work opportunities and income to the poorest in the rural areas. Some studies have also mentioned the role of MGNREGA as an additional source of income. The household's income has increased due to the increasing job opportunity of more members of the same households who are remained idle before the introduction of MGNREGA. On the other hand MGNREGA income is being used by rural households for opening their own business enterprise.

Table 5.5.1: Average Wage Earnings of Participating Households from MGNREGA Work in 2016-17

Main occupation	Bajesukdebpur	Manikpur	Dwaripara	Ramchandrapur Ditiyakhanda
Farmer	9152	8800	6688	11616
AL	10560	10912	7040	10208
SENA	3872	0	6336	9856
R E	5632	3872	4048	3872
OL	7392	9504	8272	2464
Average	8448	9152	6864	9504

Source: Primary Data 2016-17 and Author's Calculation

The average income earned by the households from the MGNREGA varied widely across villages and across households within the same villages. In Bajesukdebpur average earnings for households were Rs. 8,448 while in Manikpur it was Rs. 9,152, for Ramchandrapur Ditiyakhanda it was Rs. 9,504. The average wage earnings in Dwaripara were only Rs. 6,864.

From the table 5.6.1, it is evident that AL got the maximum benefits from MGNREGA for all studied villages which were our objective in introduction of MGNREGA.

Income from MGNREGA, as a share of household income, can be taken as an indicator of the importance of the programme for the poor and is presented in table 5.6.2.

Table 5.6.2: Percentage Share of MGNREGA Income in Total Income of the Participating Households in 2016-17

Main occupation	Bajesukdebpur	Manikpur	Dwaripara	Ramchandrapur Ditiyakhanda
Farmer	13.78	11.39	9.18	5.63
AL	18.24	17.52	13.12	9.84
SENA	9.90	0.00	0.07	2.77
R E	3.56	1.18	1.11	0.62
OL	9.48	10.74	6.71	0.17
Average	12.62	11.44	8.45	3.05

Source: Primary Data 2016-17 and Author's Calculation

Considering that sampled households practiced diverse livelihood activities, MGNREGA's annual contribution to household income through wages was found to be 12.62 percent and 11.44 percent in the beneficiary households in Bajesukdebpur and Manikpur respectively. The primary data (2016-17) for selected villages revealed that among the four selected villages, maximum benefits were distributed among AL while least benefits were received by RE. The percentage share of MGNREGA income in total income in Ramchandrapur Ditiyakhanda was 3.05 percent in an average which was insignificant. This is also indicative of the fact that there were less takers of MGNREGA in this village, as commented by panchayet member, which could be

possible due to numerous reasons. To the extent that this programme increases the income and purchasing power of poor rural households, it will have an impact on poverty.

Table 5.5.3: Effect of MGNREGA Work on Total Income of Participating Household across Different Income Group in the Studied Villages

Main Occupation	Mean Income of Treatment Group	Mean Income of Control Group	Mean Difference	't' Value	'p' Value
Bajesukdebpur					
Farmer	67821	63854	3967	1.495*	0.071
AL	65403	59068	6335	1.661***	0.003
SENA	90048	59068	30980	5.291***	0.000
R E	131171	288925	-157755	-3.483***	0.001
OL	77414	72735	4679	1.669**	0.048
Manikpur					
Farmer	78527	70630	7897	2.092**	0.020
AL	62350	55965	6385	1.393*	0.090
SENA	NA	NA	NA	NA	NA
R E	322219	305407	16812	0.124	0.456
OL	88880	65250	23630	1.851*	0.069
Dwaripara					
Farmer	76305	61815	14490	2.203**	0.019
AL	53972	45407	8565	2.895***	0.004
SENA	96120	82327	13794	2.428**	0.018
R E	363945	182750	181195	0.689	0.281

OL	123258	90136	33122	0.790	0.287
Ramchandrapur Ditiyakhanda					
Farmer	97276	72694	24582	1.317	0.207
AL	69032	53777	15255	2.104**	0.027
SENA	85387	76394	8992	1.508*	0.071
R E	82902	180118	-97216	-1.677*	0.077
OL	NA	NA	NA	NA	NA

Source: Primary Data 2016-17 and Author's Calculation

Whether there is any significant change income due to participation in MGNREGA work have been mentioned in Table 5.5.3 which contains means and mean difference of income for treatment and control households. In the Table, the mean value of the outcome variable income is higher in the control group than in the treatment group in Bajesukdebpur village for farmer which implies that programmes has a positive impact on income of households. Raw differential or mean difference is 3967, which is the first estimate of treatment effect before doing any sophisticated econometric analysis. The positive treatment effect is not a surprising result as MGNREGA participation has been enhanced the income of participating households than in their counterparts. The mean difference is positive and significant at one percent level for agricultural labour in Bajesukdubpur. MGNREGA has positive effect on all other section of studied villages except RE which is evident from the table. But the positive difference is not significant for farmer households in Ramchandrapur Ditiyakhanda. The income diversification is so high for this section particularly for Ramchandrapur Ditiyakhanda that the average income for this section is relatively higher that the other section and the income difference due to MGNREGA is not statistically true. In case of NA there is either no participation or impossibility of statistical testing due to very low participation.

5.6 Impact of MGNREGA on Status of Poverty

Studies on poverty observe that deprivation across a wide range of nutrients (calories, micro-nutrients, etc.), can lead to a poverty trap where low nutrition leads to low productivity which in turn leads to low wages and then to low nutrition, thus completing a vicious cycle of food insecurity. Depending on how net transfers from MGNREGA are spent, their nutritional implications may be noteworthy (Jha et al. 2012). MGNREGA has contributed to ensuring a higher consumption of food and food availability. The participation in MGNREGA programme had helped to reduce the meals foregone by households (Englera et al. 2015). Those who worked in the programme scarified 1.6 fewer meals per week. Now we have discussed the consumption pattern of households in the study villages across different types of households.

Table 5.6.1: Percentage Distribution of Consumption of Commodities and Services by Different Categories of Households, 2016–17

Item of Consumption	Bajesukdebpur					Manikpur				
	Farmer	AL	SENA	RE	OL	Farmer	AL	SENA	RE	OL
Food grains	22.7	20.7	21.3	15.4	19.2	18.7	21.0	17.5	5.4	15.3
Vegetable, milk/animal products and Fruits	34.3	33.0	35.1	29.8	30.6	32.5	31.8	35.8	14.0	25.4
Grocery	14.7	13.4	13.6	11.2	13.3	19.5	19.6	21.4	7.1	19.5
Intoxicant	1.2	2.0	3.3	2.0	2.7	0.7	1.0	1.7	1.4	0.1
Subtotal food	**72.8**	**69.0**	**73.2**	**58.3**	**65.7**	**71.4**	**73.4**	**76.3**	**27.9**	**60.3**
Total fuel	0.0	0.0	0.3	1.3	0.6	0.4	0.1	0.7	3.9	1.7
Clothing and footwear	11.7	10.3	13.7	12.5	11.8	10.2	11.0	9.4	4.1	9.3

Consumer durables	1.1	1.2	2.0	4.7	1.6	1.3	1.3	0.0	13.4	2.9
Health and education	6.6	4.1	4.7	8.5	5.8	5.5	6.7	5.8	2.1	5.2
Electricity	1.7	1.6	1.9	1.9	1.4	2.5	2.8	2.3	0.7	2.2
Other exp	4.4	12.0	2.4	11.5	11.2	7.4	3.3	4.4	47.3	17.3
Transport	1.7	1.8	1.8	1.4	1.9	1.3	1.4	1.1	0.6	1.2
Grand total	100	100	100	100	100	100	100	100	100	100

Continuation of Table 5.6.1………..

Item of Consumption	Dwaripara					Ramchandrapur Ditiyakhanda				
	Farmer	AL	SENA	RE	OL	Farmer	AL	SENA	RE	OL
Food grains	12.8	15.7	10.7	8	10.7	14.37	17.46	15.34	7.88	14.71
vegetable, milk/animal products and Fruits	32.9	35.4	34.5	21.7	28.2	28.5	32.33	29.86	17.41	30.23
Grocery	19.2	20.2	18.6	10.3	14.7	17.14	17.82	16.55	10.37	15.81
Intoxicant	0.9	0.2	2.6	1.1	2.4	0.71	0.7	0.49	1.3	1.1
Subtotal	**65.8**	**71.5**	**66.4**	**41**	**56**	**60.72**	**68.31**	**62.24**	**36.96**	**61.85**
Total fuel	0.9	0.2	2.8	2	5.1	3.99	1.67	0.92	2.4	2.69
Clothing and footwear	11.2	13.2	10.9	4.2	9.3	8.8	11.4	9.81	5.76	9.88
Consumer durables	4.5	0.8	1.6	10.8	4.8	3.23	1.15	5.95	8.23	1.61
Health and	6.7	6.5	8.2	3.1	5.1	3.69	5.88	4.56	4.48	4.62

education										
Electricity	1.8	2.1	2	0.7	1.4	2.62	3.05	2.79	1.63	2.87
Other exp	7.6	4.1	6.2	37.6	16.9	14.07	4.91	10.63	38.85	13.18
Transport	1.5	1.6	1.9	0.7	1.5	2.88	3.63	3.12	1.7	3.28
Grand total	100	100	100	100	100	100	100	100	100	100

Source: Primary Data 2016-17 and Author's Calculation

The table 5.6.1 on consumption expenditure of village households shows that farmer households spend the highest per cent of their expenditure on food items (22.66 per cent) followed by self employed (21.34 per cent) in Bajesukdebpur village. On the other hand in Dwaripara village, agricultural labour households spend the highest per cent of their expenditure on food items (13.88 per cent) followed by farmer (11.8 per cent). The scenario is same for Manikpur. Households with services as their main occupation spend the lowest percentage on food items in all of the studied villages. The composition of the food items, however, reveals that the richer households spend a larger per cent on non food item, while the poorer households spend large amounts on food item. The highest percentage is spent on non food item by service households 41.7 percent, 59 percent, 72.1 percent and 63.04 percent in Bajesukdebpur, Dwaripara, Manikpur and Ramchandrapur Ditiyakhanda respectively followed by other labour households. But agricultural labour households spent 26.52 percent and 28.34 percent on these items in Manikpur and Dwaripara respectively. The highest percentage of expenditure on health and education are incurred by service households and farmers in Bajesukdebpur. But the percentage is higher for agricultural labour households in other studied villages. As we have already seen, people in the village have poor access to public health services and they have to spend huge amounts on healthcare.

MPCE has been used as a proxy indicator to assess the effect of MGNREGA on poverty levels of a household. The impact is likely to be positive if the increase in income has transferred into an increase in expenditure, particularly on food and essential items, of the household. The study on Andhra Pradesh revealed that MPCE of 10 percent households had been increased after the participation in MGNREGA. Expenditure on non-food items increased significantly by around 23 percent (Englera et al., 2015). Deininger et al. examined the effect of MGNREGA with the data of 2,500 same households in 2004, before MGNREGA and in 2006 and 2008, after the execution of MGNREGA in Andhra Pradesh. The study revealed that MGNREGA participation had a significant and positive effect on consumption expenditure, energy consumption and asset accumulation.

From the above analysis it is very much clear that MGNREGA can play an important role in consumption smoothing of a rural households. We have tried to establish this in the table 5.6.2 in a first hand approach with any econometric analysis and then we have seen the result with the help of Probit model.

Table 5.6.2: Fractiles of the Village Distributions of MPCE and Participation in MGNREGA within the Class

	Bajesukdebpur		Manikpur		Dwaripara		Ramchandrapur Ditiyakhanda	
Fractile Class of MPCE	MPCE*	% of HH**	MPCE*	% of HH**	MPCE*	% of HH**	MPCE*	% of HH**
0-5%	789	27	1038	25	912	29	1040	23
5-10%	831	22	1073	100	974	71	1101	27
10-20%	880	44	1089	81	1008	89	1141	38
20-30%	933	40	1102	85	1062	86	1272	43

30-40%	984	37	1120	86	1145	88	1388	37
40-50%	1012	43	1144	83	1232	87	1425	29
50-60%	1051	52	1280	77	1301	75	1459	25
60-70%	1108	56	1396	69	1406	71	1495	20
70-80%	1228	50	1494	64	1568	59	1577	19
80-90%	1329	30	1649	54	1757	57	1899	17
90-95%	1451	19	1959	47	2005	45	2314	10
95-100%	1880	8	3170	29	2264	33	3503	8
All classes	1096	40	1389	67	1355	69	1565	26

Source: Primary Data 2016-17 and Author's Calculation

N.B: *Average MPCE of the Class,

    ** Percentage of HH Participating MGNREGA within the group

On the basis of our primary survey we have calculated the MPCE of the village households and distributed them as the percentile classes. For village Bajesukdebpur, the 5th percentile of the MPCE distribution was estimated as Rs. 821 and the 10th percentile as Rs.835. The MPCE of corresponding class for Dwaripara are Rs. 912 and Rs. 974 respectively. But the MPCE of Manikpu and Ramchandrapur Ditiyakhanda are relatively higher for the first two classes. Using consumer price index for agriculture labour of 2011-12 and 2016-17, we have estimated rural BPL line for West Bengal Rs. 1075. We can see that 60 percent of the population belongs to BPL in Bajesukdebpur. The percentages of BPL households for other studied villages are 10 percent, 30 percent and 5 percent in Manikpur, Dwaripara and Ramchandrapur Ditiyakhanda respectively. From the table 5.6.2, it is clear that MPCE increases with increase in participation of MGNREGA for all studied villages. Since the level of MPCE is in lower level, the propensity of consumption is very high for rural mass and with increase in income, expenditure on

commodities increases. The participation rate is lower in certain level of MPCE due to the delayed payment of MGNREGA and political issues. First of all the people who live with a very low level of MPCE can not wait for the delayed payment in MGNREGA. They preferred daily payment basis due to their hand to mouth. On the other hand the political strength of these people is lower than the relatively higher MPCE classes. We can also say that the people are in a lower MPCE level due to the exclusion from the programme. So we can say that MGNREGA has improved the consumption capacity of rural mass and partially helped to get rid of poverty. On the other hand after a certain higher level of MPCE people prefer to do better job and they are not interested to work in MGNREGA. So participation in MGNREGA decreases with increasing MPCE after a comfort level of MPCE.

The status of poverty is discussed in the table 5.7.3. From the table it is quite clear that SC/STs are relatively better position than non-SC/STs in our study villages. The studied villages are predominant in SC/STs except Manikpur and its reflection is shown in the below table.

Table 5.6.3: Caste Wise Distribution of Household on the Basis of Poverty across Villages

Category	Number of Households				
	Bajesukdebpur	Manikpur	Dwaripara	Ramchandrapur	Total
SC/ST	316	97	123	106	642
Non-SC/ST	155	116	9	12	292
Total	471	213	132	118	934
Category	Number of Households Belongs to Poverty				
	Bajesukdebpur	Manikpur	Dwaripara	Ramchandrapur	Total
SC/ST	180	11	30	4	225
Non-SC/ST	106	6	6	3	121
Total	286	17	36	7	346
Category	Percentage of Households Belongs to Poverty within the Category				

	Bajesukdebpur	Manikpur	Dwaripara	Ramchandrapur	Total
SC/ST	57.0	11.3	24.4	3.8	35.0
Non-SC/ST	68.4	5.2	66.7	25.0	41.4

Source: Primary Data 2016-17 and Author's Calculation

The highest poverty vulnerability is observed in Bajesukdebpur village. On the other hand Manikpur and Ramchandrapur Ditiyakhanda has experienced relatively lower percentage of households belongs to below poverty line. But in most of the cases the percentage of households belongs to poverty from non-SC/STs are relatively higher than the SC/STs except Manikpur. If we see the households in an aggregate, the percentage of households below poverty are 41.4 percent for non-SC/STs where as it is 35 percent for SC/STs.

Status of poverty of a household (SPH) is binomial and we have assigned the values 1 and 0 for below poverty and others respectively. Any increase in household size (HHS) is expected to decrease the availability of resources in percapita sense and will reduce the level of consumption. Studies and existing data have cited that the initiation of rural employment programme has generated supplementary employment for the labourers and therefore, it is expected to have a positive impact on the growth rate of wages in any given region and enhances the level of income which leads to increase in consumption (Englera et al., 2015). In view of this, the variable participation in MGNREGA (MGP) is included to relate with status of poverty analysis. The household belongs to which caste (HHC) is also an important factor in determining the level of possession of resources in a village economy and the standard of living depends of the category of social strata like caste. Consumption is a function of income (Keynes, 1935). So we have considered percapita income (PCI) as a determinant of poverty. Education is the human capita which augment the production skill of a person and enhances the standard of living. So household's total level of education (THE) is an impotent variable for analysis. Percapita land

holding (PCL) can induce employment opportunities through agricultural production of a household. To capture the poverty we have considered PCL of a household. The notations and specifications of status of poverty and its determinants are presented in Table 5.6.4.

Table 5.6.4: Notation, Mean, and SD of the Variables used in Probit Regression Model to Estimate the Effect MGNREGA Considering the both the Household Participating and without Participating Households

Notation of Variable	Specification of Variable	Mean	Standard Deviation	Minimum	Maximum
	Dependent Variable				
SPH	Poverty (Poor=1, Other=0)	0.2	0.4	0.0	1.0
	Independent Variable				
HHS	Household size	4.45	1.15	1.0	10.0
HHC	Households belongs to the caste (SC/ST =1, Other = 0)	.71	0.45	0.0	1.0
PCI	Percapita income of households	1607	1303.74	793.33	18475
MGP	MGNREGA participation (yes=1, No=0)	.55	.50	0.0	1.0
HTE	Households total education level	24.90	12.35	0.0	84
PCL	Percapita landholding in decimal	16.79	18.94	0.0	198

Source: Primary Data 2016-17 and Author's Calculation

Now let us analyze the data by Probit regression model.

Table 5.6.5: Probit Estimation of MGNREGA over Sample Households on Poverty Considering both the Household Participating and without Participating Households in MGNREGA

	Coefficient	Std. Err.	z	P>z	Number of obs. = 934
_constant	11.08375	.8541221	12.98[***]	0.000	LR chi2(6) = 813.35

HHS	.1393816	.0691871	2.01**	0.044	Prob. > chi2 = 0.0000
HHC	-.5425776	.1655482	-3.28***	0.001	Log likelihood = -211.604
PCI	-.0087977	.0006244	-14.09***	0.000	Pseudo R2 = 0.6578
MGP	-.3056143	.1442111	-2.12**	0.034	
HTE	-.0210577	.0063998	-3.29***	0.001	
PCL	-.0093549	.0053972	-1.73*	0.083	

Source: Primary Data 2016-17 and Author's Calculation

Estimation states that HHC, PCI, MGP, HTE and PCL have negatively related with Poverty of the households and all are statistically significant. But households size (HHS) is significantly and positively related to poverty. The household's size is positively related with poverty and statistically significant means that the probability of poverty increases with increasing household's size. But the result is quite different for caste categories. HHC negatively related with poverty implies that SC households are better than other categories. Though it seems to be unlike, but in our study villages SC households are predominant and most of the resources are concentrated to them. The empirical results relating to the effect of MGNREGA programme over poverty has been estimated by Probit regression model. The result indicates that in Poverty is significantly influenced by the MGNREGA programme. Household's level of education and percapita land holding are also negatively related with poverty and statistically significant. This empirical result has established that education and resource will reduce the level of poverty.

5.7   Summing up

In the study villages most of the households are marginal and land less. The study observed that there was a widespread variation in the effectiveness of implementation of MGNREGA among different studied villages. The agricultural labour and farmer are the major participants in

MGNREGA. The women participation in Dwaripara and Ramchandrapur Ditiyakhanda is significantly lower than the men. Village Manikpur is able to provide job more than one third women under the scheme. MGNREGA's annual contribution to household income through wages was found to be higher in Bajesukdebpur and Manikpur respectively than Ramchandrapur Ditiyakhanda was 3.05 percent in an average which was insignificant. From the analysis it is clear that the MGNREGA has a significant effect in both village-level infrastructural advancement and have a considerable positive impact on village development. The study shows that MGNREGA is so far successful in enhancing the welfare of rural households by offering them consistent income through better access to local employment at minimum wages and providing productive asset creating through MGNREGA. Estimation states that households size (HHS) is significantly and positively related to poverty and caste categories are negatively related with poverty. Though it seems to be unlike, but in our study villages SC households are predominant and most of the resources are concentrated to them. Poverty is significantly influenced by the MGNREGA programme. Household's level of education and percapita land holding are also negatively related with poverty and statistically significant. Education and resource have a potential to reduce the level of poverty.