Baseline Study Report for the project entitled "Green Livelihood for a Sustainable Society (GLASS)"



Submitted by Centre for Sustainable Development and Research



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Abbreviations and Acronyms

GP	Gram Panchayat
AAY	Antyodaya Anna Yojana
BPL	Below Poverty Level
DRCSC	Development Research Communication & Service Centre
FYM	Farm Yard Manure
GLASS	Green Livelihood for a Sustainable Society
HH	Household
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
OBC	Other Backward Classes
PHE	Public Health Engineering
РНН	Priority Households
PVCA	Participatory Vulnerability and Capacity Assessment
RKSY	Rajya Khadya Suraksha Yojana
SAPCC	State Action Plan on Climate Change
SC	Scheduled Caste
SHG	Self Help Group
SPHH	State Priority Ration Card
ST	Scheduled Tribe

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Baseline Survey Report

1. Introduction

West Bengal is an eastern state of India. 70% of the state's population is rural population. According to the Planning Commission 23% of the total rural population lived below the poverty line in 2011-12. The Red and Lateritic soil zones cover major part of West Bengal and about 2.5 crores population lives in this zone. The percentage of households living below the poverty line is higher than the state average of 36.4%. The project aims to focus on the sub-humid west climatic region with Red and Lateritic soil zone in 4 districts of West Bengal to strengthen the capacity of small and marginal farmers to build resilient livelihood models in line with SAPCC of West Bengal. With changing climate and the erratic rainfall, rising temperature, prolonged summer, shortened winter the forest cover is vanishing and many food items that were collected previously from the forests are no longer available. With days passing by it is becoming difficult for the farmers to anticipate the rains by calendar days/ months which is affecting the output.

The intervention aims to address pressing issues of the red lateritic zone and its vulnerable coastal communities. The project will be implemented in 25 census villages in 2 districts namely Purulia and Bankura of West Bengal and will work with 3500 marginalized households. These interventions are designed at 2 distinct levels of ecosystem, community, households.

1.1. Background of the Project

The overall objective is to develop climate adaptive and resilient livelihood systems through diversification, technology adoption and natural resource management for small and marginal farmers associated with agriculture and allied sector. The specific objective is to enhance adaptive capacity of 3500 vulnerable farm families in semi-arid regions of West Bengal by introducing measures to adapt to the adverse impacts of climate change on their food and livelihood security. The study objectives are

- Conducting PVCA to know about the resources (natural resources, human resources, etc.) present in the village, the problems of the village as well as the capacities of the village which will help in planning the activities effectively and fulfil the project objectives.
- Conducting Baseline Study will help in understanding the basic socio-economic condition of the target population which will help in planning the activities effectively for fulfilling the project objectives.

In this report we dealt with the baseline study to understand the socio-economic status of the target population.

1.2. Objective of the Baseline Study

When baseline data are significant to:

- Set future targets/benchmark of the project because if we do not know where we are, it would not be possible to set the targets on where we intend to go
- It also helps in measuring changes as a project proceeds in monitoring

 One can compare the initial conditions and changes of project and control groups in an impact evaluation

Baseline information is important for

- Characterizing the prevailing conditions under which an exposure unit functions and to which it must adapt;
- Describing average conditions, spatial and temporal variability and anomalous events, some of which can cause significant impacts;
- Calibrating and testing impact models across the current range of variability;
- Identifying possible ongoing trends or cycles;
- Specifying the reference situation with which to compare future changes

The baseline study aims to provide an independently assessed information relevant to the project against which the project's progress and effectiveness can be monitored and assessed both during the implementation of the project's activities and after the completion of the project. The baseline study, an early element of the project monitoring framework, is the first step in the project monitoring and evaluation system. The study seeks to provide the basis for subsequent assessments on how efficiently the activity of the project will be implementing and the eventual results of the project.

2. Methodology

Baseline data collection: Baseline data includes the initial information on program participants or other program aspects collected prior to the intervention program. It is essential to collect baseline data to enable stakeholders (e.g., program implementers, policy makers, beneficiaries, etc.) to monitor and track changes. It may be used later to provide a comparison for assessing program outcomes or impacts.

Design to collect baseline data set: Baseline data sets are collected keeping the project goal, objectives and intended benefits in mind. Keeping the context and objectives of the project, the design to collect the baseline datasets need to be made to enable all the stakeholders to compare the changes "before and after" implementation of the program.

2.1. Sample Size, technique and questionnaire development

Purposive sampling technique was used for sample selection from each village of respective GPs and blocks. The sample selection was based upon the characteristic of the population that includes primary occupation, landholding and educational status of targeted beneficiaries and project objectives. A structured questionnaire was developed for the selected beneficiaries.

2.2. Data Collection

Consultants visited the respective project areas and conducted household surveys through structured questionnaire with the help of Kobo Toolbox Application. The respondents were selected through the purposive random sampling method. After data collection the data was analysed by SPSS and accordingly a comprehensive report was prepared.

3.0. Baseline Study of Purulia District

3.1. Target Respondents

The baseline study of Purulia district at West Bengal covers Kashipur block comprising six Gram Panchayats namely Agardi, Barrah, Gourandih, Hadaldah Uparah, Rangamati Ranjandi and Sonathali. DRCSCs intervention in the study area was since 2015 at Agardi (Kashidih, Mrigipahari, Seja), Rangamati Rangandi (Ranjandi) and Sonathali (Lara, Lari) Gram Panchayats and number of activities are on progress; the areas where no activities were taken up since last five years were at Agardi (Saherbera) and Hadaldah Uparah (Kathgora) and under these GLASS initiative five new villages from Barrah (Paharpur, Palsara), Gourandih (Bastardih, Rangunigora) and Hadaldah Uparah (Mehi) Gram Panchayat was included. Thus the study area is classified into three groups viz. old villages (Group I) where few interventions are made, old villages (Group II) where no work was done last five years and new villages (Group III) where interventions are to be implemented currently under the GLASS initiative. As COVID 19 pandemic restricted much of the interventions for the old villages number of activities were left out and thus on convergence mode they are included under the present initiative. The baseline study covers 13 villages in total. The sample distributions are given below in the Table 1.

Table 1. Sample distribution of baseline study				
District	Block	Gram Panchayat	Village	Number of sample
			_	Household
Purulia	Kashipur	Agardi	Kashidih	14
			Mirgipahari	14
			Saherbera	18
			Seja	18
		Barrah	Paharpur	10
			Palsara	20
		Gourandih	Bastardih	21
			Rangunigora	10
		HadaldahUparah	Kathgora	17
			Mehi	21
		Rangamati Ranjandi	Ranjandi	20
		Sonathali	Lara	10
			Lari	9

3.2. Demographic characteristics

All the respondents were female. 16%, 3% and 7% of sampled households (HH) were headed by females as reported for group I, group II and group III respectively in the region. All the sampled HH falls under Scheduled Tribes (ST) category at old group II. 94% of the sampled HH belongs to ST category and 5% of the sampled HH falls under Other Backward Classes (OBC) in group I. In group III 95% of the sampled HH are ST, 3% and 1% HHs falls under OBC and Scheduled Caste (SC) category respectively.

3.2.1. Gender wise distribution of household members

Total population of Purulia district are 2,930,115 (male: 1,496,996 and female: 1,433,119) (Population census, 2011). According to the census, 2011 total population of the Kashipur block is 200,083 (male: 101,801 and female: 98,282).



The gender wise total population of the selected villages in the block according to Census report, 2011 is given in the Figure 1.

Figure 1. Gender wise total population of the selected villages

According to the baseline survey, the age wise HH member distribution in the project area is depicted in Figure 2. For baseline survey, the percent distribution of household members was recorded according to the different age group where 58% of the population contributes to the age group of 18 to 59 years followed by 23% for the age group between 5-18 years, 12% for more than 60 years and 7% for infant in the age group



below 5 years at group I. At group II 55% of the population contributes to the age group of 18 to 59 years followed by 24% for the age group between 5-18 years, 14% for more than 60 years and 7% for infant in the age group below 5 years. At group III 65% contributes to the age group of 18 to 59 years followed by 18% for the age group between 5-18 years, 11% for more than 60 years and 6% for infant in the age group below 5 years (Figure 3).





8%, 11% and 5% of sampled HH have either pregnant or breast feeding women in their families at group I, group II and group III respectively. 5%, 3% and 1% of sampled HH have family members with differently abled at group I, group II and group III respectively. Returnee person was found in 5%, 3% and 1% of the total sampled HH at group I, group II and group III respectively.

3.2.2. Economic status

Baseline survey for sampled HHs revealed that all the HHs is Below Poverty Line (BPL). From the study it is revealed that 100% of the sampled HH possesses Aadhar card in group I and II while its 98% in group III; 93% sampled HH possesses Ration card in group I, 100% in group II and 96% in group III. There are 91%, 94% and 83% of sampled HH holding Job card in group I, group II and group III (Figure 4). The type of ration card was also recorded during the survey. In group I 43% HH falls under PHH, 7% and 29% HH falls under RKSY-I and SPHH category. In group II, 14%, 2% and 19% HHs fall under PHH, RKSY-I and SPHH respectively. In case of group III, 1%, 27%, 3%, 1% and 47% of the sampled HH falls under AAY, PHH, RKSY-I, RKSY-II and SPHH category respectively (Figure 5).



Figure 4. Percent distribution of different card holders



3.2.3. Educational Background

In group I, 35% of the respondents are found to be illiterate. 35% of the respondents are educated up to 4th standard, 18% of the respondents are educated up to 8th standard, 10% respondents are educated up to 10th standard while 1% of the respondents are educated up to 12th standard and 1% respondents are found to be graduate. In group II, 57% of the respondents are illiterate, 20%, 3%, 11% and 9% are educated up to 4th standard, 8th standard, 10th standard and 12th standard respectively. In group III, 59% respondents are illiterate. 24%, 8%, 5% and 4% are educated up to 4th standard and 12th standard and 12th standard group II and group III (Figure 6).

The educational status of each of the sampled HH members were recorded during the baseline survey and it was revealed that 44% of the sampled population is educated up to 4^{th} standard followed by illiterate (24%), by 8^{th} standard (18%), up to 10^{th} standard (9%), up to 12^{th} standard (4%), graduate and above graduate (1%) in group I. In group II, 46% of sampled HH are educated up to 4^{th} standard followed by education up t 8^{th} standard (27%), up to 10^{th} and illiterate (both 11%),

up to 12^{th} standard (4%) and graduate (1%). In group III, 40% of the sampled HH are educated up to standard 4th, followed by illiterate (27%), up to 8th standard (22%), up to 10th standard (5%), up to 12th standard (4%) and graduate (2%) (Figure 7).



Figure 6. Educational status of respondents



Figure 7. Educational status of sampled HH

3.3. Information on Source of Income

The total household income in the project area is mostly Rs 35,000 to less than Rs 45,000 in all the three groups covering 98%, 83% and 94% of the sampled HHs from group I, group II and group III respectively. the total HH income in the range of Rs 45,000 and above are recorded as 2%, 17% and 4% of the sampled HH from group I, group II and group III respectively. The income range between Rs 25,000 to less than Rs 35,000 was recorded for 2% of the sampled HH in only group III (Figure 8).

The percent of livelihood mix includes mainly agriculture, animal husbandry, business, MGNREGS, service, seasonal migration and migrant labour.



Figure 8. Total income of sampled HH



The major source of livelihood of the sampled HH in all the three groups is agriculture (98% for group I and 100% for both group II and III). Seasonal migration (87% for group I, 97% for group II and 98% for group III) was recorded as second livelihood mix option for the sampled HH. In group I, 75% of sampled HH practices animal husbandry followed by MGNREGS (67%), migrant labour (15%), business (1%) and service (1%). In group II apart from agriculture and seasonal migration, 40% of sampled HH practices animal husbandry followed by MGNREGS (29%), migrant labour (14%) and service (3%). In group III, 48% of the sampled HH depends upon MGNREGS followed by animal husbandry (45%), migrant labour (10%) and business (4%) (Figure 9).

3.3.1. Occupation

The primary occupation of the sampled HH in group I lie mostly on agriculture that contributes to about 83% of the HH followed by daily wage labour (15%) and migrant labour (2%). In group II main occupation of the sampled HH is agriculture (88%) followed by daily wage labour (9%) and service (3%). In group III, 65% of the sampled HH rely on agriculture, 31% HH rely on daily wage labours followed by blacksmith (2%) and 1% each in carpentry and migrant labour (Figure 10).



Figure 10. Primary occupation of sampled HH

Secondary occupation in group I lies mostly on daily wage labour (49%) followed by agriculture labour (31%), agriculture (11%), migrant labour (4%), livestock rearing (3%) and business and service (1%). In group II and III also the daily wage labour is the main secondary occupation for most of the households in the study area which is 69% and 50% respectively. In group II agriculture labour (20%) and agriculture (11%) is

practiced as secondary occupation. Similarly in group III, dependency on agriculture, agriculture labour and migrant labour were recorded for 29%, 20% and 1% of the sampled HH respectively (Figure 11).



Figure 11. Secondary occupation of sampled HH

3.3.2. Loan

31%, 20% and 11% of the sampled HH from group I, group II and group III respectively has taken loan. The loan is taken from Self Help Group (SHG). In group I 44% of HH has taken loan for agricultural purposes, 44% HH took loan for livestock, 6% HH took loan for home repair and another 6% HH took loan for some other purposes. In group II, 87% of the sampled HH took loan for agriculture and 13% took loan for livestock while in group III, 67% of the sampled HH took loan for agriculture and 33% took loan for livestock (Figure 12).



Figure 12. Purpose of loan by sampled HH

The amount of loan taken by the sampled HH for agriculture purposes in group I was mostly in the range of Rs 5,000 to less than Rs 10,000 and 3HH took loan in the range of Rs 10,000 to less than Rs 25,000. One HH was found to have taken loan less Rs 5000 and one HH has taken loan more than Rs 25,000. 12HHs were found to have taken loan for livestock rearing where the loan amount ranges in Rs 5000 to less than Rs 10,000 followed by Rs 10,000 to less than Rs 25,000 and Rs 25,000 to above. The loan amount for home repair and other purposes was found to be in the range of Rs 10,000 to less than Rs 25,000 taken by only 2HHs and Rs 5000 to less than Rs 10,000 taken by only 2HHs respectively (Figure 13).

In case of group II, 7HH took loan in the range of Rs 10,000 to less than Rs 25,000 for agriculture and 1 HH took loan for livestock that ranged between Rs 5,000 to less than Rs 10,000. In case of group III, 2HH took loan for agriculture purposes that ranged between Rs 10,000 to less than Rs 25,000 and 1HH took loan for same purpose that ranged between Rs 5,000 to less than Rs 10,000. 6HHs took loan for livestock in the range of Rs 10,000 to less than Rs 25,000 (Figure 13).



Figure 13. Amount of loan taken by sampled HH

3.3.3. Migration

85% and 98% of the sampled HH seasonally migrate to distant places for earning their livelihood as reported for group I and III while seasonal migration is 100% in group II. Only 15% and 2% of the sampled HH members do not migrate in group I and group III respectively (Figure 14). According to the baseline study it was observed that 31% of seasonal migration is contributed by Agardi GP followed by Hadalda (20%), Gourandi (17%), Barrah (15%), Rangamati Ranjandih (10%) and Sonathali (7%) (Figure 15).



Figure 14. Migration status of sampled HH



3.4. Information on Land use of Household 3.4.1. Type of land owned

From the baseline survey it is revealed that in group I, 66% of the sampled household possesses farmland and nutrition garden, 15% of sampled the HH possesses only farmland and 4% of the sampled HH have space for kitchen/ nutrition garden. In group II and III, 2% and 7% of the sampled household are landless.

In group II, 18% of sampled HH possesses



both farmland and nutrition garden and 15% of sampled HH have space only for nutrition garden while in group III, 26%, 8% and 41% of the sampled HH possesses only farmland, only nutrition garden and both farmland and nutrition garden respectively (Figure 16).

Baseline study depicts that in group I, 66% of sampled HH possesses nutrition garden area below 2 decimal while 33% of sampled HH owns 2 decimal to less than 3 decimal land area for nutrition garden and only 1% HH represents nutrition garden area in the range of 3 decimal to less than 4 decimal. In group II and III, 67% and 33% of the sampled HH possesses nutrition garden area in the range of 2 decimal to less than 3 decimal and below 2 decimal respectively (Figure 17).



Figure 17. Percent HH distribution of nutrition garden area

The types of crops grown in the nutrition garden are given in the Table 2 below,

Table 2. Types of crops grown in the nutrition garden			
Name of crops			
Green amaranth, Red amaranth, Indian spinach, Fenugreek			
leaves, Bethua leaves, Radish green, Punka leaves, Panjabi			
palang, Jute, Water spinach, Susni leaves			
Bottle gourd, Ridge gourd, Cucumber, Tomato, Green chilli,			
Pumpkin, Ivy gourd, Okra, Bitter gourd, Brinjal, Raw banana,			
Snake gourd			
Beet, Taro, Elephant foot yam, Carrot, Radish, Potato, Sweet			
potato			
Chick pea, Flat beans, Pigeon pea, French beans, Green peas,			
Cow pea, Groundnut			
Coriander, Garlic, Onion, Turmeric, Ginger			
Curry leaves, Basil leaf, Neem leaf, Marigold leaf, Pudina leaf,			
Banana, Black berry, Guava, Papaya, Mango, Indian jujube,			
Jackfruit, Lemon			
Butterfly pea, Madar, Napier grass, Mountain ebony			

3.4.2. Sources of irrigation for nutrition garden

The sources of irrigation for nutrition garden in sampled HH were observed to be tube wells and wells. 51% of the sampled households' source of irrigation in nutrition garden is tube well while 47% of sampled HH use water from wells for irrigating their nutrition gardens and only 1% of the sampled HH reported their source of irrigation for nutrition garden was rainwater harvesting tank in group I. in case of group II and III, 72% and 62% of the sampled HH depends upon tube well for irrigating their



nutrition garden respectively while 28% and 35% of the sampled HH depends upon wells for irrigation of nutrition garden respectively. Only 2% of sampled HH in group III reported to have no irrigation sources for their nutrition garden (Figure 18).

3.4.3. Types of agricultural land

Variation on types of agricultural land was noticed in the project area. The land use composed of different types of land viz. upland (Tar), medium medium upland (Baid), lowland (Kanali) lowland and (Bahal/Sole). Upland is possessed by 51%, 33% and 25% of the sampled HH in group I, II and III respectively. In group I, II and III, the mid-upland



Figure 19. Type of agricultural land owned by sampled HH

is owned by 25%, 31% and 39% of the sampled HH respectively. Mid-lowland is owned by 17%, 7% and 31% of the sampled HH respectively while lowland is owned by 6%, 29% and 5% of the sampled HH respectively (Figure 19).

From the baseline survey it is noticed that in group I, 54% of sampled HH possessed upland in the range of 1 bigha to less than 2 bigha while 24%, 15% and 7% of sampled HH possesses upland in the range of 2 bigha to less than 3 bigha, less than 1 bigha and 3 bigha to less than 4 bigha respectively. Similarly for mid-upland 66% of the sampled HH possesses land in the range of 1 bigh ato less than 2 bigha followed by 10%, 17%, and 7% in the range of less than 1 bigha, 2 bigha to less than 3 bigha and 3 bigha to less than 4 bigha respectively. In case of mid-lowland and lowland also the the higher percent is observed for the area that ranges from 1 bigha to less than 2 bigha which is contributed by 55% and 57% respectively. 20% of sampled HH possesses mid-lowland in the range of 2 bigha to less than 3 bigha while it is 14% for lowland. 15% of sampled HH owns mid-lowland in the range of 3 bigha to less than 4 bigha which is 14% for lowland. (Figure 20).





In case of group II, 28% of the sampled HH owns upland in the range of 4 bigha and above while 22% owns upland in the range of below 1bigha. 17% of sampled HH each contributes to the the upland area that ranges from 1 bigha to less than 2 bigha, 2 bigh ato less than 3 bigha nad 3 bigha to less than 4 bigha. In case of mid-upland and mid-lowland, 53% and 50% of the sampled HH owns land in the range of 1 bigha to less than 2 bigha respectively while 41% and 25% HH possesses mid-upland and mid-lowland in the range of 2 bigha to less than 3 bigha respectively and the same is contributed by 6% and 25% respectively ranging below 1 bigha. Similarly 63% HH owns lowland that falls in the range of 2 bigh ato less than 3 bigha while 6% and 25% HH owns lowland in the range of less than 1 bigha and 1 bigha to less than 2 bigha respectively Figure (20).

In group III, 81% of the sampled HH owns upland in the range of 1 bigha to less than 2 bigha while 11% owns upland in the range below 1 bigha and 4% HH owns upland in the range of 2 bigha to less than 3 bigha and 3 bigha to less than 4 bigha. Mid-upland area mostly lies within 1 bigha to less than 2 bigha (51%) followed by 2 bigha to less than 3 bigha (30%), less than 1 bigha (7%) and 3 bigha to

less than 4 bigha (7%) and 4 bigha and above (5%). In case of mid-lowland and lowland also the land area mostly lies within the range of 1 bigha to less than 2 bigha (62% and 60% HH respectively). 26% and 20% of sampled HH owns mid-lowland and lowland in the range of 2 bigha to less than 3 bigha respectively while 12% and 20% HH owns mid-lowland and lowland in the range of 4 bigha nad above respectively (Figure 20).

Table 3. Types of crops grown in different types of land					
Types of	Upland	Mid-upland	Mid-lowland	Lowland	
crops					
Cereals	Paddy, Maize, Wheat	Paddy, Wheat	Paddy	Paddy, Wheat	
Pulses	Black gram, Pigeon pea, Grass pea, Green gram	Pigeon pea, Grasspea, Green gram,BlackBengal gram	Bengal gram, Pigeon pea, Grass pea, Green gram	Black gram, Pigeon pea, Grass pea, Green gram	
Vegetables	Bitter gourd, Elephant foot yam, Brinjal, Tomato, Potato, Taro, Bottle gourd, Pumpkin, Radish, Flat beans	Bottle gourd, Okra, Pumpkin, Bitter gourd, Ridge gourd, Brinjal, Potato, Flat beans, Tomato, Elephant foot yam, Taro, Cucumber, Radish, sweet potato, Snake gourd, Cassava, Beet	Bottle gourd, Okra, Pumpkin, Bitter gourd, Elephant foot yam, Taro, Potato, Radish, Flat beans, Cucumber, Ridge gourd, Tomato, Brinjal, Snake gourd	Bottle gourd, Okra, Pumpkin, Bitter gourd, Ridge gourd, Brinjal, Potato, Flat beans, Tomato, Elephant foot yam, Taro, Cucumber, Radish, sweet potato, Snake gourd, Carrot	
Spices	Onion, Turmeric, Chilli, Garlic	Onion, Turmeric, Chilli, Garlic, Coriander, Ginger, Cumin	Onion, Turmeric, Chilli, Garlic, Coriander, Ginger	Onion, Turmeric, Chilli, Garlic, Coriander	
Oilseeds	Mustard	Mustard	Mustard	Mustard	
Fodder	Butterfly pea	Butterfly pea	Butterfly pea	Butterfly pea, Mountain ebony	

The types of crops grown in different types of land are given in the Table 3 below,

3.4.4. Sources of irrigation for agricultural land

The major source of irrigation for agricultural land is rainwater. From the baseline study it was revealed that 53%, 56% and 54% of the sampled HH rely on rain water for irrigation in group I, II and III respectively while 16%, 19% and 40% of sampled HH rely on pond respectively in group I, II and III. In group I, ditches, dugwell, canal, jor, check dam and ground water

are the sources of irrigation as reported by 9%, 9%, 1%, 11%, 1% and 1% of



sampled HH respectively. in case of group II, 14%, 8% and 3% of sampled HH depends on jor, ditches and dugwell respectively for irrigation. In case of group III, 2% each sampled HH depends upon ditches and canal for irrigation and 1% each of the sampled HH depends upon dug well, jor, check dam and ground water for irrigation (Figure 21).

Water availability in different water sources was also recorded during the baseline survey. In group I, water availability in ditches is recorded for 3 months to less than 4 months, 4 months to less than 6 months and more than 6 months as reported by 14%, 71% and 14% of sampled HH respectively. 8% of sampled HH says water is available throughout the year

in dug well while water availability for 3 months to less than 4 months, 4 months to less than 6 months and more than 6 months is 15%, 38% and 38% respectively as reported by the respondents. 28% of sampled HH reported that pond water is available for 3 months to less than 4 months while 36% HH reports for 4 month to

less than 6 months and 20% HH reported that pond water is available for more than 6 months. 16% HH reported pond water is perennial in nature. Canal water is available for 3 months to less than 4 months as reported by 100% of sampled HH. 38% of sampled HH informed that jor water is available for 3 months to less than 4 months while 31%, 19%, 13% of sampled HH informed that jor water is available for 4 months to less than 6



Figure 23. Water availability in irrigation sources of agri- land

months and more than 6 months and perennial respectively. 100% of sampled HH reported water availability is throughout the year in the check dam and groundwater availability is 4 months to less than 6 months as reported by 100% of sampled HH (Figure 23).

In group II, 60% of the sampled HH reports water availability in ditches is for 3months to less than 4 months, and 20% each of the sampled HH reports ditch water availability for 4 months to less than 6 months and more than 6 months. 50% of the sampled HH reports dugwell as perennial and 50% reports water availability in dig well for 3 months to less than 4 months. Pond water is available for 3 months to less than 4 months and 27% of the

sampled HH respectively. Similarly, jor water availability is for 2 months to less than 3 months, 3 months to less than 4 months and 4 months to less than 5 months as reported by 13%, 75% and 13% of the sampled HH in group II (Figure 23).

In group III, respondents' response for water availability in ditches and dug well was 4 months to less than 6 months and 3 months to less than 4months respectively. 49%, 35%, 8% and 2% of the sampled HH reports pond water availability for 3 months to less than 4 months, 4 months to less than 6 months, more than 6 months and 2 months to less than 3 months respectively. only 6% HH reports the pond to be perennial. Canal, jor, check dam nad groundwater is available for 4 months to less than 6 months, 3 months to less than 4 months, 4 months to less than 6 months and perennial respectively as reported by the respondents of group III (Figure 23).

From the study it was also found that in group I, 35% of the HH use pond water for farming while 23%, 20%, 18%, 2%,1% and 1% HHs use water from jor, ditches, dug well, canal, check dam and groundwater respectively. In case of group II, 42% of the sampled HH use pond water for farming and 31%, 19% and 8% HHs use water from jor, ditches and dugwell respectively for farming. In case of group III, 86% of HH use pond water from farming while 3% each of sampled HH use ditch and canal water for farming while dugwell, jor, check dam and groundwater are used by 1% HH each (Figure 24).



Figure 24. Use of water sources for farming by sampled household

The use of irrigation water sources by the sampled HH in different seasons was also recorded during the baseline survey. The seasons were classified as pre-kharif (summer) season, kharif (monsoon) season and rabi (winter) season. From the baseline study it was noticed that in group I, during pre-kharif season pond water is mostly used by the sampled HH (3) followed by dugwell (2HH), check dam (1HH) and jor (2HH). During the kharif season pond water is used by maximum number of the sampled HH (23) followed by jor (12HH), dug well (9HH), ditches (9HH), check dam (1HH) and canal water (1HH). During rabi season also pond water is used by maximum number of sampled HH (23HH) followed by jor (15HH), ditches (13HH), dugwell (13HH), canal (1HH), jor (1HH) and check dam (1HH). In group II, pond water is used by maximum number of sampled HH in both kharif and rabi season i.e. 10HH and 11HH respectively. Ditches and dugwell water is used by 3 nad 2 HHs respectively in both kharif and rabi season. Jor water usage is maximum in kharif and rabi season respectively. In case of group III, the pond water usage is maximum in kharif and rabi season which is 47 and 46HH respectively. In ore-kharif season 1HH use canal water and other sources of water is used by only 1HH. Similarly in kharif season 1HH use all the other sources of



water for irrigation. During rabi season, 2HH use ditch water while 1HH use other sources of water for irrigation (Figure 25).

Figure 25. Season wise use of water sources for irrigation

Irrigation water scarcity prevails in the project area for 6 months as reported by the respondents during the baseline study. In group I, 95% of the sampled HH face irrigation water scarcity in the months of May - June and January - March. 94% of the sampled HH face scarcity in the months of March - May and 76% of the respondents informed that irrigation water scarcity is observed in the months of December - January.



In group II, 94% of the sampled HH informed that scarcity prevails from the months of April – May and December - March. 91% of sampled HH reported the scarcity during May – June and March – April. Only 3% of sampled HH reported irrigation water scarcity during June – July. In group III, 82% of the sampled HH face scarcity of irrigation water in the months of April – June and January – April and 56% face scarcity in the months of December - January (Figure 26).

3.5. Information on Inputs in Agriculture

Organic inputs are used by almost all the sampled HH in all the groups and most of them use Farm Yard Manure (FYM) and 47% and 5% of sampled HHs use vermicompost in group I and III respectively. Only 2% and 1% HH use other organic inputs in group I and III respectively (Figure 27). From the survey it was observed that in group I, 90% of the HH's source of vermicompost is DRCSC and 23% HHs prepare vermicompost on their own while 3% of the sampled HH depends upon market, neighbors and government sources. In case of FYM, 83% of the HH produces FYM by their own, 18% HH collects from neighbors, 7% HH depends upon market and 1% HH collects from DRCSC. In group II, 77% of the sampled HH produces FYM by their own, 7% and 23% HH

depends upon market and neighbors respectively. In case of group III, among the vermicompost users, 75% HHs source of vermicompost is DRCSC while 25% HH depends on market. 80% of the HH produces FYM by their own while 23% HH depends upon neighbors and only 1% HH depend upon market for FYM (Figure 27).



Figure 27. Use and sources of organic inputs

3.6. Access to Drinking Water

The main source of drinking water in the project area is tube well. From the study it was observed that 85%, 97% and 79% of sampled HH depends on tube well for drinking water in group I, II and III respectively while 15%, 9% and 10% HH depends on dugwell for drinking water in group I, II and III respectively. 29% and 4% of the sampled HHs depends on PHE (tap) water in group III and I respectively (Figure 28).



3.7. Information on Livestock and Other Assets

3.7.1. Livestock

84%, 74% and 73% of the sampled HH possesses cow or buffalo while 56%, 40% and 24% of the sampled HH possesses goat and 13%, 3% and 5% of the sampled HH possesses sheep in group I, II and III respectively. 6% of the sampled HH in each group possesses pig. Duck and hen is possessed by 29%, 17%, 5% and 69%, 34% and 44% of the sampled HH from group I, II and III respectively. 3% and



1% of the sampled HH owns rabbit in group II and III respectively. 16%, 6% and 11% of the sampled HH possesses pigeon in group I, II and III respectively (Figure 29).

The number of livestock possessed by the sampled HH in percent is given in the Figure 30. It was revealed that among the total HH owing cow and or buffalo in group I, 77%, 18%, 3% and 1% of the sampled HH owns cow or buffalo in the range of 1 to less than 3 numbers, 3 to less than 5 numbers, 5 to less than 10 numbers and 10 and above respectively. 65%, 27% and 8% HH owns 1 to less than 3 numbers, 3 t less than 5 numbers and 5 to less than 10 numbers of goats. In case of sheep, 36% HH possesses 1 to less than 3 numbers of sheep while 45% and 18% HHs owns sheep in the range of 3 to less than 5 to less than 10 numbers respectively. 80% HH owns pig in the range of 1 to less than 3 numbers and 20% HH owns pig 5 to less than 10 numbers. 96%, 93% and 43% HH owns 1 to less than 10 numbers of duck, hen and pigeon respectively and 4%, 7% and 57% HH owns 10 to more than 10 numbers of duck, hen and pigeon respectively in group I.



Figure 30. Number of livestock owned by sampled HH

In group II, 85% and 15% of sampled HH possesses cow/ buffalo in the range of 1 to less than 3 numbers and 3 to less than 5 numbers respectively. Similarly, goat is owned by 43% and 57% HH in the range of 1 to less than 3 numbers and 3 to less than 5 numbers respectively. All the sampled HH in group II possesses sheep and pig in the range of 1 to less than 3 numbers and rabbit and pigeon in the range of 1 to less than 10 numbers. 83% and 75% of the sampled HH owns duck and hen respectively in the range of 1 to less than 10 numbers and 17% and 25% HH owns duck and hen in the range of 10 and above respectively (Figure 30). In group III, 93%, 5% and 2% of sampled HH possesses cow/ buffalo in the range of 1 to less than 3 numbers, 3 to less than 5 numbers and 5 to less than 10 numbers respectively. 75% HH owns goat and sheep in the range of 1 to less than 3 numbers and 25% HH owns goat in the range of 3 to less than 5 numbers while 25% HH possesses sheep that are in the range of 10 and above. Pig is possessed by 80% and 20% HH in the range of 1 to less than 3 numbers and 3 to less than 5 numbers. All the sampled HH owns duck and rabbit that ranges between 1 to less than 3 numbers and 1 to less than 10 numbers respectively. In case of hen, 94% HH have 1 to less than 10 numbers and 6% HH have hen in the range of 10 and above. 78% and 22% HH possesses pigeon in the range of 1 to less than 10 numbers and 10 and above respectively (Figure 30).

3.7.2. Other assets

100% of the sampled HH possesses other assets in group I and II that include mainly pond, dug well, thresher, bullock cart, cycle van, plough, pump set, bicycle and two wheeler while 96% HH possesses other assets in group III. In group I, only 1% HH owns a pond and dug well. 98% of the HH possesses bicycle. Bullock cart and two wheeler are owned by 16% and 7% of the sampled HH respectively. Thresher, plough and pump set are owned by 65%, 75% and 7% of the sampled HH respectively. In



group II, thresher, plough and pump set are owned by 63%, 37% and 6% of the sampled HH. Bullock cart, bicycle and two wheeler are owned by 9%, 97% and 3% of the sampled HH. Only 3% HH owns dug well. In group III, 46%, 63% and 11% of sampled HH owns thresher, plough and pump set respectively. Bullock cart, cycle van, bicycle and two wheeler are owned by 20%, 3%, 95% and 6% of the sampled HH (Figure 31).

3.8. Food taken in daily diet

From the baseline study it was observed that 100% of the sampled HH take rice in their daily diet in group I and III while in case of group II 97% of the sampled HH take rice daily. 100%, 91% and 98% of the sampled HH take vegetables regularly in their diet as reported from group I, II and III respectively. Pulses (dal) are taken regularly by 98%, 94% and 96% of the sampled HH in group I, II and III





56% of the sampled HH consume fish regularly while 39% and 12% of sampled HH consume meat and egg daily respectively in group I. In group II, 63% of the sampled HH consume fish regularly while 40% and 9% of sampled HH consume meat and egg daily respectively. In group III, 57% of the sampled HH consume fish regularly while 35% and 4% of sampled HH consume meat and egg daily respectively. Roti is consumed by only 32%, 23% and 32% of the sampled HH in group I, II and III respectively and only 1% HH was recorded to have fruits in their daily diet from group I. (Figure 32).

3.8.1. Sources of food

The respondents in the study area depends upon local market for several food items viz. vegetables, pulses, cooking oil, sugar, spices and other essentials. People also depend upon ration shop for rice, pulses and sugar. Nutrition garden is also a source of vegetables for few household who grow seasonal crops in their garden. 100% HH source of rice is ration shop and own farm production in

group I, in group II, 100% and 71% HH depends upon own farm production and ration shop for rice respectively and in group III, 96% and 99% HH depends upon own farm production and ration shop respectively for rice. 5% HH from both group I and III depends upon local market for rice. In group I, 7%, 39% and 68% HH depends upon own farm production, ration shop and local market respectively for pulses. In group II, 3%, 51% and 57% HH depends upon own farm production, ration shop and local market respectively for pulses while 5%, 37% and 71% HH depends upon own farm production, ration shop and local market respectively for pulses (Figure 33).



Figure 33. Sources of food in sampled HH

91%, 40% and 49% HH depends upon their nutrition garden for vegetables to some extent and also depends upon the local market in group I, II and III respectively. Almost all the sampled HH depends upon the local market for cooking oil and sugar and only 16%, 6% and 10% HH depends upon their own farm production for cooking oil in group I, II and III respectively and 4% and 2% HH depends upon ration shop for sugar in group I and III respectively. All the HH collect spices from local market while 8% and 2% of sampled HH grow few spices in their garden or farmland in group I and III respectively. Other essentials are also collected from local market and there are few HHs (1%, 3% and 2% respectively) in each group who manage other essentials from their farmland or nutrition garden and only 1% HH collects other essentials from different sources in group I (Figure 33).

3.8.2. Sources of fuel wood

The different sources of fuel wood comprises of firewood (wood, litters, twigs), government, Ujjala supported scheme. kerosene, smokeless oven and biogas. 100% of the sampled HH from all the groups depends upon collected firewood for cooking. 27%, 9% and 22% of the sampled HH also have government support respectively while 69%, 91% and shop. Only 3% HH from group II



and 1% HH from group III depends upon biogas and smokeless oven respectively for cooking (Figure 34).

3.8.3. Sources of seeds

The baseline study reports that 88%, 89% and 95% of the sampled HH from group I, II and III respectively save seeds while 16%, 6% and 10% HH from group I, II and III respectively depends upon market. 1% HH collects seed from neighbors in group I and III. 32% and 3% of the sampled HH depends upon DRCSC for seeds in group I and II respectively (Figure 35). It was also reported that four numbers of grain bank is present that are supported by the respondents which is



only recorded at the village Lari of Sonathali Gram Panchayat.

3.8.4. Food scarcity

24%, 19% and 30% of the sampled HH in group I, II and III respectively suffers from food scarcity while 76%, 81% and 70% HHs in group I, II and III respectively get food throughout the year (Figure 36).



Figure 36. Food scarcity of sampled HH

The hunger days in a year lasts for less than one month in 65%, 50% and 80% of the HH in group I, II and III respectively while it is 1 to less than 3 months for 35%, 50% and 20% HH in group I, II and III respectively. The hunger days for five years back was also recorded and prevalence of hunger days for 6 to more than 6 months was recorded for 45%, 88% and 60% HH in group I, II and III respectively. 40% and 32% HH suffered from hunger for 3 to less than 6 months



in group I and III respectively, and 15% and 4% HH for 1 to less than 3 months in group I and III respectively. 13% and 4% HH from group II and III respectively suffered for less than one month in five years back (Figure 37).

3.9. Type of forest

Natural Sal (*Shorea robusta*) forest is present in the village from group I and II as reported by 19% and 5% HH respectively. 42%, 80% and 100% HH reported to have Sonajhuri (*Acacia auriculiformis*) forest covering the group I, II and III respectively. Eucalyptus forest was reported by 10% and 7% HH from group I and II respectively. Arjun (*Terminalia arjuna*) forest was reported by 17% and 7% HH from group I and II



respectively. Social or agroforestry was reported by only 12% and 2% HH from group I and II respectively (Figure 38).

The distance of each type of forests from the respondent's house was also recorded during the study. Sonajhuri forest is located at a distance of 1 to less than 2 km from 67% HH and less than 1 km from 15% HH and more than 4 km from 18% HH in group I. 20% and 80% HH reported the distance of Sonajhuri forests is less than 1 km and 1 to less than 2 km respectively in group II. Sonajhuri forest is located at a distance of 1 to less than 2 km from 82% HH and less than 1 km from 3% HH and 2 to less than 3 km from 15% HH in group III (Figure 39).





In group I, Eucalyptus forest distance was recorded as 1 to less than 2 km and 2 to less than 3 km from 69% and 31% sampled HH respectively. Distance of Arjun forest from 93% HH was recorded

as 1 to less than 2 km and 2 to less than 3 km from 7% HH in group I. The respondents reported that Sal forest is located 1 to less than 2 km for 80% HH and the same is 2 to less than 3 km, 3 to less than 4 km and more than 4 km for 13%, 3% and 3% sampled HH in group I. Social or agroforestry areas are located at a distance 1 to less than 2 km and 2 to less than 3 km from 53% and 47% HH respectively in group I (Figure 39).

In group II, all the sampled HH reported eucalyptus forest distance is less than 1 km, distance of Arjun forest is 1 to less than 2 km, Sal forest is 2 to less than 3 km and social or agroforestry areas are located at a distance of more than 4 km. except Sonajhuri forest no other forest types are recorded in group III (Figure 39).

3.10. Human Health and Diseases

3.10.1. Sufferings from diseases

The sufferings of sampled HH members through different diseases were recorded during the baseline study. Maximum number of HH members suffer from dental problem ingroup II and III (71% and 65% respectively) while in group I maximum number of HH suffer from cough and cold (49%). Dental problem was noticed in 38% HH in group I while 34% and 52% HH from group II and III suffer from cough and cold respectively. 38%, 43% and 61% HH suffer from eye problem in group I, II and III respectively. 44%, 34% and 40% HH from group I, II and III suffer from fever. Sufferings from stomach problem, muscle pain and bone problem was recorded as 36%, 17% and 23%; 14%, 23% nad 21%; 14%, 23% and 15% from group I, II ands III respectively. 6% and 9% HH suffers from hypertension from group II and III respectively. 6% and 1% HH suffers from diabetes in group I nad III respectively. Sufferings fron corona was recorded as 4% and 2% in group I and III while tuberculosis was obsereved in 2% and 1% HH from group I and III respectively; malaria records 2% from group I and thyroid was noticed in 1% HH from group I (Figure 40). Apart from the above mentioned diseases, sampled HH members also suffer from ear problem, heart disease, headache, low pressure and skin disease.





3.10.2. Sources of getting essential medicines

Sources of medicines were from medicine shop, government support and local herbs. 60% of sampled HH in group I and III collect medicines from all the three sources viz. medicine shop, government support and local herbs while it is 46% HH in group II. 7%, 3% and 22% of sampled HH get medicines from both medicine shops and government support in group I, II and III respectively. 12%, 3% and 4% of sampled HH collect medicines from medicine shops and local herbs in group I, II and III respectively. 6%, 40% and 1% sampled HH get medicine from government support and local herbs in group I, II and III respectively. 9%, 5% and 6% HH from group I, II and III respectively depends upon only the medicine shop while 6%, 3% and 7% HH from group I, II and III respectively depends solely upon local herbs (Figure 41).



Figure 41. Sources of medicine

3.11. Weather Information

From the baseline study it was observed that 99% of sampled HH get weather information. The different sources of weather information include district and block weather station, DRCSC weather station and television. 61%, 80% and 67% HH from group I, II and III respectively reported that they get weather information through district and DRCSC weather station while 33%, 6% and 33% HH from group I, II and III respectively get information from only DRCSC weather station and 5% and 11% HH from group I and II get information from all the three sources viz. district, block and DRCSC weather station. Only 1% and 3% HH was reported to get information from television and DRCSC weather station from group I and II respectively (Figure 42).



Figure 42. Sources of weather information

3.12. Training and Skills

3.12.1. Skill set of sampled household

Skills of the respondents and HH members in the age group of 18-45 years in different aspects were recorded during the baseline study. 53%, 77% and 59% of sampled HH from group I, II and III respectively have skills on agriculture and 42%, 23% and 40% of sampled HH have skills on both agriculture and livestock rearing in group I, II and III respectively. Skills on agriculture and agroprocessing were recorded for 4% HH from only group I. 1% HH also reported their skills in agriculture, livestock rearing and food processing from group III only. Another 1% of sampled HH from group I reported to have skills on agriculture, agro-processing and food processing (Figure 43).



Figure 43. Skills of sampled HH in the age group of 18-45 years

3.12.2. Sample households' interest in receiving training

Interest in receiving training by the sampled HH was recorded and was found that 99% HH wanted to receive training. The training themes were agriculture, agro-processing, food processing, livestock and fisheries. 51%, 32% and 69% HH from group I, II and III respectively showed their interest in training for agriculture and livestock (Figure 44).



Figure 44. HHs interested in receiving training

3%, 53% and 16% HH showed interest in agriculture only from group I, II and III respectively; 16%, 3% and 10% HH from group I, II and III respectively was found to have interest on agriculture, agroprocessing and livestock; 6%, 9% and 5% HH from group I, II and III respectively showed interest on agriculture and agro-processing and 8% HH showed interest in agriculture, livestock and food processing and 1% HH showed interest in agriculture, agro-processing and food processing from group I. Interest in both agriculture and food processing was recorded by 3% HH from group I and another 3% HH from group II showed their interest in receiving training on only livestock (Figure 44).

4.0. Baseline Study of Bankura District

4.1. Target Respondents

The baseline study of Bankura district at West Bengal covers Chhatna block comprising three Gram Panchayats namely Chhatna-I, Ghosergram and Jhunjkha. DRCSCs intervention in the study area was since 2015 at Ghosergram and Jhunjhka Gram Panchayats and under these GLASS initiative three new villages from Chhatna II Gram Panchayat was included. Thus the study area is classified into two groups viz. old villages where few interventions are made and new villages where interventions are to be implemented currently under the GLASS initiative. As COVID 19 pandemic restricted much of the interventions for the old villages number of activities were left out and thus on convergence mode they are included under the present initiative. The baseline study covers 12 villages in total. The sample distributions are given below in the Table 4.

Table 4. Sample distribution of baseline study				
District	Block	Gram Panchayat	Village	Number of sample
				Household
Bankura	Chhatna	Chhatna-II	Gadapathar	10
			Haribandi	12
			Mirga	15
		Ghosergram	Ghosergram	11
			Hansapahari	15
			Shaurabakra	9
		Jhunjkha	Hausibad	20
			Jamthol	11
			Jirra Kelai	11
			Joynagar	3
			Kendua	21
			Saluni	12

4.2. Demographic characteristics

All the respondents were female. Only 15% of sampled households (HH) were headed by females in the region with highest number of female headed families were noticed at all the Gram Panchayat (GP) with highest number at Jhunjhka GP. At Chhatna II GP, considering the new villages, only 13% of the sampled HHs was women headed that too was recorded for village named Mirga, while for older villages the women headed HHs was found to be 15%. In older villages, 62% of the sampled HH falls under Scheduled Tribes category, 36%



Figure 45. Caste category of sampled HH

HHs are Scheduled Caste and only 2% of sampled HH falls under General category while in new villages all the HH falls under Scheduled Tribe category (Figure 45).

4.2.1. Gender wise distribution of household members

Total population of Bankura district are 3,596,292 (male: 1,840,504 and female: 1,755,788) (Population census, 2011). According to the census, 2011 total population of the Chhatna block is **195,038** (male: 99,523 and female: 95,515). The gender wise total population of the selected villages in the block according to Census report, 2011 is given in the Figure 46.

According to the baseline survey, wise the age HH member distribution in the project area is depicted in Figure 47. For baseline survey, the percent distribution of household members was recorded according to the different age group where

in older villages, 54% of the population contributes to the age group of 18 to 59 years followed by 34% for the age group between 5-18 years, 8% for more than 60 years and 4% for infant in the age group below 5 years (Figure 48). In case of new villages, 63% of sampled HH contributes to the age group of 18 to 59 years followed

by 20%, 13% and 4% of sampled HHs contributing to the age group





of 5 to 18 years, more than 60 years and less than 5 years respectively (Figure 48).



Figure 48. Percent distribution of family members in old and new villages

5% of sampled HH have either pregnant or breast feeding women in their families as recorded for new GP and is recorded for only Gadapathar village while in case of the older GPs, 9% of the sampled HH have either pregnant or breast feeding women in their families recorded from the villages namely Ghosergram, Jamthol, Saluni, HAusibad, Saurabakra, Jirra Kelai and Hansapahari.

6% of sampled HH have family members with differently abled found only in older villages namely Hausibad, Kendua, Saluni and Saurabakra. No returnee person was found in the total sampled HH.

4.2.2. Economic status

Baseline survey for sampled HHs revealed that all the HHs is Below Poverty Line (BPL). From the survey it is revealed that in old villages, 99% of the sampled HH possesses Aadhar card, 93% sampled HH possesses Ration card and there are 71% of sampled HH holding Job card while the same for new villages records as 97%, 92% and 62% respectively (Figure 49). The type of ration card was also recorded during the survey. in case of old villages, 58% of the ration card holder were recorded to fall under SPHH category while 31% fall under PHH category, 11% under RKSY-I category and 2% falls under RKSY-II and 3% falls under AAY category while in case of new villages only SPHH, PHH and RKSY-I categories were recorded for 17%, 13% and 4% of the sampled HH respectively (Figure 50).





Figure 49. Percent distribution of different card holders

Figure 50. Type of Ration card holders

4.2.3. Educational Background

During the baseline survey 48% of the respondents are found to be illiterate at old villages. Likewise, 34% of the respondents are educated up to 4^{th} standard, 9% of the respondents are educated up to 8^{th} standard and also 9% respondents are educated up to 10^{th} standard at old villages. In case of new villages, 54% of the respondents are illiterate, 19% respondents are educated up to 4^{th} standard, 11% respondents are educated up to 8^{th} standard, 13% respondents are educated up to 10^{th} standard and only 3% respondents are educated up to 12^{th} standard (Figure 51).



Figure 51. Educational status of respondents

The educational status of each of the sampled HH members at both old and new villages were recorded during the baseline survey and it was revealed that 45% of the sampled population is educated up to 4^{th} standard followed by illiterate (21%), 8^{th} standard (20%), up to 10^{th} standard (10%), up to 12^{th} standard (3%), and graduate (1%) at old villages. At new villages of the study area it was revealed that 33% of the sampled population is educated up to 4^{th} standard followed by educated up to 8^{th} standard (25%), illiterate (20%), up to 10^{th} standard (14%), up to 12^{th} standard (7%) and graduate (1%) (Figure 52).



Figure 52. Educational status of sampled HH at old and new villages

4.3. Information on Source of Income

The total household income in the project area for old villages mostly ranges between Rs 45,000 and above (56%) and Rs 35,000 to less than Rs 45,000 (42%) while the total household income in the range of Rs 15,000 to less than Rs 25,000 and Rs 25,000 to less than Rs 35,000 was represented by 1% each respectively. At new villages, the total household income mostly ranges between Rs 35,000 to less than Rs 45,000 while 16% of sampled HH income ranged between Rs 45,000 and above and 3% of sampled HH income ranged between Rs 25,000 to less than Rs 35,000 (Figure 53).



Figure 53. Total income of sampled HH

The percent of livelihood mix includes mainly agriculture, animal husbandry, business, MGNREGS, service, seasonal migration and migrant labour. The major source of livelihood of the sampled HH at both old and villages new is agriculture contributed by 29% and 32% respectively. The second most important sources of livelihood at both old and new villages is seasonal migration (old: 24%, new: 26%) followed by MGNREGS 20%, (old: new:



22%), animal husbandry (old: 18%, new: 19%), migrant labour (old: 6%, new: 6%), business (old: 2%, new: 2%) and service (old: 1%, new: 1%) (Figure 54).

4.3.1. Occupation

The primary occupation of the sampled HH in both the old and new villages lies mostly on agriculture that contributes to about 72% and 87% of the HH. In case of old villages, primary occupation also concentrates on daily wage labour with 24% sampled HH followed by business (2%), service (1%) and migrant labour (1%). In case of new villages, apart from agricultural activities, daily wage labour (8%) and agricultural labour (1%) was observed as primary occupation (Figure 55).





Secondary occupation of the sampled HH at old villages lies mostly on daily wage labour contributed by 58% of the HH followed by agricultural labour (22%), agriculture (12%), migrant labour (4%), livestock rearing (2%) and 1% each for other activities viz. driver and business. In new villages, the maximum number of sampled HHs secondary occupation lies within agricultural labour (89%), followed by livestock rearing (8%) and agriculture (3%) (Figure 56).



Figure 56. Secondary occupation of sampled HH

4.3.2. Loan

43% and 32% of the sampled HH from old and new villages respectively has taken loan. Baseline survey reveals that 98% of the total HH has lended money from SHG while 2% has taken loan from cooperative as recorded from old villages while in new villages, 42% of the total HH has lended money from SHG, 42% HH has taken loan from bank and another 17% HH has taken loan from neighbors. At old villages, 55% of HH has taken loan for agricultural purposes, 19% HH took loan for livestock rearing and 13% HH took loan for home repair, 8% HH took loan for

business, 3% for medical and 2% for marriage



purposes and few households were also reported to have loan for other purposes. In case of new villages, all the HH took loan for agricultural purposes (Figure 57).

At old villages, the amount of loan taken by the sampled HH for agriculture purposes was mostly in the range of Rs 5,000 to less than Rs 10,000 and Rs 10,000 to less than Rs 25,000. 4 HHs were found to have taken loan less Rs 5000 and another 3 HH has taken loan more than Rs 25,000 for agricultural purposes. 7 HHs were found to have taken loan for livestock rearing where the loan amount ranges in Rs 5000 to less than Rs 10,000 followed by Rs 10,000 to less than Rs 25,000 and Rs 25,000 to above by 3 HHs, 1HH and 1 HH respectively. The loan amount for home repair and other purposes was found to be maximum (4HH) in the range of Rs 10,000 to less than Rs 25,000 and 3HH took loan for home repair in the range of Rs 5000 to less than Rs 10,000 and 1 HH took loan more than Rs 25,000 for home repair. 1HH took loan for marriage which is more than Rs 25,000. 1 HH each has taken loan for medical purposes and the amount ranged between less than Rs 5000 and Rs 5000 to less than Rs 10,000 respectively. 5HHs took loan for business where 4HHs' loan amount ranges from Rs 25,000 and above while only 1HH took loan in the range of Rs 10,000 to less than Rs 25,000 (Figure 58). At new villages 75% of the sampled HH took loan in the range of Rs 10,000 to less than 25,000 while 17% HHs' loan amount ranges between Rs 5,000 to less than 10,000 and only 8% of the sampled HHs' loan amount ranges between Rs 25,000 and above (Figure 58).


Figure 58. Amount of loan taken by sampled HH

4.3.3. Migration

67% of the sampled HH seasonally migrate to distant places for earning their livelihood and only 33% of the sampled HH members do not migrate as observed in old villages. According to the baseline study it was also noticed that only single family member seasonally migrates in 62HHs, 2 members in 26HHs and more than 2 members migrate in only 1HH. At new villages, 68% of the sampled HH migrate out of which only 1HH with only member from Gadapathar village at Chhatna II GP was reported to have permanent migration (Figure 59). At new villages, it was noticed that only single family member seasonally migrates in 10HHs, 2 members in 4HHs and 1 to less than 3 members migrate in 10HHs. GP wise seasonal migration was reported as 41% of seasonal migration is contributed by Jhunjhka GP followed by Ghosergram (34%), and Chhatna II (25%) GP (Figure 60).



Figure 59. Migration status of sampled HH



4.4. Information on Land use of Household4.4.1. Type of land owned

From the baseline survey it is revealed that 61% of the sampled household at old villages possesses both farmland and nutrition garden, 12% of the sampled HH possesses only farmland, 19% HHs have space for kitchen/ nutrition garden and 8% of the sampled household at old villages are landless which is observed mainly at Jhunjhka GP covering Saluni, Jirra Kelai, Jamthol and Hansapahari.

In case of new villages, 43% of the sampled HHs are landless, which is covered by all the three villages viz. Gadapathar, Haribnadi and Mirga of Chhatna II GP, while 35% of sampled HHs possesses only farmland, 8% HHs have space for kitchen/ nutrition garden and 14% of the sampled HHs possesses both farmland and land for nutrition garden (Figure 61).

72% of sampled HH possesses nutrition garden area below 2 decimal while 26% of sampled HH owns 2 decimal to less than 3 decimal land area for nutrition garden and



only 2% HH represents nutrition garden area in the range of 4 decimal to less than 5 decimal at old villages. At new villages, 63% of sampled HH possesses nutrition garden area in the range of 2 decimal to less than 3 decimal and only 37% HH owns nutrition garden land below 2 decimal (Figure 62).



Figure 62. Percent HH distribution of nutrition garden area

The types of crops grown in the nutrition garden are given in the Table 5 below,

Turner of energy Norma of energy						
Types of crops Name of crops						
Leafy vegetables Green amaranth, Red amaranth, Indian spinach, Coriander leave	/es,					
Fenugreek leaves, Malabar spinach, Bethua leaves, Radish green, Pu	nka					
leaves, Panjabi palang, Jute, Susni leaves						
Fruits vegetables Bottle gourd, Ridge gourd, Cucumber, Tomato, Green Chilli, Pumpkin,	Ivy					
gourd, Okra, Bitter gourd, Brinjal, Raw banana						
Roots and Tubers Beet, Taro, Elephant foot yam, Carrot, Radish, Potato, Sweet potato	Beet, Taro, Elephant foot yam, Carrot, Radish, Potato, Sweet potato					
Leguminous Chick pea, Flat beans, Pigeon pea, French beans, Green peas, Cow pea	Chick pea, Flat beans, Pigeon pea, French beans, Green peas, Cow pea					
Spices Coriander, Garlic, Onion, Turmeric, Ginger	Coriander, Garlic, Onion, Turmeric, Ginger					
Medicinal Curry leaves, Basil leaf, Neem leaf, Marigold leaf, Pudina leaf	Curry leaves, Basil leaf, Neem leaf, Marigold leaf, Pudina leaf					
Fruits Banana, Black berry, Guava, Papaya, Mango, Indian jujube, Palm, D	Banana, Black berry, Guava, Papaya, Mango, Indian jujube, Palm, Date,					
Jackfruit						
Fodder Butterfly pea, Madar, Napier grass, Mulberry, Subabool, Mountain ebo	ny,					
Gliricidia						

4.4.2. Sources of irrigation for nutrition garden

The sources of irrigation for nutrition garden in sampled HH were observed to be tube wells, wells and rain water harvesting tank. 43% of the sampled households' source of irrigation in nutrition garden is tube well while 45% of sampled HH use water from wells for irrigating their nutrition gardens and only 12% of the sampled HH reported their source of irrigation for nutrition garden was rainwater harvesting tank at old villages. Rain water harvesting tanks were noticed at the villages viz. Ghosergram,



Hansapahari and Saurabakra at Ghosergram GP and Hausibad village at Jhunjhka GP. At new villages 42% of the sampled HHs' source of irrigation for nutrition garden is rainwater harvesting tank which was recorded for only two villages namely Haribandi and Mirga. 33% and 25% of sampled HH use water from tube wells and wells respectively for irrigating their nutrition garden (Figure 63).

4.4.3. Types of agricultural land

Variation on types of agricultural land was noticed in the project area. The land use composed of different types of land viz. upland (*Tar*), medium upland (*Baid*) and lowland (*Bahal/Sole*). 98% of sampled HH owns upland while 2% HH owns mid-upland at old villages while in case of new villages, 67% HH owns upland, 13% HH owns mid-upland and lowland are owned by 13% of the sampled HH (Figure 64).

From the baseline survey it is noticed that 16% of sampled HH possessed upland below 1 bigha area. 57% of sampled HH possesses upland area in the range of 1 bigha to less than 2 bigha while 15%, 8% and 4% of sampled HH possesses upland; in the range of 2 bigha to less than 3 bigha 3 bigha to less than 4 bigha and 4 bigha and above respectively at old villages. The area for mid-upland ranges between 1 bigha to less than 2 bigha contributed



Figure 64. Type of agricultural land owned by sampled HH



by 1 HH and also 1 HH contributes to mid upland area which is below 1 bigha at old villages (Figure 65). In case of new villages, the upland are is contributed by 38%, 31%, 19% and 12% of sampled HH in the land area ranges from 2 bigha to less than 3 bigha, 1 bigha to less than 2 bigha, 3 bigha to less than 4 bigha and less than 1 bigha respectively. 2HHs possesses mid-upland which is less than 1 bigha and 1 HH possesses mid-upland in the range of 1 bigha to less than 2 bigha. 5HHs were found to have lowland in the range of 1 bigha to less than 2 bigha (Figure 65).

The	e types of	crops	grown in	different	types of	of land	are given	in the '	Table 6	below,	

Table 6. Types	s of crops grown in unferent	types of fand	
Types of crops	Upland	Mid-upland	Lowland
Cereals	Paddy, Maize	Paddy	Paddy
Pulses	Pigeon pea, Grass pea, Green gram		
Vegetables	Bitter gourd, Ridge gourd, Snake gourd, Bottle gourd, Okra, Elephant foot yam, Brinjal, Tomato, Potato, Taro, Pumpkin, Radish, Flat beans	Bottle gourd, Potato, Tomato, Taro, Radish	Bottle gourd, Okra, Bitter gourd, Ridge gourd, Brinjal, Potato, Beans, Elephant foot yam, Taro, Cucumber
Spices	Ginger, Onion, Turmeric, Chilli, Garlic, Coriander	Onion, Turmeric, Chilli, Coriander	Onion, Chilli, Coriander
Oilseeds	Mustard, Seasame, Kusum, Sunflower	Mustard	Mustard
Fodder	Subabool, Butterfly pea, Mountain ebony		

4.4.4. Sources of irrigation for agricultural land

The major source of irrigation for agricultural land is rainwater as 42% and 35% HH depends upon rainwater for irrigation in old and new villages respectively. 32% HHs relies upon pond water for irrigation. From the baseline survey it was revealed that 10% of the sampled HHs relies on each of the canal and jor as a source of irrigation at old villages. 4%, 2% and 1% of sampled HH depends upon ditches, dug well and check



Figure 66. Sources of irrigation for agricultural land of sampled HH

dam for irrigation in old villages. At new villages, no check dam, ditches and dug well was recorded as an irrigation sources. 31% of the sampled HH at new village depends upon jor water for irrigation while 12% and 22% of sampled HHs at new village use pond and canal water for irrigating their agricultural land (Figure 66). Water availability in different water sources was also recorded during the baseline survey. At old villages water availability in ditches is recorded for 3 months to less than 4 months, 4 months to less than 6 months and more than 6 months as reported by 43%, 29% and 29% of sampled HH respectively. Water availability in dug wells was recorded for 4 months to less than 6 months and more than 6 months for 67% and 33% HH respectively. Pond water is available for 3 to less than 4 months, 4 months to less than 6 months and more than 6 months and more than 6 months and more than 6 months and 33% HH respectively. Pond water is available for 3 to less than 4 months, 4 months to less than 6 months and more than 6 months as reported by 45%, 52% and 3% of sampled HH at old villages (Figure 66).

In case of canal, water availability is for 2 months to less than 3 months, 3months to less than 4 months and 4 months to less than 6 months as reported by 5%, 74% and 21% of sampled HH respectively. Similarly, 11%, 79% and 11% HHs reported that water is available for 3 months to less than

4 months, 4 months to less than 6 months and more than 6 months respectively. Only 1 HH reported that water is available for 4mmonths to less than 6 months in check dam at the old villages (Figure 67).

At new villages, the water availability at pond was recorded as 2 months to less than 3 months, 3 months to less than 4 months and



Figure 67. Response of sampled HH on water availability in irrigating sources of agricultural land

4 months to less than 6 months reported by 17%, 50% and 33% sampled HH respectively. In canal, water availability is also same as pond as reported by 9%, 64% and 27% of sampled HH respectively. 13% of sampled HH reported that jor water remains for both 2 months to less than 3 months and 3 months to less than 4 months while 69% and 6% of sampled HH reports that jor water is available for 4 months to less than 6 months and more than 6 months (Figure 67).



Figure 68. Use of water sources for farming by sampled household

From the study it was also found that at old villages, 60% of the HH use pond water for farming while 14%, 16%, 7%, 2% and 1% HHs use water from canal, jor, ditches, dug well and check dam respectively. in case of new villages, 75% of the sampled HH use jor water for farming and 20% and 5% HHs use water from canal and pond respectively for farming (Figure 68).

The use of irrigation water sources by the sampled HH in different seasons was also recorded during the baseline survey. The seasons were classified as pre-kharif (summer) season, kharif (monsoon) season and rabi (winter) season. From the baseline study it was noticed that at old villages, during pre-kharif season pond water and dugwell water is used by only 1HH each. During kharif season pond water is mostly used by the sampled HH (46)

followed by canal (14HH), jor (12HH) ditches (6HH) and check



dam (1HH). During the rabi season also the pond water is mostly used by the sampled HH (45) followed by jor (13HH), ditches (7HH), canal (6HH) and dug well (1HH). At new villages water is used only in kharif and rabi season for farming and in both the seasons, jor water is mostly used (8HHs) and canal water is used by only 2HHs in each season (Figure 69).

Irrigation water scarcity prevails in the project area for more than 6 months as reported by the respondents of both old and new villages during the baseline study. 100% and 99% of the respondents at old villages informed that irrigation water scarcity is observed in the months of April to May and March to April respectively. 97% of the sampled HH informed that scarcity prevails

from the months of May to June. 93%, 96% and 98% of sampled



HH reported the scarcity during December to January, January to February and February to March respectively. In new villages, 70% of the sampled HH informed that irrigation water scarcity prevails in the months of April to May, May to June and December to January. 68% of the sampled HH reported irrigation water scarcity during January to February. 51%, 62%, 30% and 3% of the sampled HH reported scarcity during February to March, March to April, October to November and November to December respectively (Figure 70).

4.5. Information on Inputs in Agriculture

Out of total households surveyed at old and new villages, organic inputs are used by 90% and 86% of the sampled HH respectively. Out of these 90% HHs at old villages, 99% HHs use Farm Yard Manure (FYM), 45% HHs use vermicompost and 8% HH use other organic inputs. Only 2% HH use vermiwash which was recorded from Hausibad village of Jhunjhka GP. At new villages out of 86% HHs using organic inputs, 81% of



sampled HH use FYM and 11% HH use other organic inputs. Only 3% of the sampled HH use vermicompost which was recorded from Haribadi village of Chhatna II GP (Figure 71).

From the survey it was observed that at old villages, 80% of the HHs' source of vermicompost is DRCSC, 16% HHs collect vermicompost from market and only 4% HHs prepare vermicompost on their own. Similarly, 27% of the HHs' source of FYM is market, 19% HH collect it from neighbours, 1% HH get FYM from government sources and 6% HHs' source is DRCSC while 47% of the HHs prepare FYM by their own. In case of vermiwash only 2HHs were recorded where 1HH collects it from market and the other HH get it from DRCSC (Figure 70). However, in case of new villages, 61% of the HH prepare FYM by their own, 21% and 18% of the HHs' sources of FYM are market and neighbours respectively. Only 1HH was recorded to use vermicompost who collects it from market (Figure 71).

4.6. Sources of Drinking Water

The main source of drinking water in the project area is tube well. From the study it was observed that at old villages, 85% of sampled HH depends on tube well for drinking water while 38% and 30% of the sampled HHs depends on PHE (tap) and dug well respectively. Only 3% of the sampled HH relies on pond water for drinking purposes and 1% HH each also uses canal and river water for drinking purposes. At new villages, all the HHs' source of drinking water is tubewell and 24% HHs also depend



upon dug well along with the tube wells for drinking water (Figure 72).

4.7. Information on Livestock and Other Assets

4.7.1. Livestock

Baseline study reports 54% and 73% of the sampled HH possesses cow or buffalo at old and new villages respectively. Percent HH owning goat, sheep, pig, duck, hen, rabbit and pigeon at old villages are 43%, 22%, 5%, 20%, 52%, 4% and 15% respectively while in case of new villages the percent HH owing goat, sheep, pig, duck, hen, rabbit and pigeon is 35%, 22%, 5%, 43%, 65%, 3% and 3% respectively (Figure 73). The number of livestock was also assessed during the study.

The number of livestock possessed by the sampled HH in percent is given in the Figure



73. It was revealed that among the total HH owing cow and or buffalo at old villages, 72% of the sampled HH owns cow or buffalo in the range of 1 to less than 3 numbers. 23% HH owns 3 to less than 5 cow/buffalo and 5% HH owns 5 to less than 10 numbers of cow or buffalo. In case of goat, 71% HH possesses 1 to less than 3 numbers of goats while 16% and 10% HHs owns goat in the range of 3 to less than 5 and 5 to less than 10 numbers respectively. 64% HH owns sheep in the range of 1 to less than 3 numbers, 20% HH owns 3 to less than 5 numbers and 16% HH owns 5 to less than 10 numbers of sheep. All the HHs possessing pig ranges between 1 to less than 3 and in case of duck, it ranges from 1 to less than 10 and for rabbit it ranges from 1 to less than 10 numbers. Among the total HH possessing hen 88% HH owns 1 to less than 10 numbers of hen and 15% HH possesses pigeon in the range of 1 to less than 10 and 35% HH owns pigeon more than 10 in numbers (Figure 74).



Figure 74.Number of livestock owned by the sampled household

At new villages, the among the total HHs owing cow and or buffalo, 67% HHs possesses cow and or buffalo in the range of 1 to less than 3, 11% HH numbers ranges between 3 to less than 5 and 22% HHs number ranges between 5 to less than 10. In case of goat, 46% HH owns goat in the range of 3

to less than 5, while 38% and 15% of the HHs number ranges between 1 to less than 3 and 5 to less than 10 respectively. 50% HHs number of sheep ranges between 1 to less than 3 while 38% and 13% HHs number ranges between 3 to less than 5 and 5 to less than 10 respectively. All the HHs possessing pig ranged between 1 to less than 3 numbers. In case of duck and hen, 94% and 67% HHs number ranged between 1 to less than 10 numbers respectively and 6% and 33% HHs number of duck and hen ranged between 10 and above respectively. In case of pigeon all the HHs number of pigeon ranged between 1 to less than 10 numbers (Figure 74).

4.7.2. Other assets

At old villages, 88% of the sampled HH possesses other assets that include mainly, bicycle, thresher, plough, bullock cart, cycle van, pump set, two wheeler and dug well. Only 2% of the sampled HH owns dug well. 97% of the HH possesses bicycle while 10% HH owns twowheeler. Thresher and plough are owned by 29% and 32% of the sampled HH respectively. Bullock cart, cycle van and pump set are



owned by 3%, 4% and 3% of the sampled HH respectively (Figure 74). Bullock cart and dug well was observed at Kendua village only. Cycle van was observed in the villages viz. Jamthol, Kendua and Saurabakra while pump set was observed at two villages namely Jamthol and Kendua. Two-wheeler was observed at the villages viz. Hausibad, Jamthol, Kendua, Hansapahari and Saluni.

At new villages, 62% of the sampled HH possesses other assets that include mainly, patta land, bicycle, thresher, plough, cycle van and dug well. Only 4% of the sampled HH possesses patta land observed at Mirga village. 96% and 9% of sampled HH possesses bicycle and cycle van. Plough and thresher are owned by 17% and 9% HH respectively. Only 4% HH owns dug well found at 1 HH at Mirga village (Figure 75). Thresher and cycle van were recorded at MIrga village while plough was recorded at Mirga and Gadapathar village.

4.8. Food taken in daily diet

From the baseline study it was observed that 100% of the sampled HH at both old and new villages take rice, vegetables and dal in their daily diet. Fish is consumed daily by 27% and 22% HH at old and new villages respectively, while egg and meat was consumed by 21% and 19% of sampled HH and 10% and 5% of sampled HH respectively. Roti



was consumed by 62% and 11% of the sampled HH at old and new villages respectively (Figure 76), and fruits were not included in their diet as recorded during the baseline study.

4.8.1. Sources of food

The respondents in the study area depends upon local market for several food items viz. rice, vegetables, pulses, cooking oil, sugar, spices and other essentials. People also depend upon ration shop for rice, pulses and sugar. Nutrition garden is also a source of vegetables for few household who grow seasonal crops in their garden. 99% and 95% HH source of rice is ration shop at old and new villages respectively. 84% HHs at each old and new village other source of rice is their own farmland and 11% and 8% HHs source of rice is also the local market at old and new villages respectively. At old villages, the sources of pulses are local market (97%) and ration shop (16%). 97% and 13% HHs source of sugar at old villages are local market and ration shop respectively. 98% HH depends upon local market for vegetables and 57% HH also have kitchen garden from where they collect vegetables at old villages. Similarly, 99% HHs source of spices is local market while 23% HH also collect spices from their garden. All the other essentials are bought from the local market as reported by 98% HHs. Apart from these few food items are also collected that includes vegetables, spices and other essentials which are contributed by 23%, 5% and 12% of the sampled HH at old villages (Figure 77).

At new villages, the sources of pulses are local market (84% HH) and ration shop (43% HH). The sugar is also mainly collected from local market and ration shop as reported by 97% and 8% of sampled HH at new villages respectively. 97% HH depends upon the local market for cooking oil but 11% HH were noticed to have cooking oil from their farm. All the HHs at new villages buy vegetables from the local market and 76% HHs sources of vegetables is their garden or farmland while 11% HHs also collected vegetables. 70% HH depends upon local market for spices. 70% HH get other essentials from the local market and 3% HH collects the other essentials at new villages (Figure 77).



Figure 77. Sources of food in sampled HH

4.8.2. Sources of fuel wood

The different sources of fuel wood comprises of firewood both collected and own, government supported Ujjala scheme, market (kerosene and firewood) and kerosene shop. Percent HH using government supported schemes at old and new villages are 38% and 16% HHs respectively. Firewood collected scores higher percentage in terms of HH coverage which is 96% and 84% at old and new villages respectively. Firewood (own) is contributed by only 2% and 19% of the sampled HH at old and new villages



respectively. 24% and 5% of the sampled HH at old and new villages depends upon market for fuelwood mainly kerosene and firewood. 92% and 84% of smapled HH depends upon kerosene shop for fuelwood at new and old villages respectively (Figure 78).

4.8.3. Sources of seeds

The baseline study reports that 81% and 84% of the sampled HH save seeds at old and new villages respectively while 15% and 43% HH depends upon market. At old villages, other sources of seeds are mainly from DRCSC (60%), followed by other NGOs (8%), Panchayat (9%) and ADA office (4%). People also collect seeds from their neighbours which are 4% and there are 4% HHs who do not collect any seeds from any of the above-mentioned sources



at old villages and at new village it is restricted to 5% HHs. At new villages the other sources are mainly DRCSC (54%), Panchayat (11%), ADA office (5%) and other NGOs (3%) (Figure 79). One seed bank is present at Kendua village of Jhunjhka GP which is supported by own self.

4.8.4. Food scarcity

68% and 76% of the sampled HH suffers from food scarcity at old and new villages respectively while 32% and 24% of the sampled HH get food throughout the year at old villages new and respectively (Figure 80).



Among the total HHs suffering from food scarcity, in old villages the hunger days in a year prevails for mostly 1 to less than 3 months and 3months to less than 6 months in 44% and 49% HHs respectively. 4% HH suffers from hunger for less than one month and 3% HH suffer from hunger for 6 months to more at old villages. The hunger days five years back was also recorded and prevalence of



hunger days for 6 to more than 6 months was recorded for 74% HH while 25% HH suffered from hunger for 3 to less than 6 months and only 1% HH suffered for 1 to less than 3 months at old villages during five years back. Among the total HHs suffering from food scarcity at new villages the hunger days in a year was recorded maximum for 54% HH suffering from scarcity for 1 month to less than 3 months. 46% HH suffered from hunger for 3 months to less than 6 months at new villages in a year. Five year back hunger data was also recorded for the new villages where 68%, 11% and 21% of the sampled HH suffered from hunger for 3 months to less than 6 months, 1 month to less than 3 months and 6 months to more respectively (Figure 81).

4.9. Type of forest

The different types of forest were recorded during the survey and only two types were recorded for both old and new villages i.e. Sonajhuri (Acacia auriculiformis) and Eucaluptus. Natural Sal (Shorea robusta) forest is present in only one new village named Haribandi as responded by one HH of the village comprising 1% of the total forest. At old villages the percent coverage of Sonajhuri and Eucalyptus forest was recorded as 64% and 36% respectively



while the same at new villages was recorded as 50% and 49% respectively. The response of the sampled HH regarding different types of forest in their area was also recorded as given in the Figure 82.

The distance of each type of forests from the respondent's house was also recorded during the study. At old villages the distance of Sonajhuri forest was recorded as less than 1 km, 1 to less than 2 km, 2 to less than 3 km, 3 to less than 4 km and more than 4 km in 35%, 33%, 10%, 5% and 17% of the sampled HH.

For Eucalyptus forest the distance of the forest from the respondents' house was recorded as less than 1 km, 1 to less than 2 km, 2 to less than 3 km, 3 to less than 4 km and more than 4 km in 31%, 44%, 10%, 10% and 4% of the sampled HH. At new villages 97% HHs' distance from Sonajhuri forest and Eucalptus forest ranges between 2 to less than 3 km. For 3% HH the distance of Sonajhuri forest from the respondents HH was recorded as more than 4 km and in case of Eucalptus forest 3% HH reports that the distance



to the forest is 1 to less than 2 km. the response of the HHs for the distance to different types of forest is given in Figure 83.

4.10. Human Health and Diseases

4.10.1. Sufferings from diseases

The sufferings of sampled HH members at both old and new villages through different diseases were recorded during the baseline study. Maximum number of HH members suffer from fever (old: 34% HH, new: 76% HH) and cough and cold (old: 42% HH, new: 84% HH). At old villages, the trend of suffereings from different diseases are dental problem (18% HH) followed by eye problem (16% HH), bone problem (14% HH) and stomach problem (12% HH). The trends of other important diseases the sampled HH sufferes from at the new villages are dental problem

(38% HH), stomach problem (16%



HH), eye problem (14% HH) and bone problem (11% HH). People in the study area also sufferes from muscle pain, tuberculosis and leprosy whose percentage in old nad new villages are 6% and 3%; 5% and 3%; and 1% and 3% HHs respectively. Other disases at old villages are observed for 1%, 3% and 1% HH suffering from blood sugar, corona and phylaria respectively. hypertnsion was noticed in 3% HH at new villages. The sufferings of HH from different diseases is given in Figure 84.

4.10.2. Sources of getting essential medicines

Sources of medicines were from medicine shop, government support and local herbs. At old villages 53% of sampled HH collect medicines from all the three sources viz. medicine shop, government

support and local herbs. 36% of sampled HH get medicines from both medicine shops and government support. 9% of sampled HH collect medicines from local herbs and government support. 1% each of the sampled HH gets medicine from government support and medicine shop. At new villages 50% of the sampled HH collect medicines from all the three sources viz. local herbs, medicine shop and government support. 39% of sampled HH get medicines from both medicine shop and government support. Only 11% of the sampled HH get medicine solely from the government support at new villages (Figure 85).



Figure 85. Source of medicine in the study area

4.11. Weather Information

From the baseline study it was observed that all the sampled HH from both old and new villages get weather information. The different sources of weather information include district and block weather station, DRCSC weather station and television. At old villages, 49% and 48% of the sampled HH get weather information from district and DRCSC weather station and district, block and DRCSC weather station respectively. 2% of sampled HH get information from DRCSC weather station only and 1% HH get information from district and block weather stations. At new villages, 67% of the sampled HH reported that they get weather information through district and DRCSC weather station while 22% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information from district and block weather station and 11% HH get information f



Figure 86. Sources of weather information in sampled HH

4.12. Training and Skills

4.12.1. Skill set of sampled household

Skills of the respondents and HH members in the age group of 18-45 years in different aspects and combinations were recorded during the baseline study. At old villages, 80% of sampled HH have skills on agriculture and 9% of sampled HH have skills on both agriculture and livestock rearing. Skills on agriculture and agro-processing were recorded for 4% HH. 2% HH also reported their skills in agriculture, livestock rearing and agro-processing. Another 2% of sampled HH reported to have skills on livestock. 3% of sampled HH reported to have skills on agriculture, agro-processing and food processing (Figure 87). At new villages, 54% of the sampled HH have skills on agriculture, 24% HHs have skills on both agriculture and livestock rearing. 5% HHs have skills on food processing and another 5% HHs have skills on both agriculture and food processing. 3% HH have skills on agriculture, livestock and food processing while another 3% HH have skills on agriculture, agro-processing and food processing while another 3% HH have skills on agriculture, agro-processing and food processing while another 3% HH have skills on agriculture, agro-processing and food processing while another 3% HH have skills on agriculture, agro-processing and food processing while another 3% HH have skills on agriculture, agro-processing and food processing while another 3% HH have skills on agriculture, agro-processing and food processing while another 3% HH have skills on agriculture, agro-processing and food processing while another 3% HH have skills on agriculture, agro-processing and food processing and food processing skills were reported from 3% HHs (Figure 87).



Figure 87. Skills of sampled HH in the age group of 18-45 years

4.12.2. Sample households' interest in receiving training

Interest in receiving training by the sampled HH was recorded and was found that 93% HH from old villages and 97% from new villages wanted to receive training. The training themes were agriculture, agro-processing, food processing and livestock. At old villages, 32% HH showed their interest in training for food processing and 29% HH showed interest in both agro-processing and food processing. 14% HH showed interest in agriculture, agro-processing and food processing. 8%, 5%, 3% and 2% HHs showed interest in receiving training on agriculture; agriculture and livestock; agriculture, food processing and livestock; and food processing and livestock respectively. 4% HH were found to have interest in having training on all the four aspects. 1% HH showed interest in

receiving training on each of the aspects in combination viz. agriculture and agro-processing; agriculture and food processing; and agro-processing (Figure 88).

At new villages 44% of the sampled HH would like to have training on agriculture and food processing while 17% HH wants training on only food processing, 14% HH wants training on three aspects viz. agriculture, livestock and food processing, 11% HH showed their interest in receiving training on three aspects mainly agriculture, agro-processing and food processing. 5% of the sampled HH wants training on agro-processing and food processing. 3% of the sampled HH expressed their interest in receiving training on only agriculture and another 3% HH wants training on agr0processing only. There are few HHs (3%) who expressed their interest in receiving training on four aspects viz. agriculture, agro-processing, food processing and livestock (Figure 88).



Figure 88. Percent of sampled HH interested in receiving training on various aspects

5.0. Recommendations

In view to the major findings in different villages of two districts, few recommendations are made. The villages are classified as old villages where DRCSC's intervention was carried out in last five years and new villages where interventions will be made for first time by DRCSC as proposed in Bankura district.

In Purulia district the villages in the study area are classified as old villages (Group I) where DRCSC's intervention was carried before five years back, old villages (Group II) where DRCSC's intervention was carried out in last five years and new villages where interventions will be made for first time by DRCSC as proposed.

The details of the recommendations are appended below in Table 7.

Table 7. Rec	ommendation i	or the study area	
Village	Village	Gram	Recommendations
Group	Name	Panchayat	
Old villages, Chhatna Block, Bankura District	Ghosergram Hansapahari Shaurabakra Hausibad Jamthol Jirra Kelai Joynagar Kendua Saluni	Ghosergram Jhunjhka	mostly drought prone areas, certain soil and water conservation measures should be carried out as an entry point activities. From the baseline study it was also revealed that although irrigation sources are made available to these villages and few of the activities related to soil and water conservation were carried out but still water scarcity for irrigation as well as drinking water scarcity prevails in the area. The water availability in most
Old	Kashidih	Agardi	of the cases was found to be 3 to less than 4
Old villages (Group I)	Kashidih Mirgipahari Seja Lara Kari Ranjandih	Agardi Sonathali Rangamati Ranjandi	of the cases was found to be 3 to less than 4 months. Thus more intensification of the activities to raise the soil and water conservation in the area is required. Integrated approach of ecosystem based plantation to enhance the watershed area is required. Restoration of degraded or erosion prone areas are required. Moreover, few of the places may act as a model for other villages and also for other places that are facing same challenges in their area. To cope up with the climate change issues and natural disasters like drought certain strategies should be adopted that may include capacity building and awareness generation; establishment of seed and grain bank that can be utilized during and after the occurrences of any disaster or natural hazard. However, from the study it was also revealed that food security is not ensured for many of the households although different farming techniques are implemented in the area. Grain bank is observed at only two village viz. Saurabakra and Kendua. The numbers can be increased to meet the targeted population during the crisis. Baseline study depicts 68% HH suffers from food scarcity. Thus seed banks and grain
			Apart from the grain and seed banks, intervention on agricultural practices and techniques, introduction of ecological farming and giving emphasis on nutrition garden is highly crucial to ensure the food scarcity prevalence. As few interventions were made in these villages, but due to COVID 19 pandemic much of the target beneficiaries lost their job and are now solely depends upon agricultural activities. Their source of income has reduced having greater impact on their income. Moreover, the second wave of

T 11 **T**

			covid 19 has made their situation more miserable as they were jobless, increased cost of agricultural inputs were noticed, more over they had to arrange fodder for their livestock.
			Most importantly, the interventions are still continuing in many of the villages as during COVID 19 pandemic most of the activities were restricted. However, the training and skill development programmes were hampered most thus emphasis should be given in capacity building, skill development and group formation and its strengthening.
			Mutual Co-operation Group should be established and strengthening of the groups should be done through series of training programmes related to book keeping, savings & accounts etc.
			Experience and knowledge should be shared through a common forum and convention of farmers can be introduced so that networking process through different stakeholder can be attained. Exposure/internal visits to the demonstration plots and models can be initiated for better understanding and sharing of farmers experiences.
			The significant days related to environment and its conservation should be observed through mass awareness and campaigns.
New villages, Chhatna Block, Bankura District	Gadapathar Haribandi Mirga	Chhatna II	As mentioned the area to be dry and drought prone, entry pint activities such as soil and water conservation measures are required in these villages. Compared to the old villages, new villages sources of water for irrigation is limited to pond, canal and jor which proves to be one of the constraints to meet the water requirement.
New villages, Kashipur Block, Purulia District	Baterdih Rangunigora Palsara Paharpur Mehi	Gourandih Barrah Hadaldah- Uparah	Micro-irrigation facilities are required to implement in these villages. The micro-irrigation facilities may include, rain water harvesting structure, construction of ditches and or pond etc. watershed development is required in these region along with the afforestation activities. The soil and water conservation techniques viz. construction of staggered trenches, 30-40 model, selection of plant species for afforestation activities etc. has to be properly investigated before its implementation to a particular area and accordingly the most suitable interventions should be made.
			before the implementation of such activities,

capacity building programmes should be initiated by the implementing agencies to capacitate the beneficiaries on watershed development, its significance and benefits.

Training programmes can help in enhancing the skills and knowledge of the local people in water conservation.

As mentioned for old villages, establishment of seed and grain banks are required for same reason i.e. To cope up with disaster situation, and reduce food scarcity. Baseline study depicts 76% HH suffering from food scarcity. Thus multi-level cropping system and integrated farming approach has become one of the prerequisite in the proposed area. These can be attained through introduction of Integrated Farming System (IFS), establishing nutrition garden, promotion of ecological farming, livestock rearing and their management. Apart from these interventions, support could be made in fisheries, livestock and capacity building on various aspects of ecological farming should be introduced.

Unlike the old villages' beneficiaries, COVID-19 pandemic has caused serious threat to the life and livelihood of these targeted communities as due to periodic lockdown transport is restricted and the wage earners could not have any scope of work. For the small and marginal farmers, availability and access to seeds and other inputs has become a prime concern. COVID-19 induced disruptions have led to an increase in price of agricultural inputs making these beyond the reach of the smallholder and marginal farmer which ominously foretell the march of hunger and death in future.

Target groups do not have knowledge on how to deal with climate-related risks rather follows negative strategies and their traditional agricultural practices are replaced by modern ones which harm the nature. Thus bringing a change in their practice will be a huge challenge unless regular awareness, hands on demonstration and quality results out of the demonstration should be undertaken.

Weather prediction and crop advisory should be developed to disseminate weather information to the farmers so that decision making process eases

Mutual Co-operation Group should be established and strengthening of the groups should be done

			through series of training programmes related to book keeping, savings & accounts etc.
			Experience and knowledge should be shared through a common forum and convention of farmers can be introduced so that networking process through different stakeholder can be attained. As mentioned above also exposure visits should be conducted.
			The significant days related to environment and its conservation should be observed through mass awareness and campaigns.
Old villages (Group II) Kashipur Block, Purulia District	Kathgora Saherbera	Hadaldah- Uparah Agardi	These areas are not devoid of drought and dry zones. As mentioned these areas are considered as old villages where few interventions such as establishment of water harvesting structures like ditches, dugwell, farm pond and social forestry was taken but it was made long back and due to withdrawal of project activities and emergence of COVID 19 pandemic the situation was worsen. Scarcity of water and food prevails in these areas thus the interventions and activities related to the ecological farming, IFS, Livestock management, fisheries etc should be carried out and emphasis should be given on capacity building, formation of Mutual Co-operation Group and strengthening of the groups. Experience and knowledge sharing through local meetings, seminars, and workshops should be done so that networking process can be attained. As mentioned for other groups also the exposure visits should be conducted. The significant days related to environment and its conservation should be observed through mass awareness and campaigns

6.0. Conclusions

In conclusion, the baseline study demonstrates that in the targeted population areas has a genuine need for support for several interventions as mentioned under the recommendation section as well as portrayed in project activities to increase their coping ability towards climate change impacts that are prevailing in the study area. Moreover, due to such interventions, SDG 1, 2 and 3 goals can be attained through enhancement of per capita income, ensuring food security and increasing well-being of the target population.

It is also noticed in the project area that due to several environmental factors and due to COVID 19 pandemic many of the people were not able to earn their livelihood through wages. Even though few of the target beneficiaries in old villages managed to overcome the situation but several interventions

were restricted during lockdown phases and unless they are supported further they would return back to their former status. At present state they make lesser profit- in growing vegetables and other crops. The amount of production does not suffice throughout the year, and food scarcity prevails in the area.

Respondents' responses also showed that they are interested in the groups providing a wide range of services. Community members and farmers were generally positive to learn about sustainable agriculture that would enhance their livelihood with betterment of soil and water in the area and conserve the natural resource base of the study area.

Annexure I

Photo plates







During baseline study



The study area



Forest at Bankura



Crop field at Purulia

State রাজ্যর নামঃ APPI Baseline

Annexure II Household Survey Questionnaire

APPI Baseline

West Bengal District জেলার নামঃ Bankura Purulia **Blocks of Bankura** নিচে উল্লিখিত তালিকা থেকে বাঁকুড়া জেলার ব্লক বাছুনঃ Chhatna **Blocks of Purulia** নিচে উল্লিখিত তালিকা থেকে পুরুলিয়া জেলার ব্লক বাছুনঃ (Kashipur Gram Panchayat of Chhatna Block নিচে উল্লিখিত তালিকা থেকে ছাতনা ব্লকের গ্রাম পঞ্চায়েত বাছুনঃ Ghosergram Jhujhka Chhatna II **Gram Panchayat of Kashipur Block** নিচে উল্লিখিত তালিকা থেকে কাশীপুর ব্লকের গ্রাম পঞ্চায়েত বাছুনঃ Agardi Hadalda Uparah Rangamati Ranjandi Barrah Sonathali Gourandih Villages of Jhujhka Gram Panchayat নিচে উল্লিখিত তালিকা থেকে ঝুঝকা গ্রাম পঞ্চায়েতের গ্রামটি বাছুনঃ Joynagar Kendua Hausibad Jirra kelai Saluni Jamthol

Villages of Ghosergram Gram Panchayat

নিচে উল্লিখিত তালিকা থেকে ঘোষেরগ্রাম গ্রাম পঞ্চায়েতের গ্রামটি বাছুনঃ

- Ghosergram
 - Hansapahari Saurabakra

Villages of Chhatna II Gram Panchayat নিচে উল্লিখিত তালিকা থেকে ছাতনা ২ গ্রাম পঞ্চায়েতের গ্রামটি বাছুনঃ নিচে উল্লিখিত তালিকা থেকে ছাতনা ২ গ্রাম পঞ্চায়েতের গ্রামটি বাছুনঃ

	Mirga
	Haribandhi
	Gadapathar
Village নিচে উঞ্চি	s of Agardihi Gram Panchayat দ্বিখিত তালিকা থেকে আগরডি গ্রাম পঞ্চায়েতের গ্রামটি বাছুনঃ
	Mirgipahari
	Saherbera
	Kashidih
	Seja
	Vatin

Villages of Hadalda Uparrah Gram Panchayat

নিচে উল্লিখিত তালিকা থেকে হডলদা-উপরদা গ্রাম পঞ্চায়েতের গ্রামটি বাছুনঃ

Kathgora
0

Villages of Rangamati -Ranjandi Gram Panchayat নিচে উল্লিখিত তালিকা থেকে রাঙ্গামাটি-রঞ্জনডি গ্রাম পঞ্চায়েতের গ্রামটি বাছুনঃ



Villages of Barrah Gram Panchayat

ানচে ডাল্লাখত ত্যালকা থেকে বরড়াগ্রাম পঞ্চায়েতের গ্রামাচ বাছুন	0 0
নিচে উল্লিখিত তালিকা থেকে বরড়াগ্রাম পঞ্চায়েতের গ্রামটি বাছুন	7 <u>°</u>



Palsara

Villages of Gourandih Gram Panchayat

নিচে উল্লিখিত তালিকা থেকে গৌরাঙ্গডি গ্রাম পঞ্চায়েতের গ্রামটি বাছুনঃ

নিচে উল্লিখিত তালিকা থেকে গৌরাঙ্গডি গ্রাম পঞ্চায়েতের গ্রামটি বাছুনঃ



Bastardih

Villages of Sonathali Gram Panchayat

নিচে উল্লিখিত তালিকা থেকে সোনাথলি গ্রাম পঞ্চায়েতের গ্রামটি বাছুনঃ	
নিচে উল্লিখিত তালিকা থেকে সোনাথলি গ্রাম পঞ্চায়েতের গ্রামটি বাছুনঃ	

Lari			
Lara			

Name of the Beneficiary:

উপভোক্তার নামঃ

Gender			
লিঙ্গঃ			
Male			
Female			
Others			
Father's/Guardian/Husband N পিতা/স্বামী/অভিভাবকের নামঃ	lame:		

Caste

জাতিঃ

\bigcirc	Schedule	Tribes	(ST)
	Schedule	111000	()))

- Schedule Caste (SC)
-) Other Backward Caste (OBC)
-) Minority
- 🔵 General
-) Others

Women-headed Household

পরিবারের প্রধান কি মহিলা (হ্যাঁ/না)?

\bigcirc	Yes	
\bigcirc	No	

Do you have any mobile no (Yes/No): পরিবারের সদস্যর মোবাইল নং আছে(হ্যাঁ/না)?

\bigcirc	Yes	
\bigcirc	No	
ontact No:		

Contact No: পরিবারের সদস্যর মোবাইল নং

Do you have any Job Card (Yes/No):

পরিবারের কোনো জব কার্ড আছে কিনা (হ্যাঁ/না)?

) Yes

) No

Job card Number:

জব কার্ডটি নিজের চোখে দেখে পাশে দেগুয়া ফরম্যাট অনুযায়ী লিখুন (Format: XX-XX-XXXXX)

Do you have Aadhaar card ภาพลาศ ภาษาศ ภาษา ภาษา ภาษา ภาษา ภาษา ภาษา ภ	
আপনার আধার কার্ড আছে কিনা ? আপনার আধার কার্ড আছে কিনা ?	
Yes	
No	
Aadhaar card No.	
আধার কার্ডের নম্বরঃ	
আধার কার্ডের নম্বর	

Educational Qualification:

উত্তরদাতার শিক্ষাগত যোগ্যতাঃ

Illiterate
 Up to 4 standard
 Up to 8 standard

Up to 10 standard

O Up to 12 standard

🔵 Graduate

) Above Graduate

No of Illiterate Person in the family:

পরিবারে কতজন নিরক্ষর আছেন?

0

No of members up to 4 standard in the family: : পরিবারে কতজন ৪র্থ শ্রেনী পর্যন্ত পাশ করেছেন?

0

No of members up to 8 standard in the family:: পরিবারে কতজন ৮ম শ্রেনী পর্যন্ত পাশ করেছেন?

0

No of members up to 10 standard in the family:: পরিবারে কতজন ১০ম শ্রেনী পর্যন্ত পাশ করেছেন?

0

No of members up to 12 standard in the family:: পরিবারে কতজন ১২তম শ্রেনী পর্যন্ত পাশ করেছেন?

0

No of graduate members in the family: : পরিবারে কতজন স্নাতক পর্যন্ত পাশ করেছেন?

0

No of members above Graduate in the family:: পরিবারে কতজন স্নাতকোত্তরের উপর পর্যন্ত পাশ করেছেন?

0

Infant Family Members - Male (Less than 5 years): পরিবারে কতজন ৫ বছরের নিচে পর্যন্ত ছেলে শিশু বা বাচ্চা আছে?

0

Infant Family Members - Female (Less than 5 years): পরিবারে কতজন ৫ বছরের নিচে পর্যন্ত মেয়ে শিশু বা বাচ্চা আছে?

0

Youth Family Members - Male (5 years - 18 Years): পরিবারে কতজন ৫ বছর থেকে ১৮ বছর পর্যন্ত ছেলেরা আছে?

0

Youth Family Members - Female (5 years - 18 Years): পরিবারে কতজন ৫ বছর থেকে ১৮ বছর পর্যন্ত মেয়েরা আছে?

0

Adult Family Members - Male (18 Years - 49 Years): পরিবারে কতজন ১৮ বছরের ওপর থেকে ৪৯ বছর পর্যন্ত ছেলেরা আছে?

0

Adult Family Members - Female (18 Years - 49 Years): পরিবারে কতজন ১৮ বছরের ওপর থেকে ৪৯ বছর পর্যন্ত মেয়েরা আছে?

0

Old Family Members - Male (Above 49 Years) পরিবারের ৪৯ বছরের উপরের পুরুষ সদস্য সংখ্যাঃ

গারবারের ৪৯ বন্থরের ও শরের 'পুরুষ সদস) সংব)

0

Old Family Members - Female (above 49 Years) পরিবারের ৪৯ বছরের উপরের মহিলা সদস্য সংখ্যাঃ

0

Total members of the family=0 মোট পরিবারের সদস্যঃ

No of Pregnant/Breast Feeding Women in your Family: পরিবারে গর্ভবতী/বুকের দুধ খাওয়ানো মহিলার সংখ্যাঃ

0

No of Handicapped/Spastic person in your Family: পরিবারের প্রতিবন্ধী সদস্য সংখ্যাঃ

0

No of Returnee person in your Family: পরিবারে বাইরে থেকে ফিরে আসা সদস্য সংখ্যাঃ

0

Total Household Income (INR/Yearly): পরিবারের মোট আয় (টাকা/বছর)

- Less than 15000
-) 15000 to Less than 25000
- 25000 to less than 35000
- 🔵 35000 to less than 45000
- 🔵 45000 & above

Percentage of livelihood mix:

কোন কোন জিবিকা থেকে উপাৰ্জন হয়ঃ

	Agriculture
	Animal Husbandry
	Fishery
	Business
	MGNREGS
	Service
	Seasonal Migration
	Migrant Labour
	Collection
	Government Schemes
Percen চাষ থেৰে	tage of livelihood mix from agriculture চ কত উপাৰ্জন হয়ঃ

0

Percentage of livelihood mix from animal husbandry পশুপালন থেকে কত উপার্জন হয়ঃ

0

Percentage of livelihood mix from fishery মাছ চাম থেকে কত উপার্জন হয়ঃ

0

Percentage of livelihood mix from business ব্যবসা থেকে কত উপার্জন হয়ঃ

0

Percentage of livelihood mix from MGNREGS MGNREGS থেকে কত উপার্জন হয়ঃ

0

Percentage of livelihood mix from service চাকুরি থেকে কত উপার্জন হয়ঃ

0

Percentage of livelihood mix from seasonal migration সিজনাল মাইগ্রেসন থেকে কত উপার্জন হয়ঃ

0

Percentage of livelihood mix from migrant labour পরিজাই শ্রমিকরা কত উপার্জন করেনঃ

0

Percentage of livelihood mix from collection সংগ্রহ করে কিরকম উপার্জন হয়ঃ

0

Percentage of livelihood mix from government schemes সরকারি পরিকল্পনা দ্বারা কত উপার্জন হয়ঃ

0

Total Percentage= 0 বিভিন্ন ধরনের জিবিকা থেকে আয়ের সতকরা হিসেবঃ

Have you taken loan in last 3 years? আপনি কি গত ৩ বছরে ঋণ নিয়েছেন?

\bigcirc	Yes

) No

From where do you take loan? ঋণ কোথা থেকে নেন?

SHG
Bank
Cooperative
Neighbours

For what purpose have you taken loan from SHG? স্বনির্ভর দল থেকে ঋণ কোন কাজের জন্য নেওয়া হয়?

Agriculture

Livestock
Fishery
Medical
Marriage

For what purpose have you taken loan from Bank? ব্যাঙ্ক থেকে ঋণ কোন কাজের জন্য নেওয়া হয়?

Agriculture
Livestock
Fishery
Medical
Marriage

For what purpose have you taken loan from Cooperative? সমবায় থেকে ঋণ কোন কাজের জন্য নেওয়া হয়?

Agriculture
Livestock
Fishery
Medical
Marriage

For what purpose have you taken loan from Neighbours? প্রতিবেশিদের থেকে ঋণ কোন কাজের জন্য নেওয়া হয়?

Agriculture
Livestock
Fishery
Medical
Marriage

Amount of loan taken from SHG for Agriculture স্বনির্ভর দল থেকে কৃষি কাজের জন্য কত টাকা ঋণ নেনঃ

- Less than 5 thousand
- 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
- 25 thousand and above

Amount of loan taken from SHG for Livestock স্বনির্ভর দল থেকে পশুপালনের জন্য কত টাকা ঋণ নেনঃ

- Less than 5 thousand
- 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
- 25 thousand and above

Amount of loan taken from SHG for Fishery স্বনির্ভর দল থেকে মাছ চামের জন্য কত টাকা ঋণ নেনঃ

- Less than 5 thousand
- 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
- 25 thousand and above

Amount of loan taken from SHG for Medical স্বনির্ভর দল থেকে চিকিৎসার জন্য কত টাকা ঋণ নেনঃ

- Less than 5 thousand
- 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
- 25 thousand and above

Amount of loan taken from SHG for Marriage স্বনির্ভর দল থেকে বিবাহের জন্য কত টাকা ঋণ নেনঃ

- Less than 5 thousand
- 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
- 25 thousand and above

Amount of loan taken from Bank for Agriculture ব্যাঙ্ক থেকে কৃষি কাজের জন্য কত টাকা ঋণ নেনঃ

- Less than 5 thousand
- 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
- 25 thousand and above

Amount of loan taken from Bank for Livestock ব্যাঙ্ক থেকে পশুপালনের জন্য কত টাকা ঋণ নেনঃ

- Less than 5 thousand
- 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
- 25 thousand and above

Amount of loan taken from Bank for Fishery ব্যাঙ্ক থেকে মাছ চাম্বের জন্য কত টাকা ঋণ নেনঃ

- Less than 5 thousand
- 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
 - 25 thousand and above

Amount of loan taken from Bank for Medical ব্যাঙ্ক থেকে চিকিৎসার জন্য কত টাকা ঋণ নেনঃ

- Less than 5 thousand
 - 5 thousand to Less than 10 thousand
 - 10 thousand to Less than 25 thousand
 - 25 thousand and above

Amount of loan taken from Bank for Marriage ব্যাঙ্ক থেকে বিবাহের জন্য কত টাকা ঋণ নেনঃ

Less than 5 thousand

- - 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
- 25 thousand and above

Amount of loan taken from Cooperative for Agriculture সমবায় থেকে কৃষি কাজের জন্য কত টাকা ঋণ নেনঃ

- Less than 5 thousand
- 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
- 25 thousand and above

Amount of loan taken from Cooperative for Livestock সমবায় থেকে পশুপালনের জন্য কত টাকা ঋণ নেনঃ

- Less than 5 thousand
- 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
- 25 thousand and above

Amount of loan taken from Cooperative for Fishery সমবায় থেকে মাছ চাষের জন্য কত টাকা ঋণ নেনঃ

- Less than 5 thousand
- 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
- 25 thousand and above

Amount of loan taken from Cooperative for Medical সমবায় থেকে চিকিৎসার জন্য কত টাকা ঋণ নেনঃ

- Less than 5 thousand
- 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
 - 25 thousand and above

Amount of loan taken from Cooperative for Marriag	;e
সমবায় থেকে বিবাহের জন্য কত টাকা ঋণ নেনঃ	

- Less than 5 thousand
- 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
- 25 thousand and above

Amount of loan taken from Neighbours for Agriculture প্রতিবেশীদের থেকে কৃষি কাজের জন্য কত টাকা ঋণ নেনঃ

- Less than 5 thousand
- 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
- 25 thousand and above

Amount of loan taken from Neighbours for Livestock প্রতিবেশীদের থেকে পশুপালনের জন্য কত টাকা ঋণ নেনঃ

- Less than 5 thousand
- 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
- 25 thousand and above

Amount of loan taken from Neighbours for Fishery প্রতিবেশীদের থেকে মাছ চাম্বের জন্য কত টাকা ঋণ নেনঃ

- Less than 5 thousand
- 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
- 25 thousand and above

Amount of loan taken from Neighbours for Medical প্রতিবেশীদের থেকে চিকিৎসার জন্য কত টাকা ঋণ নেনঃ

- Less than 5 thousand
- 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
- 25 thousand and above

Amount of loan taken from Neighbours for Marriage প্রতিবেশীদের থেকে বিবাহের জন্য কত টাকা ঋণ নেনঃ

- Less than 5 thousand
- 5 thousand to Less than 10 thousand
- 10 thousand to Less than 25 thousand
 - 25 thousand and above

Do you have Ration Card (Yes/No):

পরিবারের রেশন কার্ড আছে কিনা (হ্যাঁ/না)?

\bigcirc	Yes
\bigcirc	No

) No

Types of Ration Card:

পরিবারের রেশন কার্ডের ধরণ নিচের উল্লিখিত তালিকা থেকে নির্দিষ্ট করুনঃ



How many family members do not have ration cards: পরিবারের কতজনের রেশন কার্ড নেই?

0

Type of Land Owned

আপনার কি ধরনের জমি আছে?

Land for Kitchen/Nutrition Garden (পুষ্টি বাগানের জমি)
Field Land (মাঠের জমি)
None

Area of Kitchen/Nutrition Garden (Decimal): নিউট্রিশন/কিচেন গার্ডেনের জায়গাঃ

- Below 2 Decimal
- 2 Decimal below 3 Decimal
- 3 Decimal below 4 Decimal
- 4 Decimal below 5 Decimal
- 5 Decimal & Above
Vegetables grown in the Kitchen/Nutrition Garden: নিউট্রিশন/কিচেন গার্ডেনে কি কি সবজি চাষ হয়ঃ

	Bottle Gourd (লাউ)
	Ridge Gourd (ঝিঙে)
	Snake Gourd (চিচিঙে)
	Pumpkin (কুমড়ো)
	Tomato
	Okra (ড্যাঁড়শ)
	Bitter Gourd (উচ্ছে)
	Brinjal (বেগুন)
	Cucumber (🍽 🎢
	None

Leafy Vegetables grown in the Kitchen/Nutrition Garden: নিউট্রিশন/কিচেন গার্ডেনে শাক জাতীয় কি কি সবজি চাম হয়ঃ

	Coriander Leaves (ধনে পাতা)
	Pudina Leaves
	Green Amaranth (নটে শাক)
	Red Amaranth (লাল শাক)
	Spinach (পালং শাক)
	Malabar Spinach (পুঁই শাক)
	Fenugreek Leaves (মেথি শাক)
	Jute (পার্ট শাক)
	None

Root crops grown in the Kitchen/Nutrition Garden: নিউট্রিশন/কিচেন গার্ডেনে মূল জাতীয় কি কি সবজি চাষ হয়ঃ

Carrot (গাঁজর)
Radish (মুলো)
Beet (বীট)
None

Tuber crops grown in the Kitchen/Nutrition Garden: নিউট্রিশন/কিচেন গার্ডেনে কন্দ জাতীয় কি কি সবজি চাষ হয়ঃ

Potato
Sweet Potato (রাঙ্গালু)
Elephant Foot Yam (ওল)
Taro (কচু)
Cassava (কাসাভা)
None

Leguminous Crops grown in the Kitchen/Nutrition Garden: নিউট্রিশন/কিচেন গার্ডেনে শুঁটি জাতীয় কি কি সবজি চাষ হয়ঃ

Beans
Flat Beans (সিম)
Soyabean
Pea (মটরশুঁটি)
Cowpea (বরবটি)
Pigeon Pea (অরহড়)
Groundnut (চিনাবাদাম)
Kidney Beans (রাজমা)
None

Fruits grown in the Kitchen/Nutrition Garden: নিউট্রিশন/কিচেন গার্ডেনে কি কি ফল চাম হয়ঃ



Spices grown in the Kitchen/Nutrition Garden: নিউট্রিশন/কিচেন গার্ডেনে কি কি মশলা চাষ হয়ঃ

Ginger (আদা)
Turmeric (হলুদ)
Onion (পোঁয়াজ)
Garlic (রসুন)
Coriander (ধনে)
Cumin (জিরা)
Fenugreek (মেথি)
Curry Leaves
Chilli (লঙ্কা)
None

Oilseeds grown in the Kitchen/Nutrition Garden: নিউট্রিশন/কিচেন গার্ডেনে কি কি তিলবীজ চাষ হয়ঃ

Mustard
Sesame (তিল)
Flax (তিসি)
Niger
Sunflower (সূর্যমুখী)
Kusum Seeds
None

Fodder Crops grown in the Kitchen/Nutrition Garden: নিউট্রিশন/কিচেন গার্ডেনে কি কি পশুখাদ্য চাষ হয়ঃ

Napier
Subabool
Mulberry (ହୁଁ୭)
Gliricidia
Butterfly Pea (অপরাজিতা)
Mountain Ebony (কাঞ্চন)
Madar (মাদার)
None

Sources of Irrigation for Kitchen/Nutrition Garden: নিউট্রিশন/কিচেন গার্ডেনে জলসেচ কোথা থেকে করেনঃ

Wells
Rainwater Harvesting Tank
None

Types of Agricultural Land:

চাষের জমির ধরন (১ এর বেশী সনাক্ত করতে পারবেন)

- Upland/Tar
- Medium Upland/Baid
- Medium Low Land/Kanali
- Lowland/Bahal/Sole

Area of Upland/Tar:

টাঁড়/উপরের জমির পরিমানঃ

- Less than 1 Bigha
- 1 Bigha Less than 2 Bigha
- 2 Bigha Less than 3 Bigha
- 3 Bigha Less than 4 Bigha
- 4 Bigha & Above

Area of Medium Upland/Baid: বাইদ জামির পরিমানঃ

- Less than 1 Bigha
- 1 Bigha Less than 2 Bigha
- 2 Bigha Less than 3 Bigha
- 3 Bigha Less than 4 Bigha
- 4 Bigha & Above

Area of Medium Low Land/Kanali: সোল বা মাঝারী নিচর জমির পরিমানঃ

- Less than 1 Bigha
- 1 Bigha Less than 2 Bigha
- 2 Bigha Less than 3 Bigha
- 3 Bigha Less than 4 Bigha
- 4 Bigha & Above

Area of Low Land/Sole/Bahal: কানালী বা একদম নিচ জমির পরিমানঃ

- Less than 1 Bigha
- 1 Bigha Less than 2 Bigha
- 2 Bigha Less than 3 Bigha
- 3 Bigha Less than 4 Bigha
 - 4 Bigha & Above

Cereals Grown in Upland/Tar Land:

টাঁড় জমিতে কি কি দানাশষ্য চাষ হয়ঃ

Paddy (ধান) Wheat (গম) Maize (ভুট্টা) Bajra (বাজরা) None

Pulses grown in Upland/Tar Land: টাঁড় জমিতে কি কি ডাল জাতীয় ফম্বল চাম্ব হয়ঃ

- Red Lentil (মুগ) Green Gram (মুসুর) Pigeon Pea (অড়হর)
 - Grass Pea (খেসারি)
 - Bengal Gram (ছোলা)
 - None

Vegetables grown in Upland/Tar Land :

টাঁড় জমিতে কি কি সবজি চাষ হয়ঃ

- Bottle Gourd (লাউ)
- Ridge Gourd (ঝিঙে)
- Snake Gourd (চিচিঙে)
- Pumpkin (কুমড়ো)
- Potato
 - Sweet Potato (রাঙ্গালু)
- Tomato
- Okra (টেঁড়স)
- Bitter Gourd (উচ্ছে)
- Brinjal

Elephant Foot Yam (ওল)

- Taro (কচু)
- Casava (কাসাভা)
- Carrot
- Radish
- Beet
- Beans
- Flat Beans (সিম)
- Pigeon Pea (অড়হর)
- Cucumber (শନ୍ମୀ)
 - None

Spices grown in Upland/Tar Land: টাঁড় জমিতে কি কি মশলা চাষ হয়ঃ

- Ginger (আদা) Turmeric (হলুদ)
- Onion (পেঁয়াজ)
- Garlic (রসুন)
- Coriander (ধনে)
- Fenugreek (মেথি)
- Cumin (জিরে)
- Chilli (লক্ষা)
- None

Oilseeds grown in Upland/Tar Land : টাঁড় জমিতে কি কি তৈলবীজ চাষ হয়ঃ



Fodder Crops grown in Upland/Tar Land :

টাঁড় জমিতে কি কি পশুখাদ্য চাষ হয়ঃ



Cereals Grown in Medium Upland/Baidh Land: বাইধ জমিতে কি কি দানাশষ্য চাষ হয়ঃ



Pulses grown in Medium Upland/Baidh Land: বাইধ জমিতে কি কি ডাল জাতীয় ফষল চাষ হয়ঃ

Red Lentil (মুগ)
Green Gram (মুসুর)
Pigeon Pea (অড়হর)
Grass Pea (খেসারি)
Bengal Gram (ছোলা)

None

Vegetables grown in Medium Upland/Baidh Land: বাইধ জমিতে কি কি সবজি চাষ হয়ঃ

Bottle Gourd (লাউ) Ridge Gourd (ঝিঙে) Snake Gourd (চিচিঙে) Pumpkin (কুমড়ো) Potato Sweet Potato (রাঙ্গালু) Tomato Okra (টেঁড়স) Bitter Gourd (উচ্ছে) Brinjal Elephant Foot Yam (ওল) Taro (কচু) Casava (কাসাভা) Carrot Radish Beet Beans Flat Beans (সিম) Pigeon Pea (অড়হর) Cucumber (🏹 🕅) None

Spices grown in Medium Upland/Baidh Land:



- Ginger (আদা) Turmeric (হলুদ)
- Onion (পেঁয়াজ)
- Garlic (রসুন)
- Coriander (ধনে)
- Fenugreek (মেথি)
- Cumin (জিরে)
- Chilli (লঙ্কা)
 - None

Oilseeds grown in Medium Upland/Baidh Land: বাইধ জমিতে কি কি তৈলবীজ চাষ হয়ঃ



Fodder Crops grown in Medium Upland/Baidh Land: বাইধ জমিতে কি কি পশুখাদ্য চাষ হয়ঃ

Napier
Subabool
Mulberry (তুঁত)
Gliricidia
Butterfly Pea (অপরাজিতা)
Mountain Ebony (কাঞ্চন)
Madar (মাদার)
None

Cereals Grown in Medium Low Land/Kanali: কানালি জমিতে কি কি দানাশষ্য চাষ হয়ঃ



Pulses grown in Medium Low Land/Kanali: কানালি জমিতে কি কি ডাল জাতীয় ফষল চাষ হয়ঃ



Vegetables grown in Medium Low Land/Kanali: কানালি জমিতে কি কি সবজি চাষ হয়ঃ

কানানি জার্মতে কি কি সবজি চাম হয়: Bottle Gourd (লাউ) Ridge Gourd (ঝিঙে) Snake Gourd (ডিচিঙে) Pumpkin (কুমড্যো) Potato Sweet Potato (রাঙ্গালু) Tomato Okra (টেড্স) Bitter Gourd (উচ্ছে) Brinjal Elephant Foot Yam (ওল) Taro (কচু) Casava (কাসাভা) Carrot Radish

- Spices grown in Medium Low Land/Kanali: কানালি জমিতে কি কি মশলা চাষ হয়ঃ
- Ginger (আদা) Turmeric (হলুদ) Onion (পেঁয়াজ) Garlic (রসুন) Coriander (ধনে) Fenugreek (মেথি) Cumin (জিরে)

Beet

Beans

None

Flat Beans (সিম)

Cucumber (🎢)

Pigeon Pea (অড়হর)

None

Oilseeds grown in Medium Low Land/Kanali: কানালি জমিতে কি কি তৈলবীজ চাষ হয়ঃ

Mustard
Sesame (তিল)
Flax (তিসি)
Niger
Sunflower (সূর্যমুখী)
Kusum Seeds
None

Fodder Crops grown in Medium Low Land/Kanali: কানালি জমিতে কি কি পশুখাদ্য চাষ হয়ঃ



Cereals Grown in Low Land/Sole/Bahal: বহাল জমিতে কি কি দানাশষ্য চাষ হয়ঃ

Paddy (ধান) Wheat (গম) Maize (ভুট্টা) Bajra (বাজেরা) None Pulses grown in Low Land/Sole/Bahal: বহাল জমিতে কি কি ডাল জাতীয় ফম্বল চাম্ব হয়ঃ

Red Lentil (মুগ)

- Green Gram (মুসুর)
- Pigeon Pea (অড়হর)
- Grass Pea (খেসারি)
- Bengal Gram (ছেলা)
- None

Vegetables grown in Low Land/Sole/Bahal: বহাল জমিতে কি কি সবজি চাষ হয়ঃ

Bottle Gourd (লাউ) Ridge Gourd (ঝিঙে) Snake Gourd (চিচিঙে) Pumpkin (কুমড়ো) Potato Sweet Potato (রাঙ্গালু) Tomato Okra (টেঁড়স) Bitter Gourd (উচ্ছে) Brinjal Elephant Foot Yam (ওল) Taro (কচু) Casava (কাসাভা) Carrot Radish Beet Beans Flat Beans (সিম) Pigeon Pea (অড়হর) Cucumber (🏹) None

Spices grown in Low Land/Sole/Bahal: বহাল জমিতে কি কি মশলা চাষ হয়ঃ



Oilseeds grown in Low Land/Sole/Bahali: বহাল জমিতে কি কি তৈলবীজ চাষ হয়ঃ



Fodder Crops grown in Low Land/Sole/Bahal: বহাল জমিতে কি কি পশুখাদ্য চাষ হয়ঃ

Napier
Subabool
Mulberry (ັ້ອູ້ອ)
Gliricidia
Butterfly Pea (অপরাজিতা)
Mountain Ebony (কাঞ্চন)
Madar (মাদার)
None

Sources of Irrigation for field:





For how many days there is water in Ditch? হাপাতে কতদিন জল থাকে?

- Less than 1 month
- 1 month to Less than 2 months
- 2 months to Less than 3 months
- 3 months to Less than 4 months
- 4 months To Less than 6 months
- More than 6 months
 - Perennial

For how many days there is water in Dugwell? কয়োতে কতদিন জল থাকে?

- Less than 1 month
- 1 month to Less than 2 months
- 2 months to Less than 3 months
- 3 months to Less than 4 months
- 4 months to Less than 6 months
- More than 6 months
- Perennial

For how many days there is water in Pond? পুকুরে কতদিন জল থাকে?

- Less than 1 month
- 1 month to Less than 2 months
- 2 months to Less than 3 months
- 3 months to Less than 4 months
- 4 months to Less than 6 months
- More than 6 months
- Perennial

For how many days there is water in Canal? খালে কতদিন জল থাকে?

- Less than 1 month
- 1 month to Less than 2 months
- 2 months to Less than 3 months
- 3 months to Less than 4 months
- 4 months to Less than 6 months
- More than 6 months
- Perennial

For how many days there is water in Jor? জোডে কতদিন জল থাকে?

- Less than 1 month
 - 1 month to Less than 2 months
- 2 months to Less than 3 months
- 3 months to Less than 4 months
- 4 months to Less than 6 months
- More than 6 months
- Perennial

For how many days there is water in Stream? স্ট্রিমে কতদিন জল থাকে?

- Less than 1 month
- 1 month to Less than 2 months
- 2 months to Less than 3 months
- 3 months to Less than 4 months
- 4 months to Less than 6 months
- More than 6 months
 - Perennial

Is the	Ditch	water	used	for	farming?
হাপার	জল চার্নে	ষ ব্যবহার	া হয় বি	जेना?	

<1 114 O(*1 0164 4) 4 1 1 4 1 1 *** 11:
Yes
No
ls the water in the Dugwell used for farming? কুয়োর জল চাষে ব্যবহার হয় কিনা?
Yes
No
ls the Pond water used for farming? পুকুরের জল চাষে ব্যবহার হয় কিনা?
Yes
No
ls the Canal water used for farming? খালের জল চাষে ব্যবহার হয় কিনা?
Yes
No
ls the Jor water used for farming? জোড়ের জল চাষে ব্যবহার হয় কিনা?
Yes
No
ls the Stream water used for farming? স্ট্রিমের জল চাষে ব্যবহার হয় কিনা?
Yes
No
ln which season is the Ditch water used for agriculture? কোন সময়ে হাপার জল চাষে ব্যবহার করা হয়?
Summer Season (Zaid Season)
Monsoon Season (Kharif Season)
Winter Season (Rabi Season)
In which season is the water of the Dugwell used for agriculture? কোন সময়ে কুয়োর জল চাষে ব্যবহার করা হয়?
Summer Season (Zaid Season)
Monsoon Season (Kharif Season)
Winter Season (Rabi Season)

In which	season	is the	Pond	water	used	for	agricultu	re?
কোন সময়ে	য পকরের	জল চা	ষ ব্যবং	হার করা হ	হয়?			

Summer Season (Zaid Season)

Monsoon Season (Kharif Season)

Winter Season (Rabi Season)

In which season is the Canal water used for agriculture? কোন সময়ে খালের জল চামে ব্যবহার করা হয়?

Summer Season (Zaid Season)

Monsoon Season (Kharif Season)

Winter Season (Rabi Season)

In which season is the Jor water used for agriculture? কোন সময়ে জোডের জল চাষে ব্যবহার করা হয়?

Summer Season (Zaid Season)

Monsoon Season (Kharif Season)

Winter Season (Rabi Season)

In which season is the Stream water used for agriculture?

কোন সময়ে স্ট্রিমের জল চাষে ব্যবহার করা হয়?

Summer Season (Zaid Season)

Monsoon Season (Kharif Season)

Winter Season (Rabi Season)

In which months do you face irrigation water scarcity? কোন কোন মাসে চাষের জলের অভাব দেখা যায়?

April-May (বৈশাখ - জ্যৈষ্ঠ)

June-July (আষাঢ় - শ্রাবণ)

August-September (ভাদ্র - আশ্বিন)

October-November (কার্তিক - অগ্রহায়ন)

- December-January (পৌষ -মাঘ)
 - February-March (ফাল্গুন চৈত্র)

Sources of Drinking Water:

পানীয় জলের উৎসঃ

Tube Well

Pond

Do you use organic inputs in agriculture? কৃষিকাজে জৈবসার ব্যবহার হয় কিনা?

)Yes

) No

What organic inputs do you use? জৈবসার হিসেবে কি ব্যবহার করেনঃ

- Vermiwash (ভার্মিগুয়াস)
- Vermicompost (কেঁচোসার)
- FYM (গোবরসার)
 - Biogas Slurry (বাইও গ্যাস স্লারি)
- Amrutpani (অমৃতপানি)
 - Liquid Manure (তরলসার)

Source of Vermiwash

ভার্মিওয়াস কোথা থেকে পানঃ



Source of Vermicompost কেঁচোসার কোথা থেকে পানঃ



Source of FYM

গোবর সার কোথা থেকে পানঃ



Source of Biogas Slurry

বাইও গ্যাস স্লারি কোথা থেকে পানঃ

Own
Neighbour
Exchange
Others

Source of Amrutpani

অমৃতপানি কোথা থেকে পানঃ

Own
Neighbour
Exchange
Others

Source of Liquid Manure

তরল সার কোথা থেকে পানঃ

Own
Neighbour
Exchange
Government
Others

Types of livestock:

কত ধরনের প্রাণী আছে (নিচের তালিকা থেকে বাছুন - ১এর বেশী বাছতে পারবেন)



Number of Cows/Bulls/Buffalo: কতগুলি গরু/বলদ/মহিষ আছে?

1 no - Below 3 nos

3 nos - below 5 nos

5 nos - below 10 nos

- 10 nos and above
- 20 nos and above

Number of Goats: কতগুলি ছাগল আছে?

1 no - Below 3 nos

- 3 nos below 5 nos
- 5 nos below 10 nos
- 10 nos and above

Number of Sheep:

কতগুলি ভেড়া আছে?

- 1 no Below 3 nos
- 3 nos below 5 nos
- 5 nos below 10 nos
- 10 nos and above

Number of Pigs:

- কতগুলি শুকর আছে?
 - 1 no Below 3 nos
 - 3 nos below 5 nos
 - 5 nos below 10 nos
 - 10 nos and above

Number of Ducks:

কতগুলি হাঁস আছে?

- 1 no Below 10 nos
- 10 nos below 20 nos
- 20 nos below 30 nos
- 30 nos below 40 nos
- 40 nos below 50 nos
- 50 nos and above

Number of Hen: কতগুলি মুরগী আছে?

- 1 no Below 10 nos
- 10 nos below 20 nos
- 20 nos below 30 nos
- 30 nos below 40 nos
- 40 nos below 50 nos
- 50 nos and above

Do you have any Other Assets: (Yes/No)

উৎপাদনের সঙ্গে যুক্ত অন্য কোন সম্পদ থাকলে "হ্যাঁ" বাছুন, তা না হলে "না" বাছুন

\bigcirc	Yes
\bigcirc	No

Any Other Assets:

উৎপাদনের সঙ্গে যুক্ত সম্পদটির নাম নিচে বাছুন (১-এর বেশী বাছতে পারবেন))

	Pond/Water bodies
	Orchard
	Lease Land
	Social Forestry
	Vested/Patta Land
	Tractor/Power Tiller
	Thresher
	Bullock Cart
	Cycle Van
	Motor Van
	Plough
	Pump Set
	Cycle
	Two Wheeler
	Tubewell
	Dugwell
	Others (Manually Specify)
Diago	montion other productive accets (Maximum 1 no)

Please mention other productive assets (Maximum - 1 no): উৎ পাদনের সঙ্গে যুক্ত সম্পদটির নাম নিচে লিখুন (কেবলমাত্র ১ টি উল্লেখ করবেন)

Main Occupation

প্রধান জীবিকা (কেবলমাত্র ১ টি নির্দিষ্ট করতে পারবেন)

- Agriculture
- Livestock
- Fisheries
- Agro-processing
- () Service/Job
- () Business (Trading/retail etc.)
- Agriculture labour
- () Construction worker (Mason/labour)
- () Jewellery worker
- () Bidi worker
- 🔵 Brick Kiln labour (ইঁটভাটার শ্রমিক)
- 🔵 Carpenter (ছুতোর/কাঠের মিস্ত্রি)
- 🔵 Potter (কুমোর)
- 🔵 Cobbler (মুচি)
- 🔵 Cutter (দর্জি)
- Migrant Labour
- Daily Wage Labour
- 🔵 Blacksmith (কামার)
- 🔵 Begging (ভিক্ষা)
 - Others (Manually Specify)

Please mention the main occupation which is not mentioned in the list পূর্ববর্তী প্রশ্নের (প্রধান জীবিকা) উত্তরের তালিকাতে যদি না থাকে তাহলে এখানে উল্লেখ করুন (সর্বাধিক ১ টি)

Secondary Occupation

আনুসাঙ্গিক/গৌন জীবিকা (কেবলমাত্র ১ টি নির্দিষ্ট করতে পারবেন)

- Agriculture
- Livestock
- () Fisheries
- Agro-processing
- () Service/Job
- () Business (Trading/retail etc.)
- 🔵 Agriculture labour
- Construction worker (Mason/labour)
- () Jewellery worker
- Bidi worker
- Brick Kiln labour
- 🔵 Carpenter (ছুতোর/কাঠের মিস্ত্রি)
- 🔵 Potter (Kumor)
- 🔵 Cobbler (মুচি)
- 🔵 Cutter (দর্জি)
- Migrant Labour
- Daily Wage Labour
- 🔵 Blacksmith (কামার)
- 🔵 Begging (ভিক্ষা)
 -)Others (Manually Specify)
- 🔵 None

Please mention the secondary occupation which is not mentioned in the list পূর্ববর্তী প্রশ্নের (আনুসাঙ্গিক/গৌন জীবিকা) উত্তরের তালিকাতে যদি না থাকে তাহলে এখানে উল্লেখ করুন (সর্বাধিক ১ টি)

Foods taken in daily diet:

রোজকার খাবারে কি কি খাবার থাকেঃ



Types of forest present in the locality: গ্রামের আশেপাশে কি ধরনের বনভূমি আছেঃ

- Sonajhuri Forest
- Eucalyptus Forest
- Arjuna Forest
- Sal Forest
- None

Distance of the Sonajhuri Forest সোনাঝুরি জঙ্গলের দুরত্ব কতটাঃ

- Less than 1 KM
- 1 KM to Less than 2 KM
- 2 KM to Less than 3 KM
- 3 KM to Less than 4 KM
- More than 4 KM

Distance of the Eucalyptus Forest ইউক্যালিপটাস জঙ্গলের দুরত্ব কতটাঃ

- Less than 1 KM
- 1 KM to Less than 2 KM
- 2 KM to Less than 3 KM
- 3 KM to Less than 4 KM
- More than 4 KM

Distance of the Arjuna Forest অর্জুন জঙ্গলের দুরত্ব কতটাঃ

- Less than 1 KM
- 1 KM to Less than 2 KM
- 2 KM to Less than 3 KM
- 3 KM to Less than 4 KM
- More than 4 KM

Distance of the Sal Forest শাল বনের দুরত্ব কতটাঃ

- Less than 1 KM
 - 1 KM to Less than 2 KM
- 2 KM to Less than 3 KM
- 3 KM to Less than 4 KM
- More than 4 KM

Types of Migration:

মাইগ্রেশনের ধরন নিচের তালিকা থেকে যে কোন ১ টি বাছুন

Seasonal
Irregular
More than 6 months
Permanent
None

How many seasonal migrants? কতজন সিজনাল মাইগ্রেণ্ট আছেন?

- 1 no Below 3 nos
- 3 nos Below 5 nos
- Above 5 nos

How many irregular migrants? কতজন ইরেগুলার মাইগ্রেণ্ট আছেন?

- 1 no Below 3 nos
- 3 nos Below 5 nos
- Above 5 nos

How many migrants migrate for more than 6 months? কতজন মাইগ্রাণ্ট ৬ মাসের বেশি সময়ের জন্য মাইগ্রেট করেন?

- 1 no Below 3 nos
- 3 nos Below 5 nos
- Above 5 nos

How many permanent migrants? কতজন পারমানেণ্ট মাইগ্রেণ্ট আছেন?

- 1 no Below 3 nos
 - 3 nos Below 5 nos
- Above 5 nos

Sources of getting Rice:

আপনার বাড়ীতে চাল কোথা থেকে সংগ্রহ করেন তা নিচের তালিকা থেকে বাছুন (১ এর বেশী সনাক্ত করতে পারবেন)

Own Ration shop Local market Grain Bank

Sources of getting Pulses:

আপনার বাড়ীতে ডাল কোথা থেকে সংগ্রহ করেন তা নিচের তালিকা থেকে বাছুন (১ এর বেশী সনাক্ত করতে পারবেন)

Own
Ration shop
Local market

Sources of getting Cooking Oil:

আপনার বাড়ীতে রান্না করার তেল কোথা থেকে সংগ্রহ করেন তা নিচের তালিকা থেকে বাছুন (১ এর বেশী সনাক্ত করতে পারবেন)



Sources of getting Sugar:

আপনার বাড়ীতে চিনি কোথা থেকে সংগ্রহ করেন তা নিচের তালিকা থেকে বাছুন (১ এর বেশী সনাক্ত করতে পারবেন)

Ration Shop

Local Market

Sources of getting Vegetables:

আপনার বাড়ীতে সবজী কোথা থেকে সংগ্রহ করেন তা নিচের তালিকা থেকে বাছুন (১ এর বেশী সনাক্ত করতে পারবেন)

Own	kitchen	garden

Local market

Collection

Sources of getting Spices & other essential materials:

আপনার বাড়ীতে মশলা ও অনান্য প্রয়োজনীয় দ্রব্য কোথা থেকে সংগ্রহ করেন তা নিচের তালিকা থেকে বাছুন (১ এর বেশী সনাক্ত করতে পারবেন)

Own
Local market
Collection

Sources of getting Cooking arrangement (kerosene, Cooking Gas etc):

আপনার রান্না করার জ্বালানী কোথা থেকে সংগ্রহ করেন তা নিচের তালিকা থেকে বাছুন (১ এর বেশী সনাক্ত করতে পারবেন)

- Home (Bio-gas arrangement)
 - Govt Support (Ujjala scheme)
 - Market (Kerosine, Firewood)
- Collection (Firewood)
- Own (Firewood)
 - Kerosene Shop
 - Smokeless Oven
 - Others (Manually Specify)

Please mention other source which is not mentioned in the list আপনার উত্তরটি উপরক্ত তালিকাতে যদি না থাকে তাহলে এখানে উল্লেখ করুন

Sources of getting Seeds

বাজ কো	খা থেকে পানঃ
	Own
	Neighbours
	Market
	ADA Office
	Panchayat Office
	DRCSC
	NGO's other than DRCSC
	Others (Manually Specify)
	None

Please mention other source which is not mentioned in the list বীজ কোথা থেকে পান এই প্রশ্নের উত্তর উপরক্ত তালিকাতে যদি না থাকে তাহলে এখানে উল্লেখ করুন:

Is there any seed bank?

কোন সীড ব্যাঙ্ক আছে কিনা?

\bigcirc	Yes
\bigcirc	No

Who supports this seed bank? সীড ব্যাঙ্ক চালাতে কে সহায়তা করেঃ

Government
DRCSC
NGO's other than DRCSC
Others (Manually Specify)

Mention who supports the seed bank other than the above mentioned options (Maximum 1) সীড ব্যাঙ্ক চালাতে কে সহায়তা করে এই প্রশ্নের উত্তর উপরক্ত তালিকাতে যদি না থাকে তাহলে এখানে উল্লেখ করুন (সর্বাধিক ১ টি)

ls there any grain bank? গ্রেইন ব্যাঙ্ক আছে কিনা?



Who supports this grain bank? গ্রেইন ব্যাঙ্ক চালাতে কে সহায়তা করেঃ

Government
DRCSC
NGO's other than DRCSC

Others (Manually Specify)

Mention who supports the grain bank other than the above mentioned options (Maximum 1) গ্রেইন ব্যাঙ্ক চালাতে কে সহায়তা করে এই প্রশ্নের উত্তর উপরক্ত তালিকাতে যদি না থাকে তাহলে এখানে উল্লেখ করুন (সর্বাধিক ১ টি)

Do you face any food scarcity?

কোন খাদ্যাভাব দেখা দেয় কিনা?

\bigcirc	Yes
\bigcirc	No
In the	time of food scarcity from where do you get food?
খাদ্যাভা	বর সময় কোথা থেকে খাবার পাওয়া যায়ঃ
	Government Ration Shop
	Collection
	Grain Bank
	DRCSC Support

Collection
Grain Bank
DRCSC Support
Migration
Others (Manually Specify)
None

Mention other sources of getting food during food shortage: খাদ্যাভাবের সময় কোথা থেকে খাবার পাওয়া যায় সেটি উপরক্ত তালিকাতে যদি না থাকে তাহলে এখানে উল্লেখ করুন:

Hunger days in a year at present বর্তমানে খাদ্য সংকট কতদিন থাকেঃ

- Less than 1 month
- 1 month Less than 3 months
- 3 months- Less than 6 months
- 6 months to more than 6 months

Hunger days in a year 5 years back ৫ বছর পর্বে খাদ্য সংকট কতদিন থাকতঃ

- Less than 1 month
- 1 month Less than 3 months
- 3 months- Less than 6 months
- 6 months to more than 6 months

What are the diseases that you suffer from?



Dental Problem
Eye Problem
Stomach Problem
Muscle Pain
Bone Problems
Hypertension
Blood Sugar
Thyroid
Tuberculosis
Cancer
Leprocy
Malaria
Dengue
Phylaria
Fever
Cough and Cold
Corona
Others (Manually Specify)
None

Mention any other diseases that you suffer from: আপনি কি কি অসুখে আক্রান্ত হন এই প্রশ্নের উত্তর উপরক্ত তালিকাতে যদি না থাকে তাহলে এখানে উল্লেখ করুনঃ

Sources of getting essential Medicine:

আপনার প্রয়োজনীয় ওষুধ কোথা থেকে সংগ্রহ করেন তা নিচের তালিকা থেকে বাছুন (১ এর বেশী সনাক্ত করতে পারবেন)

Medicine Shop

Support from Govt.

None

Do you receive weather information?

আপনি কি আবহাওয়া সংক্রান্ত কোন তথ্য পান?

\bigcirc	Yes	
\bigcirc	No	

From where do you receive the information? আবহাওয়া সংক্রান্ত তথ্যগুলি কথা থেকে পানঃ

TV
Radio
Newspaper
Block Weather Station
District Weather Station
DRCSC Weather Station

Skill set of the male/female between 18-45:

আপনার পরিবারের ১৮-৪৫ বছর বয়সী পুরুষ/মহিলাদের কি কি দক্ষতা আছে সেগুলি নিচে উল্লিখিত তালিকা থেকে সনাক্ত করুন (১ এর বেশী সনাক্ত করতে পারবেন)

	Agriculture
	Livestock
	Fisheries
	Agro processing
	Tailoring
	Food processing
	Others (Manually Specify)

Please mention your skill which is not in the list আপনার যেকোনো একটি দক্ষতা উল্লেখ করুনঃ (Only 1 no)

Do you receive any skill development training? আপনি কি কোন দক্ষতা বৃদ্ধি প্রশিক্ষণ পান?

\bigcirc	Yes		
\bigcirc	No		
Who gives the training? এই প্রশিক্ষণটি কারা দেয়?			
	Government		
	DRCSC		
	Others (Manually Specify)		

Mention who gives training other than the above mentioned options এই প্রশিক্ষণটি কারা দেয় এই প্রশ্নের উত্তর উপরক্ত তালিকাতে যদি না থাকে তাহলে এখানে উল্লেখ করুনঃ

Are you interested in receiving skill development training? আপনি কি দক্ষতা বৃদ্ধির প্রশিক্ষনের জন্য আগ্রহী

Yes

No No

APPI Baseline

Interested Suitable candidates for skill training: দক্ষতা বৃদ্ধির প্রশিক্ষনের জন্য আগ্রহী প্রার্থীর সংখ্যাঃ

0

Resident Location:

রের বাইরে বেরিয়ে খোলা আকাশের নিচে দাঁড়িয়ে তথ্য সংগ্রহ করুন (Accuracy Level - maximum 8 M)

latitude (x.y °)

longitude (x.y °)

altitude (m)

accuracy (m)



Respondent Photographs:

উত্তরদাতার ছবি (আড়াআড়ি ভাবে)

Click here to upload file. (< 5MB)

Survey Date:

তথ্য সংগ্রহের তারিখঃ

yyyy-mm-dd