

BASELINE SURVEY: PHASE VI

MAYURBHANJ DISTRICT

Special Program for Promotion of Millets in Odisha
(Shree Anna Abhiyan)



Submitted to
Directorate of Agriculture and Food Production,
Government Of Odisha
2025



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Nabakrushna Choudhury Centre for Development Studies
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ନବକୃଷ୍ଣ ଚୌଧୁରୀ ଉନ୍ନୟନ ଗବେଷଣା କେନ୍ଦ୍ର
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FOREWORD

Sustainable Development Goal 2 seeks to end hunger, achieve food security, improve nutrition, and promote sustainable agriculture. Millets offer a promising solution to help accomplish these objectives. The Shree Anna Abhiyan (SAA) is a great initiative of Odisha government that shows the state's commitment to reviving the cultivation of millets that are not only climate-resilient but has significant implications on health and nutrition of people. The programme has brought different stakeholders to work together to reinstate the significance of millets in Odisha's agricultural landscape. I am delighted to have the opportunity to write this foreword for the 'Special Programme for Promotion of Millets in Odisha.'

The SAA programme has emerged from a consultation with diverse array of stakeholders including NCDS. A memorandum of understanding (MoU) was signed on February 27, 2017, bringing together key stakeholders including the Directorate of Agriculture and Food Production (DAFP), NCDS, and the Watershed Support Services and Activities Network (WASSAN). This MoU delineated the framework for concerted efforts towards implementing the SAA, with NCDS assuming the pivotal role of anchoring the research secretariat. NCDS embarked on a comprehensive survey initiative encompassing Baseline, Midterm, and End-line assessments in the designated blocks of the SAA. These surveys, designed to provide a situational analysis of the status of millet production, marketing, consumption, represent a critical step towards informed intervention and strategic decision-making. The findings of the baseline survey presented in the report would provide a situational analysis of the current status of the millet at the time of survey and a reference point to analyse the impact of intervention.

As the Director, I commend all the dedicated team members of NCDS for their unwavering commitment and tireless efforts in achieving the objectives of the SAA. Your hard work and perseverance have played a crucial role in turning our shared vision into reality. I also extend my heartfelt gratitude to our partners, stakeholders, and collaborators for their invaluable support and steadfast dedication in this direction.



Dr. Yeddula Vijay, IAS
Director, NCDS

ACKNOWLEDGEMENT

It gives me immense pleasure to extend my heartfelt gratitude to all those who contributed to the successful completion of the “Baseline Survey Report of Phase VI, 2022”. This endeavour was truly a collaborative effort, and I am deeply grateful for the unwavering support and dedication demonstrated by each individual and organization involved. First and foremost, I would like to express my sincere appreciation to the research team of Nabakrushna Choudhury Centre for Development Studies (NCDS), Bhubaneswar, for spearheading the preparation of this report. Your commitments to excellence and tireless efforts have been instrumental in ensuring the quality and accuracy of the findings presented.

I extend my heartfelt thanks to the related government departments, organizations, and stakeholders, including farmers' associations, whose invaluable support and cooperation played a pivotal role in the successful completion of this study. Special mention goes to Dr. Arabinda Kumar Padhee, Principal Secretary to the Government, Department of Agriculture & Farmers' Empowerment (DA&FE), Mr. Prem Chandra Chaudhary, Director of Agriculture DA&FE, and the Joint Director of Agriculture for their invaluable contributions.

I would like to extend my sincere appreciation to our esteemed Director, Dr. Yeddula Vijay (IAS), Director of Nabakrushna Choudhury Centre for Development Studies (NCDS). Your guidance, wisdom, and valuable suggestions have been invaluable in shaping the direction of this study. Many thanks to NCDS administration for their continuous support for smooth functioning of the research work. I also wish to acknowledge the contributions of Dr. Biswabas Patra and Dr. Rashmi Misra for their valuable insights and assistance.

I would also like to express my appreciation to the members of the Programme Secretariat (Watershed Support Services and Activities Network, WASSAN), particularly Mr. Dinesh Balam, Programme Secretariat, and the facilitating agencies and staff of the concerned areas under study for their support and cooperation. I am particularly grateful to Mr. Sushil Kumar Senapati, Ms. Kalpana Pradhan and Mr. Bikash Pradhan, along with the dedicated staffs of the State Project Monitoring Unit (SPMU), for their unwavering support and assistance throughout the duration of this project.

My sincere gratitude goes out to the Chief District Agricultural Officer (CDAO) of Mayurbhanj district, the Scheme Officer, District Programme Coordinator, Block Coordinators, and other block-level officials for their invaluable support in providing crucial information. Once again, thank you all for your invaluable contributions, dedication, and support. It has been a privilege to work alongside each of you, and I look forward to continued collaboration in our future endeavours. I extend my best wishes for the success of the publication.

Dr. Sandhya R. Mahapatro
Project Director

EXECUTIVE SUMMARY

Mayurbhanj district is one of the 17 districts where the “Special Programme for the Promotion of Millets in Odisha, hereafter Shree Anna Abhiyan (SAA)” Phase VI has begun in the Kharif 2021 in its nine selected blocks, namely, Thakurmunda, Kusumi, Muruda, Rairangpur, Karanjia, Raruan, Tiring, Bijotala, and Suliapada. The Survey findings, 2022 revealed that among the surveyed households, 87.78 per cent belonged to Scheduled Tribes (STs), while only 3.75 per cent belonged to Scheduled Castes (SCs). Other Backward Classes (OBCs)/ Socially and Educationally Backward Classes (SEBCs) accounted for 8.33 per cent of the households and General category accounted .14 per cent. The total population of the surveyed households is 3222, of which 47.61 per cent are male and 52.39 per cent are female with 100 per cent belonging to Hindu community.

Out of 720 sample households, 99.58 per cent possess ration cards. Significant portion of the population, 40.41 per cent, are farmers. The share of wage labourers is 5.92 per cent, Government employees represent 2.20 per cent and private employees 4.02 per cent. Out of the total of 720 households, 542 (75.28 per cent) have *Semi-Pucca* houses, 142 households (19.72 per cent) have *Kutchha* houses, and only 36 households (5.00 per cent) have *Pucca* houses. Agriculture activities are carried out by both male and female members of the household. Paddy is the main crop produced in the district. However, farmers were found to be cultivating maize and vegetables in some cases as well. No households were found cultivating millets in the study area during this baseline survey of SAA.

Total no of 26 sample HHS (3.61 per cent) consume millets in different seasons and at different meals of the day, especially during summer 3.61 percent of the HHs consumes millets, the data indicates that the majority of people consume millets during breakfast and evening snack across the blocks. *Tampo/Pitha* and *Jau/Torani* are the popular recipe among the surveyed households as all of them are found to be consuming these recipes. Out of the surveyed households, only 26 household consume through purchasing from market not a single sample HHs process millets.

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ABBREVIATIONS

APL	: Above Poverty Line
BPL	: Below Poverty Line
CBO	: Community Based Organization
CRP	: Community Resource Person
FGD	: Focused Group Discussion
FPO	: Farmer Producers Organization
Ha	: Hectare
HH(s)	: Household(s)
ICDS	: Integrated Child Development Scheme
LS	: Line Sowing
LT	: Line Transplantation
ITDA	: Integrated Tribal Development Agency
MDM	: Mid-Day Meal
MFP	: Minor Forest Produce
MSP	: Minimum Support Prices
NAL	: Non-Agricultural Labor
NCDS	: Nabakrushna Choudhury Centre for Development Studies
NSSO	: National Sample Survey Organization
OBC	: Other Backward Classes
SAA	: Shree Anna Abhiyan
PDS	: Public Distribution System
PVT	: Participatory Variety Trial
Qtls.	: Quintals
SC	: Scheduled Caste
SMI	: System of Millets Intensification
ST	: Scheduled Tribe
WASSAN	: Watershed Support Services and Activities Network

Chapter I

INTRODUCTION

1.1 Background

Millets are cereal grain belongs to the Poaceae family, commonly known as the grass family. Millets are small, round whole grain grown in India, Nigeria, and other Asian and African countries. It is considered an ancient grain, used both for human consumption and livestock and bird feed. Millets have multiple advantages over other crops, including drought and pest resistance. It's also able to survive in harsh environments and less fertile soil. These benefits stem from its genetic composition and physical structure — for example, its small size and hardness. This crop is also divided into two categories — major and minor millets, with major millets being the most popular or commonly cultivated varieties. Major millets include: pearl, foxtail, proso (or white), finger (or Ragi); Minor millets include: Kodo, barnyard, little, Guinea, brown top, fonio, adlay (or Job's tears). Like most cereals, millet is a starchy grain — meaning that it's rich in carbs. Notably, it also packs several vitamins and minerals. Therefore, it may offer multiple health benefits.

“Special Programme for Promotion of Millets in Odisha” is a flagship mission, popularly known as Shree Anna Abhiyan (SAA), launched by Department of Agriculture and Farmers Empowerment, Odisha in the year 2016. The broad aim of the Programme is to revive millets, widely consumed in tribal belt and other parts of the State traditionally, in farm and plates, after observing a changing pattern in agronomic practices and consumption pattern owing to government schemes and programmed inclined towards paddy cultivation. The intent to revive millets came from the environment sensitive approach that realizes millet as a climate resilient crop and has higher survival rate in rain fed areas. Comparatively higher nutrition value of the produce is also an added factor contributing to the movement.

1.2 District Profile

Mayurbhanj is one of the Eastern districts of Odisha and is considered the third most populous district of the state as per Census 2011. Mayurbhanj is land locked with a geographical in the northeast Jhargram district of West Bengal, West Singhbhum district of Jharkhand in the northwest, Balasore district in the south east and by Keonjhar district in the south west.

Fig 1.1 Map of Mayurbhanj District with Blocks

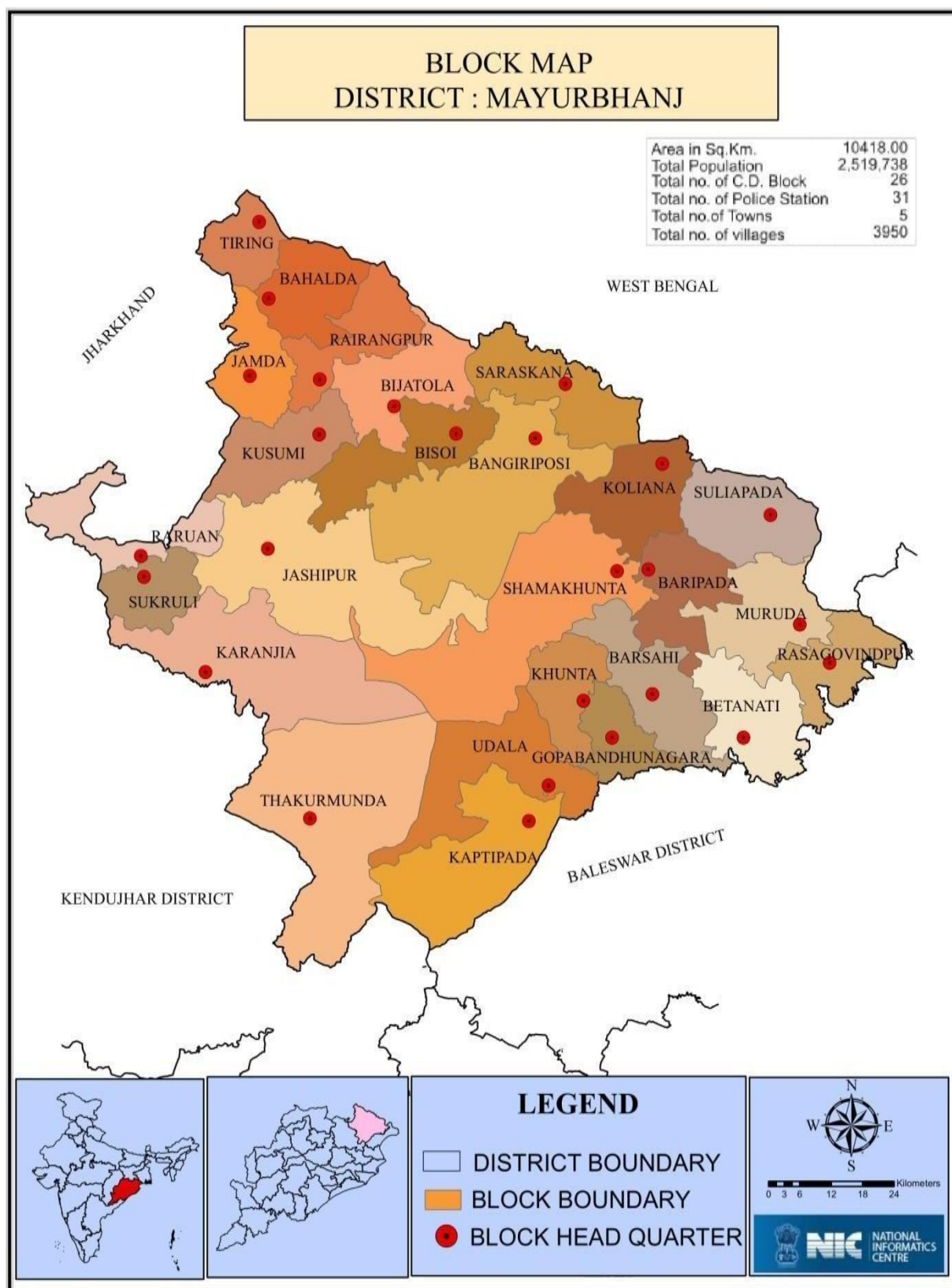


Table 1.1: Socio-economic and Demographic Features of Mayurbhanj District	
Indicator	Values
Census 2011	
Population (in Lakh)	25.19
Males (in Lakh)	12.56
Females (in Lakh)	12.63
Scheduled Caste (in Lakh)	1.84
Scheduled Tribe (in Lakh)	14.79
HHs (in Lakh)	4.72
Average HH Size	45.31
Sex Ratio	1006
Total Workers (in Lakh)	12.23
Main Workers (in Lakh)	5.48
Marginal Workers (in Lakh)	6.75
Non-Workers (in Lakh)	12.96
Work Participation Rate (WPR, %)	48.55
Cultivator as % of Total Worker	19.51
Agricultural Laborers as % of Total Workers	46.48
Literacy rate (%)	63.17
Total Geographical area (sq. km)	10418
Forest	72.33
Land put to Non-agricultural use	71.46
Barren and non-Cultivable Land	18.12
Permanent Pasture and Other Agricultural Land	34.41
Net Area Sown	31.81
Cultivable Waste Land	50.35
Old Fellow	50.23
Current Fellows	57.56
Miscellaneous Trees and Groves	25.99
Fertilizer Consumption (kg/ha)	41.39
Irrigation, Kharif ('000ha)	24.07
Irrigation, Rabi ('000ha)	14.44
No. of Village Electrified (as on March 2014)	3601
No. of banks	247
No. of AWC	4637
No. of BPL families	89030
No. of Job Card Issued (Cumulative, March 2015)	388598
No. of beneficiaries provided employment through MGNREGS	175962
Source: District Statistical Handbook, Mayurbhanj, 2011, *District at a Glance 2016	

Mayurbhanj district is proposed as one of the programme districts for promotion of Millets. The climatic condition is convenient for millets cultivation. The district has an area of 10418.00 Sq. Kms and 25.19 Lakh populations. The district shares 6.00 percent of the state's population. The density of population of the district is 241 per sq.km against 270 persons per sq.km of the State and the district has 3950 villages covering 26 Blocks. The sex ratio of the district is estimated to be 1006 female per 1000 male. The literacy percentage of the district is 63.17 against 72.9 of the state. The languages spoken by the people of this district are Bengali, English, Hindi, Odia and local tribal languages as well.

1.3 Objectives

The objectives of the baseline survey were to obtain information on proposed interventions under SAA around production, consumption, processing and marketing of millets. It is also pertinent to have some background information of the HHs surveyed. The objectives are:

- To assess the socio-economic condition of the HHs;
- To outline millet production, productivity and package of practices of marketing millets in the Mayurbhanj District;
- To examine the consumption pattern of millets and
- To elucidate the method of processing and mode of marketing millets in the Mayurbhanj District.

1.4 Methodology

1.4.1 Universe and Sample Design

The SAA programme formerly known as OMM has been implemented in the state in a phased manner. It started in 28 blocks of 7 districts in phase 1 during 2017-18. However later it has expanded to all 30 Districts of the state in different phases. . Under Phase VI of the implementation of the programme, an additional 58 blocks across 17 districts of the state including 9 blocks of Mayurbhanj district, i.e., Thakurmunda, Kusumi, Muruda, Rairangpur, Karanjia, Raruan, Tiring, Bijotala and Suliapada blocks under the programme. The baseline survey included potential millet farming households as the responded households from these blocks, selected in consultation with local farmers, NGOs, CSOs, being engaged as the facilitating agencies (FAs) and the District Agriculture Office (DAO), Government of Odisha.

From the list provided by the SAA Programme Secretariat, there were 1819 beneficiary households covering 9 blocks in the Mayurbhanj district. Nine blocks were purposively selected in the first stage of sampling then two Gram Panchayats were randomly selected from each blocks in the second stage sampling, further two villages were selected from each selected Gram Panchayats in the third stage sampling. In the fourth stage of sampling, 20 households were randomly selected from each selected village, resulting in 80 households surveyed from each block. The Baseline Survey for 2022 under Phase VI included a total of 720 households from the program households across the 9 Blocks of Mayurbhanj district. Along with household interviews, one focused group discussion (FDGs) were conducted from each village.

Out of the total 1819 programme households in Mayurbhanj district, 209 HHs in Thakurmunda Block, 285 HHs in Kusumi Block, 186 HHs in Muruda Block, 157 HHs in Rairangpur, 238 HHs in Karanjia, 270 HHs in Raruan, 187 HHs in Tiring, 128 HHs in Bijotala, and 159 HHs in Suliapada Block were planned to be covered under the SAA programme under Phase VI. Hence, for the purpose, under the Baseline Survey, 2022 Phase VI, a total of 720 samples HHs were selected for primary data collection covering in the said nine Blocks in the Mayurbhanj District.

Table 1.2: Households Surveyed in Mayurbhanj District across Nine Blocks			
Blocks	Participant HHs (No)	Surveyed HHs (No)	Percentage of HHs covered
Thakurmunda	209	80	38.28
Kusumi	285	80	28.07
Morada	186	80	43.01
Rairangpur	157	80	50.96
Karanjia	238	80	33.61
Raruan	270	80	29.63
Tiring	187	80	42.78
Bijotala	128	80	62.50
Suliapada	159	80	50.31
Total	1819	720	39.58

Source: Programme Secretariat and Field Survey

Note: HHs denotes households

1.4.2 Data Collection, Compilation and Analysis

A total of thirty-six villages were selected from nine blocks, where two Gram Panchayats for data collection from nine blocks in Mayurbhanj district for the Baseline Survey, 2022, Phase VI. These villages were selected using the simple random sampling method based on data provided by the implementing agency, WASSAN, about the prospective villages to be included under Phase VI. Two Gram Panchayats were randomly selected from each block, and two villages were further selected from each of these Panchayats.

This comprehensive baseline survey report is based on both secondary and primary data. Primary data was collected by utilizing a pre-tested interview schedule (Annexure 1) and Focus Group Discussions (Annexure 2) with respondents from the concerned districts. Additionally, secondary data on geographical information, population, agriculture, education, irrigation, forest and institution was collected from various published and unpublished sources, including the 2011 Census.

To supplement and complement the findings made under the Baseline Survey, Focus Group Discussions were conducted in each selected village. The FGDs were conducted with the local community members and other stakeholders to gather more information and insights about the socio-economic conditions and development issues of the villages. This qualitative data helped in providing a more holistic understanding of the local context, which was further used to triangulate and validate the findings of the quantitative

data collected through the survey.

The Baseline Survey report aimed to collect data on various socio-economic indicators such as household demographics, income, livelihoods and education. Besides these, the other indicators on production, consumption processing and marketing of millets at household level are also collected through structured schedules. The findings of the survey and FGDs were analyzed using appropriate statistical tools and techniques to generate a comprehensive report.

The report provides an in-depth analysis of the current situation in the selected villages and serves as a reference point to measure the progress made during the implementation of various development interventions in the future. It also highlights the gaps and challenges in the existing systems and infrastructure

1.5 Limitations of the Study

The present Baseline Survey report focuses solely on nine Blocks of the Mayurbhanj District. However, due to the onset of the harvesting season, coupled with both in and out-migration, some household heads and female respondents were found to be absent during the data collection process. Despite these challenges, it is important to acknowledge the limitations of the present study.

Firstly, due to logistical reasons and other difficulties, such as the non-availability of respondents, the study was limited to a random sample of 720 households. Secondly, there is the possibility of recall error, especially in cases involving the actual quantity of consumption and marketing, among others. Lastly, in some instances, surveyed households, particularly non-participant farmer households, consumed millets without producing them. This was made possible by past stock and acquiring of millets through exchange and barter. Unfortunately, these details were not captured during the survey.

It is essential to consider these limitations while interpreting the findings of the survey. Future studies can address these gaps and improve the accuracy of the data collection process. Despite these limitations, the present survey provides valuable insights into the socio-economic conditions of the selected households and serves as a baseline evaluate the programme in subsequent period.

1.6 Chapters

This report has been divided into five Chapters, including the current Introductory Chapter I, which provided the district profile, objectives, methodology and Limitations. Chapter II provides the socio-economic profile of sample households. Chapter III provides details on the production and productivity of millets. Chapter IV discusses about the consumption pattern of millets. Chapter V elucidates the processing and marketing of millets.

Chapter II

SOCIAL AND ECONOMIC PROFILE

2.1 Introduction

The social and economic profile of a study area provides an essential understanding of the community's demographic characteristics, livelihood patterns, and overall development status. It forms the foundation for analysing various developmental issues and planning effective interventions. The social profile typically includes aspects such as population composition, age structure, gender distribution, literacy levels, caste composition, and household characteristics, which help in assessing the social fabric of the region. Similarly, the economic profile captures the occupational structure, sources of income, landholding patterns, asset ownership, and access to basic services. It reflects the standard of living of the households and highlights the extent of economic diversity and dependence on agriculture or non-farm activities. Together, these dimensions offer insights into the socio-economic realities of the population, enabling a better understanding of their needs, constraints, and opportunities for sustainable development. This chapter thus presents a comprehensive overview of the social and economic characteristics of the sample households in the study area.

2.2 Social category

The distribution of sample households across different social groups, as presented in Figure 2.1 and Table 2.1, indicates that 87.78 per cent of households belong to ST community, followed by 8.33 per cent from OBC/SEBC category, 3.75 per cent from SC category, and only 0.14 per cent from the General caste group. Block-wise analysis shows that the proportion of ST households is highest in Suliapada and Thakurmunda (100.00 per cent) each, followed by Karanjia and Rairangpur (97.50 per cent) each. The lowest proportion of ST households is observed in Tiring (67.50 per cent), which also records the highest proportion of SC households (21.25 per cent). Muruda has the highest share of OBC/SEBC households (25.00 per cent).

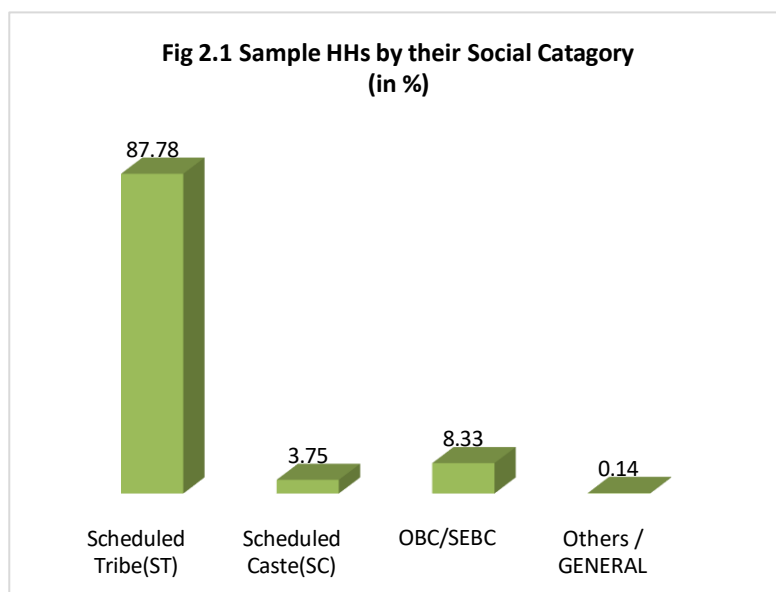


Table 2.1: Distribution of Sample HHs by their Social category										
Blocks	Scheduled Tribe (ST)		Scheduled Caste (SC)		OBC/SEBC		Others / GENERAL		Total	
	No	%	No	%	No	%	No	%	No	%
Bijotala	71	88.75	2	2.50	7	8.75	0	0.00	80	100
Karanjia	78	97.50	0	0.00	2	2.50	0	0.00	80	100
Kusumi	63	78.75	4	5.00	13	16.25	0	0.00	80	100
Muruda	60	75.00	0	0.00	20	25.00	0	0.00	80	100
Rairangpur	78	97.50	2	2.50	0	0.00	0	0.00	80	100
Raruan	68	85.00	2	2.50	10	12.50	0	0.00	80	100
Suliapada	80	100.00	0	0.00	0	0.00	0	0.00	80	100
Thakurmunda	80	100.00	0	0.00	0	0.00	0	0.00	80	100
Tiring	54	67.50	17	21.25	8	10.00	1	1.25	80	100
Grand total	632	87.78	27	3.75	60	8.33	1	0.14	720	100

Source: Baseline Survey, 2022

2.3 Sex

Fig 2.2 and Table 2.2 indicates that Out of the total 3,222 individuals surveyed, 47.61 per cent are males and 52.39 per cent are females. In Bijotala and Rairangpur, the gender ratio is perfectly balanced, with males and females each constituting 50.00 per cent of the sample population. The highest proportion of females is observed in Muruda (54.24 per cent) and Karanjia

Fig 2.2: Sample Population by sex (in %)

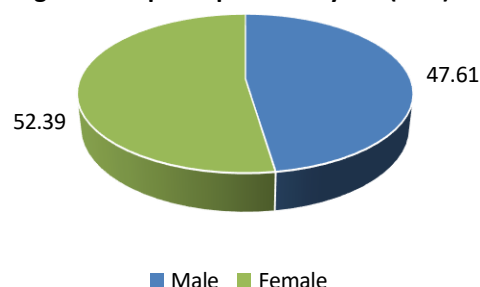


Table 2.2: Distribution of Sample Population by Sex						
Blocks	Male		Female		Total	
	No	%	No	%	No	%
Bijotala	196	50	196	50	392	100
Karanjia	160	45.85	189	54.15	349	100
Kusumi	180	47.49	199	52.51	379	100
Muruda	178	45.76	211	54.24	389	100
Rairangpur	175	50.00	175	50.00	350	100
Raruan	150	47.77	164	52.23	314	100
Suliapada	157	46.59	180	53.41	337	100
Thakurmunda	161	47.35	179	52.65	340	100
Tiring	177	47.58	195	52.42	372	100
Grand total	1534	47.61	1688	52.39	3222	100

Source: Baseline Survey, 2022

(54.15 per cent), followed closely by Suliapada (53.41 per cent) and Kusumi (52.51 per cent).

2.4 Ration card

Table 2.3 indicates that the majority of the households, accounting for 99.58 per cent, possess BPL ration cards. A very small proportion, only 0.42 per cent has APL ration cards. Notably, none of the surveyed households are found without a ration card. Block-wise, in most areas such as Bijotala, Karanjia, Rairangpur, Raruan, Suliapada, and Tiring, 100.00 per cent of the households possessed BPL ration cards with no APL cardholders. However, in the blocks of Kusumi, Muruda, and Thakurmunda, a minimal presence of APL ration card is observed, where each of these blocks have reported one household (1.25 per cent) holding an APL ration card while the remaining households hold BPL cards.

Table 2.3: Distribution of Sample HHs by their possession of Ration card						
Blocks	Ration Card/ APL		Ration Card/ BPL		Total	
	No	%	No	%	No	%
Bijotala	0	0	80	100	80	100
Karanjia	0	0	80	100	80	100
Kusumi	1	1.25	79	98.75	80	100
Muruda	1	1.25	79	98.75	80	100
Rairangpur	0	0	80	100	80	100
Raruan	0	0	80	100	80	100
Suliapada	0	0	80	100	80	100
Thakurmunda	1	1.25	79	98.75	80	100
Tiring	0	0	80	100	80	100
Grand total	3	0.42	717	99.58	720	100

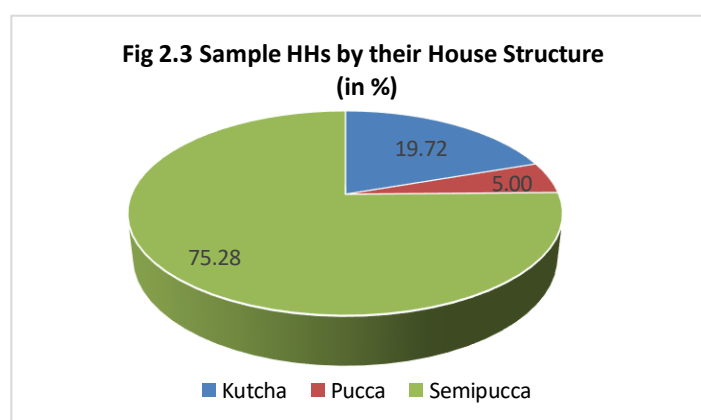
Source: Baseline Survey, 2022

2.5 Religion

The survey revealed that total population across all blocks of the district i.e., Bijotala, Karanjia, Kusumi, Muruda, Rairangpur, Raruan, Suliapada, Thakurmunda and Tiring are Hindu.

2.6 House Structure

Fig 2.3 and Table 2.4 reveal that the majority of respondents, 75.28 per cent, reside in semi pucca houses and 19.72 per cent of the total households surveyed live in Kutcha houses. The highest proportion of kutcha houses is found in Kusumi (56.25 per cent), followed by Thakurmunda (41.25 per cent) and Muruda



(40 per cent), Suliapada (27.5 per cent) and Bijotala (12.5 per cent) also have noticeable percentages of kutcha houses, while Karanjia, Rairangpur,

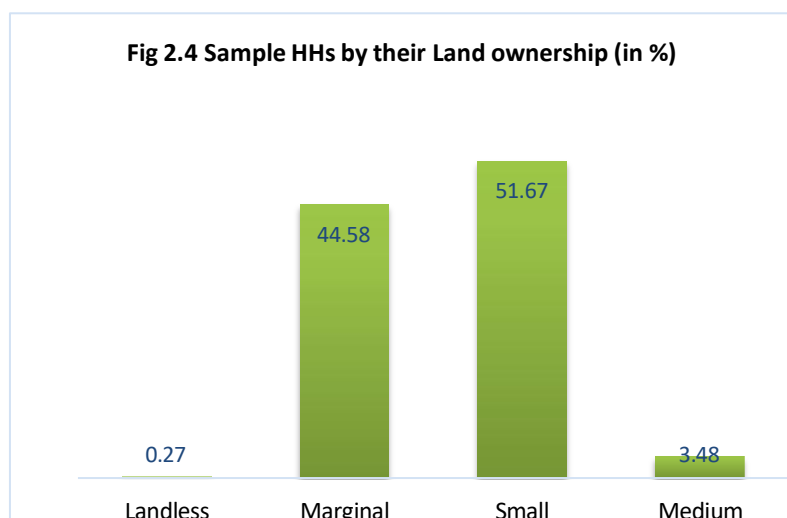
Raruan, and Tiring have no kutcha houses at all, reflecting relatively better housing stability in these areas. Out of the sample HHs 5 per cent are living in Pucca Houses. Pucca houses are most visible in Muruda (18.75 per cent), Suliapada (13.75 per cent), and Thakurmunda (6.25 per cent). In contrast, Karanjia, Rairangpur, Raruan, and Tiring have no pucca houses.

Table 2.4: Distribution of Sample HHs by their House Structure								
Blocks	Kutcha		Pucca		Semi-pucca		Total	
	N	%	N	%	N	%	N	%
Bijotala	10	12.5	1	1.25	69	86.25	80	100
Karanjia	0	0	0	0	80	100	80	100
Kusumi	45	56.25	4	5.00	31	38.75	80	100
Muruda	32	40	15	18.75	33	41.25	80	100
Rairangpur	0	0	0	0	80	100	80	100
Raruan	0	0	0	0	80	100	80	100
Suliapada	22	27.5	11	13.75	47	58.75	80	100
Thakurmunda	33	41.25	5	6.25	42	52.5	80	100
Tiring	0	0	0	0	80	100	80	100
Grand Total	142	19.72	36	5.00	542	75.28	720	100

Source: Baseline Survey, 2022

2.7 Land ownership

The landholding pattern of the surveyed households (Fig 2.4 & table 2.5) indicates that the majority of families are small and marginal farmers, with 51.67 per cent of the total respondents are small farmers and 44.58 per cent are marginal farmers. The highest proportion of small farmers is observed in Raruan (71.25 per cent), followed by Kusumi (68.75 per cent) and Thakurmunda (53.75 per cent). Marginal farmers, on the other hand, are most prominent in Suliapada (62.50 per cent), Rairangpur (50.00 per cent), and Muruda (48.75 per cent), indicating that in these blocks, a significant number of households have very limited land resources. Medium farmers form a very small section, constituting only 3.48 per cent of the total sample. The highest concentration of medium farmers is in Tiring (6.25 per cent) and Kusumi (7.50 per cent).



cent), while most other blocks have a very minimal representation in this category. Landless households are extremely few, accounting for only 0.27 per cent of the total, with just two landless families reported in Karanjia (2.50 per cent).

Table 2.5: Distribution of Sample HHs by their Land ownership										
Blocks	Landless		Marginal		Small		Medium		Total	
	N	%	N	%	N	%	N	%	N	%
Bijotala	0	0.00	36	45.00	40	50.00	4	5.00	80	100
Karanjia	2	2.50	39	48.75	37	46.25	2	2.50	80	100
Kusumi	0	0.00	19	23.75	55	68.75	6	7.50	80	100
Muruda	0	0.00	39	48.75	39	48.75	2	2.50	80	100
Rairangpur	0	0.00	40	50.00	38	47.50	2	2.50	80	100
Raruan	0	0.00	22	27.50	57	71.25	1	1.25	80	100
Suliapada	0	0.00	50	62.50	29	36.25	1	1.25	80	100
Thakurmunda	0	0.00	35	43.75	43	53.75	2	2.50	80	100
Tiring	0	0.00	41	51.25	34	42.50	5	6.25	80	100
Grand Total	2	0.27	321	44.58	372	51.67	25	3.48	720	100

Source: Baseline Survey, 2022

2.8 Age group

Table 2.6 presents the distribution of the sample population by their age group across the nine blocks. The data indicate that the majority of the population falls within the adult age group (19–44 years), accounting for 46.46 per cent of the total sample of 3,222 individuals. This is followed by the

Table 2.6 Distribution of Sample Population by their age groups																
Blocks	Infant (0-2 Year)		Pre-School (3-5 Year)		Children (6-12 Year)		Adolescent (13-18 Year)		Adults (19-44 Year)		Middle Age (45-59 Year)		Old (60 Year & Above)		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Bijotala	12	3.06	10	2.6	39	9.94	61	15.56	175	44.64	64	16.3	31	7.9	392	100
Karanjia	6	1.71	23	6.6	48	13.75	40	11.46	160	45.84	63	18.1	9	2.6	349	100
Kusumi	11	2.90	11	2.9	34	8.97	62	16.36	170	44.85	63	16.6	28	7.4	379	100
Muruda	13	3.41	18	4.6	40	10.28	59	15.16	154	39.59	64	16.5	41	11	389	100
Rairangpur	2	.57	9	2.6	45	12.85	62	17.71	167	47.71	54	15.4	11	3.1	350	100
Raruan	2	.63	4	1.3	59	18.79	47	14.97	177	56.37	21	6.69	4	1.3	314	100
Suliapada	3	.89	11	3.3	65	19.28	44	13.06	154	45.7	52	15.4	8	2.4	337	100
Thakurmunda	3	.88	16	4.7	31	9.11	32	9.41	178	52.35	60	17.7	20	5.9	340	100
Tiring	11	2.95	28	7.5	29	7.79	32	8.6	162	43.55	74	19.9	36	9.7	372	100
Grand total	63	1.95	130	4.03	390	12.10	439	13.63	1497	46.46	515	16.00	188	5.8	3222	100

Source: Baseline Survey, 2022

middle aged group (45–59 years) at 15.98 per cent and adolescents (13–18 years) at 13.63 per cent. Children aged 6–12 years constitute 12.10 per cent, whereas infants (0–2 years) constitute only 1.96 per cent, indicating a relatively smaller proportion of very young children. Block-wise analysis shows that Raruan has the highest concentration of adults (56.37 per cent), while Tiring has the largest share of middle-aged individuals. Suliapada has the highest proportion of children (19.29 per cent). The elderly population (60 years and above) is relatively small at 5.83 per cent, with Muruda block having the largest proportion of older individuals.

2.9 Education

Table 2.7 indicates that the educational status of the surveyed households across nine blocks show a mixed pattern of literacy and educational attainment. Highest illiteracy rates observed in Kusumi (42.02 per cent) and Muruda (39.71 per cent). In contrast, Karanjia (8.70 per cent) and Suliapada (11.29 per cent) recorded comparatively lower illiteracy rates. The attainment of primary education (up to 5th standard) is most notable in Kusumi (30.37 per cent), while blocks like Raruan (0.71 per cent) and Rairangpur (1.18 per cent) have minimal representation in this category. Secondary education (6th to 10th standard) shows good progress in Tiring (30.77 per cent), Bijotala (28.61 per cent), and Karanjia (27.78 per cent). However, the percentage of respondents completing higher

Block	Illiterate		up to 5 th		6th to 10 th		Higher Secondary		Graduation		Post-Graduate		Others		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Bijotala	82	22.34	6	1.63	105	28.6	14	3.81	35	9.54	9	2.45	116	31.61	367	100
Karanjia	36	8.7	67	16.18	115	27.8	57	13.77	26	6.28	5	1.21	108	26.09	414	100
Kusumi	137	42.02	99	30.37	51	15.6	20	6.13	3	0.92	1	0.31	15	4.6	326	100
Muruda	162	39.71	82	20.1	53	13	42	10.29	27	6.62	5	1.23	37	9.07	408	100
Rairangpur	103	30.29	4	1.18	54	15.9	13	3.82	54	15.9	23	6.76	89	26.18	340	100
Raruan	85	30.04	2	0.71	44	15.6	47	6.61	45	15.9	29	10.3	31	10.95	283	100
Suliapada	48	11.29	7	1.65	87	20.5	32	7.53	144	33.9	6	1.41	101	23.76	425	100
Thakurmunda	67	21.07	10	3.14	76	23.9	36	11.32	40	12.6	1	0.31	88	27.67	318	100
Tiring	78	24	8	2.46	100	30.8	39	12.00	38	11.7	5	1.54	57	17.54	325	100
Grand total	798	24.9	285	8.88	685	21.4	300	9.36	412	12.9	84	2.61	642	20.00	3206	100

Source: Baseline Survey, 2022

secondary education remains moderate across most blocks, with Karanjia (13.77 per cent) and Muruda (10.29 per cent). Graduation-level education is most significantly represented in Suliapada (33.88 per cent), whereas Kusumi (0.92 per cent) has the lowest graduation rate. Post-graduation attainment is generally low across all blocks, with the highest being in Raruan (10.25 per cent) and Rairangpur (6.76 per cent). "Others" category in Bijotala (31.61 per cent), Thakurmunda (27.67 per cent), and Rairangpur (26.18 per cent)

2.10 Occupation

The distribution of the sample population by occupation (table 2.8) shows that agriculture is the major occupation across all blocks, with the highest numbers in Tiring 124 (42.32 per cent), Karanjia 118 (46.00 per cent), Kusumi 114 (36.19 per cent), and Thakurmunda 110 (43.48 per cent), while Bijotala 113 (43.30 per cent), Muruda 101 (32.1 per cent), Rairangpur 90 (39.30 per cent), Raruan 85 (45.70 per cent), and Suliapada 80 (38.46 per cent) also have substantial agricultural workers. Daily wage labour is relatively low overall 137 (5.92 per cent) but higher in Tiring 49 (16.72 per cent) and Thakurmunda 35 (13.83 per cent).

Table 2.8: Distribution of sample population by their Occupation

Blocks	Agriculture	Daily Wage Labour	Dairy/ Goat/ Poultry	Business	Govt. Sector	Private Sector	House wife	Unemployed	Other	Total
	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)
Bijotala	113 (43.3)	5 (1.92)	3 (1.15)	2 (0.77)	0 (0)	13 (4.98)	92 (35.25)	8 (3.07)	25 (9.58)	261 (100)
Karanjia	118 (46.27)	6 (2.35)	11 (4.31)	11 (4.31)	2 (0.78)	14 (5.49)	78 (30.59)	10 (3.92)	5 (1.96)	255 (100)
Kusumi	114 (36.19)	5 (1.59)	7 (2.22)	38 (12.06)	23 (7.3)	10 (3.17)	69 (21.9)	42 (13.33)	7 (2.22)	315 (100)
Muruda	101 (32.17)	7 (2.23)	13 (4.14)	14 (4.46)	26 (8.28)	20 (6.37)	83 (26.43)	41 (13.06)	9 (2.87)	314 (100)
Rairangpur	90 (39.3)	18 (7.86)	2 (0.87)	2 (0.87)	0 (0)	6 (2.62)	80 (34.93)	21 (9.17)	10 (4.37)	229 (100)
Raruan	85 (45.7)	9 (4.84)	1 (0.54)	0 (0)	0 (0)	1 (0.54)	77 (41.4)	11 (5.91)	2 (1.08)	186 (100)
Suliapada	80 (38.46)	3 (1.44)	0 (0)	8 (3.85)	0 (0)	20 (9.62)	82 (39.42)	10 (4.81)	5 (2.4)	208 (100)
Thakurmunda	110 (43.48)	35 (13.8)	1 (0.4)	3 (1.19)	0 (0)	6 (2.37)	81 (32.02)	10 (3.95)	7 (2.77)	253 (100)
Tiring	124 (42.32)	49 (16.7)	2 (0.68)	2 (0.68)	0 (0)	3 (1.02)	83 (28.33)	13 (4.44)	17 (5.8)	293 (100)
Grand total	935 (40.41)	137 (5.92)	40 (1.73)	80 (3.46)	51 (2.2)	93 (4.02)	725 (31.33)	166 (7.17)	87 (3.76)	2314 (100)

Source: Baseline Survey, 2022

Engagement in dairy, goat, and poultry activities is minimal 40 (1.73 per cent), peaking in Muruda 13 (4.14 per cent) and Karanjia 11 (4.31 per cent). Business activities are concentrated in Kusumi 38 (12.06 per cent) and Muruda 14 (4.46 per cent), while government employment is highest in Muruda 26 (8.28 per cent) and Kusumi 23 (7.30 per cent). Private sector employment remains low 93 (4.02 per cent), with Suliapada 20 (9.62 per cent) and Muruda 20 (6.37 per cent) leading. The housewife category is significant 725 (31.33 per cent), especially in Raruan 77 (41.40 per cent), Suliapada 82 (39.42 per cent), and Bijotala 92 (35.25 per cent), while unemployment 166 (7.17 per cent) is most prominent in Kusumi 42 (13.33 per cent).

cent) and Muruda 41 (13.06 per cent). The other category is small 87 (3.76 per cent), with the highest numbers in Bijotala 25 (9.58 per cent) and Tiring 17 (5.80 per cent), which includes occupations such as carpenter, mechanic, plumber, tailor, and others.

2.11 Annual income

The survey data on the annual income distribution of households across different blocks shows (Table 2.9) that the majority of the respondents fall within the income range of Rs. 40,001 to Rs. 80,000 per year, accounting for 50.00 per cent of the total surveyed households. Among the blocks, Raruan (75 per cent) and Thakurmunda (70.00 per cent) have the highest concentration of households in this income category, Rairangpur (60.00 per cent) and Muruda (53.75 per cent) also have a significant number of respondents in this income range. The second largest group belongs to the income range of Rs. 80,001 to Rs. 1,20,000 per year, covering 28.61 per cent of the total households. In Tiring (41.25 per cent) and Kusumi (41.25 per cent), indicating a slight improvement in income levels compared to other blocks. A smaller segment of the population, about 7.63 per cent, falls within the income range of Rs. 1,20,001 to Rs. 1,60,000 per year. The highest proportion in this category is observed in Kusumi (15 per cent) and Bijotala (12.50 per cent). Households earning up to Rs. 40,000 per year represent only 5.27 per cent of the total sample, indicating that very few families are in the lowest income bracket.

Table 2.9: Distribution of the Sample HHs by their Annual income														
Blocks	Up to Rs.40000/-		Rs 40001/- to Rs.80000/-		Rs 80001/- to Rs.120000/-		Rs.120001/- to Rs.160000/-		Rs 160000/- to Rs.200000/-		Above Rs.200000/-		Total	%
	N	%	N	%	N	%	N	%	N	%	N	%		
Bijotala	6	7.50	36	45.00	23	28.75	10	12.50	0	0.00	5	6.25	80	100
Karanjia	3	3.75	25	31.25	25	31.25	8	10.00	8	10.00	11	8.00	80	100
Kusumi	2	2.50	26	32.50	33	41.25	12	15.00	4	5.00	3	3.00	80	100
Muruda	2	2.50	43	53.75	20	25.00	9	11.25	2	2.50	4	5.00	80	100
Rairangpur	13	16.25	48	60.00	12	15.00	4	5.00	3	3.75	0	0.00	80	100
Raruan	2	2.50	60	75.00	17	21.25	1	1.25	0	0.00	0	0.00	80	100
Suliapada	1	1.25	34	42.50	27	33.75	7	8.75	5	6.25	6	7.50	80	100
Thakurmunda	5	6.25	56	70.00	16	20.00	0	0.00	0	0.00	3	3.75	80	100
Tiring	4	5.00	32	40.00	33	41.25	4	5.00	4	5.00	3	3.75	80	100
Grand total	38	5.27	360	50.00	206	28.61	55	7.63	26	3.61	35	4.87	720	100

Source: Baseline Survey, 2022

However, Rairang-pur (16.25 per cent) indicating a slight high in this income levels compared to other blocks. And 4.87 per cent of the respondents reported annual incomes above Rs. 2,00,000 per year. Karanjia (8.00 per cent) and Suliapada (7.50 per cent) reported slightly higher numbers in this category.

2.12 Conclusion

The social and demographic profile of the surveyed households in the nine intervention blocks of Mayurbhanj district provides a comprehensive picture of the community structure, living conditions, and

economic status. The majority of the households belong to Scheduled Tribes. The households are entirely Hindu, with a nearly balanced gender distribution, though females slightly outnumber males in several blocks. Housing conditions reveal that a majority of families reside in semi-pucca houses, while fully pucca houses are limited, particularly in blocks such as Kusumi, Thakurmunda, and Muruda. Land ownership patterns indicate that most households are small and marginal farmers, cultivating limited plots of agricultural land, while very few households are medium farmers or landless. The educational scenario presents a mixed picture—blocks like Karanjia and Suliapada demonstrate relatively better educational attainment, whereas Kusumi and Muruda continue to face high levels of illiteracy. Access to higher education remains a challenge, as graduation and post-graduation levels are still low. Agriculture continues to be the primary source of livelihood for most households, supplemented by wage labour, livestock rearing, and small-scale businesses, reflecting a diversified livelihood strategy. Household income levels place most families within the lower to middle-income group, with only a small fraction earning higher annual incomes.

Chapter III

PRODUCTION OF MILLETS

3.1 Introduction

Millets are known for their high nutritional value, ability to grow in dry conditions, and importance in ensuring food and livelihood security for rural households. In recent years, millets cultivation has been encouraged as a climate-resilient crop that requires fewer inputs compared to other cereals. This chapter presents information on the production of millets in the study area. It discusses the extent of land under millet cultivation, types of seeds used, cropping patterns, level of productivity, and the challenges faced by farmers.

3.2 Area and production

The field data reveals that the total land possessed by the surveyed households is 2,109.44 acres, out of which 2,054.34 acres are owned land. Small and marginal farmers, who have adequate family members to work in the fields, also take land on lease and cultivate different crops. However, the leased land is very small, only 55.1 acres (Table 3.1). It is observed that paddy is the main crop cultivated by all the surveyed households, followed by vegetables. Paddy is being cultivate by all the 720 sample households .Whereas Vegetables are grown by 218 households (30.27 per cent) mainly for self-consumption, though they also sell part of the produce in local markets to meet daily needs. In addition, 85 households (11.80 per cent) cultivate other crops such as cashew, mango, cotton and other fruits.

Fig 3.1: Cultivating Area and production

Blocks	Paddy				Vegetables				Others			
	Area in Acres		HH	%	Area in Acres		HH	%	Area in Acres		HH	%
	Own land	leased in land			own land	leased in land			own land	leased in land		
Bijotala	207.75	17.5	80	100	14.9	1.5	18	22.5	0	0	0	0
Karanjia	185.15	7.25	80	100	8.5	1.85	13	16.25	21	3	23	28.75
Kusumi	233.5	6.5	80	100	31.8	1	21	26.25	9.5	1	11	13.75
Muruda	202.7	0	80	100	20	0	21	26.25	0	0	0	0
Rairangpur	166.75	7.5	80	100	38	0	35	43.75	5.5	1	9	11.25
Raruan	199	0	80	100	40.5	0	46	57.5	9.5	0	11	13.75
Suliapada	180.29	2	80	100	10	1	13	16.25	0	0	0	0
Thakurmunda	194	4	80	100	33.6	0	18	22.5	9.2	0	16	20.00
Tiring	186	0	80	100	37.7	0	33	41.25	9.5	0	15	18.75
Grand total	1755.14	44.75	720	100	235	5.35	218	30.27	64.2	5	85	11.80

Source: Baseline Survey, 2022

3.3 Reasons for not cultivating of Millets

In the study area, not a single household are found cultivating millets. Farmers reported several reasons for not cultivating millets. The major factors include not low market demand and profitability compared to paddy and other cash crops, as millets generally fetch lower prices and lack assured procurement. The absence of adequate processing and value addition facilities further discourages farmers. Other reasons include lack of quality seeds and inputs, insufficient extension support, and the small size of landholdings, which compel farmers to prefer crops that provide quick and assured returns.

3.4 Conclusion

This chapter reveals that Paddy cultivation dominates the agricultural landscape, with significant portions of land also being utilized for vegetables and other cash crops like cashew and mango. The complete absence of millet cultivation indicates a significant shift away from traditional millet-based farming practices in the region. In the next chapter, we will discuss about the consumption pattern of the respondents. We will also try and explore marketing and processing facilities available in the district for the produced

Chapter IV

CONSUMPTION OF MILLETS

4.1. Introduction

Milletts have traditionally been an important part of rural and tribal diets in India. As “nutri-cereals,” these are rich in fibre, protein, and micronutrients, and thrive in semi-arid climates with minimal inputs, making them crucial for food security. Nutritional well-being. However, in recent decades, millet consumption has steadily declined due to a variety of socio-economic and cultural factors. .Studying the consumption patterns of millets is therefore essential to understand the present status of this crop in rural diets. It helps to identify whether households still maintain a connection to traditional food habits, the extent of millets consumption across different meals, and how seasonal or cultural factors affect their use. This chapter focuses on the consumption pattern of millets among the sample households in the study area. It explores the frequency, quantity, and timing of millet consumption, as well as block wise variations.

4.2 Consumption of Millets

Table 4.1 reveals that consumption of millets among the surveyed households is notably low. Out of the total 720 Sample HHs, only 9.63 per cent (26 HHs) reported millets consumption. At the block level, the highest consumption is observed in Tiring block, where 11.25 per cent (9 HHs) consume ragi, followed by Bijotala block with 8.75 per cent (7 HHs). Both Muruda and Thakurmunda blocks report an equal share of 6.25 per cent (5 HHs each) consuming millets i.e. ragi. No millets consumption was recorded in other blocks like Karanjia, Kusumi, Rairangpur, Raruan, and Suliapada .

Table 4.1: Distribution of the Sample HHs by Consumption of Millets			
Blocks	HHs consume millets		Total sample HHs
	No	%	No.
Bijotala	7	8.75	80
Muruda	5	6.25	80
Thakurmunda	5	6.25	80
Tiring	9	11.25	80

Source: Baseline Survey, 2022

4.3 Consumption of Millets by persons of different Age Group

The age group wise analysis of millets consumption in Mayurbhanj district (table 4.2) indicates that out of 3,222 individuals, only 151 (4.7 per cent) reported consuming only ragi. The adult group (19–44 years) represents the highest proportion of consumers, with 72 persons (4.80 per cent), followed by middle-aged individuals (45–59 years) at 24 persons (4.66 per cent) and adolescents (13–18 years) with 20 persons (4.55 per cent). Children aged 6–12 years account for 19 consumers (4.87 per cent), while younger

groups such as pre-school children (3–5 years) 6 consumers (4.61 per cent) and infants (0–2 years) show very low consumption are 3 (4.76 per cent) respectively. The elderly population (60 years and above) contributes only 7 consumers (3.7 per cent), indicating limited acceptance among older age groups.

Table 4.2: Distribution of the Sample Population by Consumption of Millets in different Age group														
Blocks	(0-2 Year)		(3-5Year)		(6-12 Year)		(13-18 Year)		(19-44 Year)		(45-59 Year)		(60 Year & Above)	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Bijotala	1	8.33	0	0	3	7.7	8	13.1	16	9.14	4	6.25	0	0
Kusumi	0	0	1	9.10	3	8.8	1	1.61	6	3.53	1	1.59	4	14
Muruda	2	15.38	3	16.7	8	20	5	8.47	20	13	10	15.6	2	4.9
Thakurmunda	0	0	2	12.5	3	9.7	5	15.6	26	14.6	6	10	1	1
Tiring	0	0	0	0	2	6.9	1	3.12	4	2.47	3	4.5	0	0
Grand Total	3	4.76	6	4.61	19	4.87	20	4.55	72	4.80	24	4.66	7	3.7

Source: Baseline Survey, 2022

4.4 Consumption of Millets during Different Meals of the Day, Recipes and Across Seasons

The survey findings reveal that all 26 sample households from Bijotala(7HHS), Muruda(5HHs), Thakurmunda(5HHs), and Tiring(9HHs) consume millets primarily during breakfast and in the evening as snacks. None of the households reported millet consumption during lunch or dinner across any of the surveyed blocks. Millet consumption remains consistently low throughout the year, with all the millet-consuming households maintaining similar consumption patterns across winter, rainy, and summer seasons. This indicates that there are no significant seasonal variations in millet consumption, as the same number of households continue to consume millets uniformly in all seasons. The similar sample HHs mostly prepare and consume traditional millet-based recipes such as jau, tampo, and pitha, instead of other millet dishes, which form a part of their regular breakfast or snack items.

4.5 Conclusion

Millets consumption in the surveyed blocks of Mayurbhanj district reveals that overall consumption is quite low, indicating that millets are not a major part of the daily diet for most households. Consumption is concentrated in specific blocks, while several areas report no millet consumption at all. Across different age groups, adults and middle-aged individuals show relatively higher consumption compared to infants, young children, and the elderly, reflecting limited acceptance among the youngest and oldest populations. The findings also highlight a preference for traditional millet-based recipes such as jau, tampo, and pitha. Overall, millet consumption appears to be seasonally consistent but restricted to specific meals like breakfast and evening snacks.

Chapter V

PROCESSING AND MARKETING OF MILLETS

5.1 Introduction

Processing and marketing are key components in the millet value chain, as they help add value to the crop and improve economic returns for farmers. Efficient processing ensures better shelf life and quality of millet products, while effective marketing provides access to local and wider markets. This chapter examines the status of millet processing and marketing, the channels through which millets and millet-based products are sold, and the challenges faced by households in accessing processing units and markets.

5.2 Processing and marketing of Millets

The survey findings reveal that there is no processing or marketing of millets in the study area. This is primarily because millet cultivation is entirely absent in all the surveyed nine blocks. Since production is the basis for processing and subsequent marketing, the lack of cultivation has resulted in a complete absence of related activities such as threshing, dehauler, milling, value addition, and sale of millet-based products. Consequently, there are no local processing units, market channels, or trader networks dealing with millets in the region. Some of the respondent HHs has consumed millets through purchasing from local market and no sample HHs process millets

5.3 Conclusion

It reveals that a complete absence of millet processing and marketing activities in the surveyed blocks. Since millet cultivation is not practiced in the region, there is no local production to support processing units, value addition, or market linkages. Consequently, households have no access to locally available millet products, and no income-generating opportunities exist.

Annexure 1: Baseline Survey Data of Mayurbhanj District Phase, VI 2022

Sl.	Indicators	Unit	Baseline value									
			Bijotala	Karanjia	Kusumi	Muruda	Rairangpur	Raruan	Suliapada	Thakurmun da	Tiring	Total
1	% of Sample households Cultivating Millets	%	0	0	0	0	0	0	0	0	0	0
2	Types of Millets Cultivated (2021)		0	0	0	0	0	0	0	0	0	0
3	Avg. Area under Millets/HH (Acre)	Acre	0	0	0	0	0	0	0	0	0	0
4	Percentage per of total Millets cultivated area	%	0	0	0	0	0	0	0	0	0	0
5	Average Production of Millets by Sample Households	Qtls.	0	0	0	0	0	0	0	0	0	0
6	Package of Practice		0	0	0	0	0	0	0	0	0	0
	a) Broadcasting	%	0	0	0	0	0	0	0	0	0	0
	b) LS	%	0	0	0	0	0	0	0	0	0	0
	c) LT	%	0	0	0	0	0	0	0	0	0	0
7	Yield Rate (Qtls. /Acre)	Qtls.	0	0	0	0	0	0	0	0	0	0
8	Percentage of Sample Households Consuming Ragi (N-26 HHs)	%	0	0	0	0	0	0	0	0	0	0
	a) Breakfast	%	100	0	0	100	0	0	0	100	100	100
	b) Lunch	%	0	0	0	0	0	0	0	0	0	0
	c) Evening Snacks	%	100	0	0	100	0	0	0	100	100	100
9	Percentage of Sample Households consuming Popular Millets Recipes (N-26 HHs)		0	0	0	0	0	0	0	0	0	0
	a) Tampo/Pitha	%	100	0	0	100	0	0	0	100	100	100
	b) Jau/Torani	%	100	0	0	100	0	0	0	100	100	100
10	Percentage of use Sample Households different methods for Processing Millets		0	0	0	0	0	0	0	0	0	0
	a) Manually/ Traditional	%	0	0	0	0	0	0	0	0	0	0
	b) Machines	%	0	0	0	0	0	0	0	0	0	0
11	Percentage of Sample Households selling Millets/ Ragi		0	0	0	0	0	0	0	0	0	0
	a) Mandi	%	0	0	0	0	0	0	0	0	0	0
	b) Daily Market	%	0	0	0	0	0	0	0	0	0	0
	c) Middleman	%	0	0	0	0	0	0	0	0	0	0



Annexure 2

Confidential and to Be Used for Research Purpose Only

Households Schedule for

Baseline Survey 2022-23, Phase VI of SHREE ANNA ABHIYAN (SAA)

Serial No.....

Date.....

Part-I: Socio-Economic Status

1. Profile of the Households

1.1. Name of the Households' Head:

1.2. Name of the Respondent:

1.3. Name of the (i) Village:

(ii) GP

(iii) Blocks:

(iv) District:

1.4. Category: (i) SC (ii) ST (iii) OBC/SEBC (iv) Others (specify)

1.5. Religion (i) Hindu (ii) Muslim (iii) Christian (iv) Animism (v) Others

1.6. Ration Card Holding: (i) Ration Card (ii) Antyodaya Card (iii) Other (iv) No Card

1.7. Type of Family: (i) Nuclear (ii) Joint (iii) Extended (iv) Others (specify)

1.8. House Structure: (i) Katcha (ii) Semi-Pucca (iii) Pucca

3. HHs' Land ownership in Acre:.....

Sl No.	Name of the Crops	Yes/ No	Own Land*	Leased-in*	Sl. No.	Name of the Crops	Yes / No	Own Land*	Leased-in*
a	Paddy				c	Vegetables			
b	Millets				d	Any Others Crops			
Total Operational Holding									

4. Operational Holdings under Different Crops (in Acre)

Sl. No	Source	Expenditure Heads						Total Amount (in Rs.)
	Agriculture	Land Preparation	Transplantation / Sowing	Weeding	Fertilizers / Pesticides	Harvesting	Others	
1	a) Millet							
	b) Paddy							
	c) Vegetables							
	d) Any Other Crops (Specify)							
3	Households Expenses							
4	Other HH Expenses							
	Total							

4. Annual Expenditure:

5. Annual income of the HH (last year

6. Have you taken any agricultural loan 1-Yes 2-No If yes, please provide details.....

2. Household Particulars:

Sl. No	Name of the HH Members	Relationship with HoH (Use Code)	Age	Sex	Marital Status (Use Code)	Educational Qualification (Use Code)	Main		Subsidiary		Consume Millet (Yes/No)
							Occupation (Use Code)	Annual Income	Occupation (Use Code)	Annual Income	
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											

Codes: Marital Status: 1- Married, 2- Unmarried, 3- Widow, 4- Widower, 5- Divorced, 6- Separated, 7- Any Others (pl specify)

Relationship: 1-Self, 2- Spouse, 3- Son, 4- Daughter, 5- Daughter-in-Law, 6- Son-in-Law, 7- Father, 8-Mother, 9-Brother, 10-Sister, 11- Grandson, 12- Granddaughter, 13- Father- in-Law, 14- Mother-in-Law, 15- Any Other (Specify)

Education: 1- Illiterate, 2- Up to Class 5, 3- Class 6-10, 4- Higher Secondary, 5- Graduate, 6- Post-Graduate, 7- Technical (Diploma/Degree), 8- Professional/Management, 9- Any Other (Specify)

Occupation: 1- Agriculture, 2- Daily Wage Labour, 3- Business/Entrepreneurship, 4- Govt sector, 5- Private Sector, 6- Pension/Remittances 7- Student 8- Housewife, 9- Unemployed, 10- Others (pl. specify)

Part-II: Production of Millets

7. Do you cultivate millets?

1-Yes 2-No

If yes, give millet-wise production details

Sl. No.	Millet Crops	Season	Area (in Acre)	Land Type Used	Sources of Irrigation	Type of Seed Used	Source of Seed	Quality of Seeds	Method of Cultivation	Use of Fertilizer	Use of Pesticides	Production (Qnt.)	Kept for Seed (Qnt.)	Kept for Consumption (Qnt.)	For Marketing (Qnt.)
a	Mandia	Kharif													
		Rabi													
		Summer													
b	Suan/ Kosla /Gurji	Kharif													
		Rabi													
		Summer													
c	Koda	Kharif													
		Rabi													
		Summer													
d	Any other (specify)	Kharif													
		Rabi													
		Summer													

Land Type Used: 1-Upperland, 2-Slope Land, 3-Middle Land, 4-Low Land.

Sources of Irrigation: 1. Rain, 2. Farm Pond, 3- Stream, 4- MIP/WS, 5-River, 6- Canal, 7- Bore well, 8-Others(Specify).

Type of Seed Used: 1-Local, 2- Certified, 3-HYV. Source of Seeds: 1-Own Seed, 2- Relatives, 3-Market, 4- NGO, 5- Govt./ Community Seed Centre, 6-Others (pl. specify)

Quality of Seeds: 1. Good, 2. Average, 3. Bad

Method of Cultivation: 1) SMI- System of Millets Intensification, 2) LT- Line Transplantation, 3) LS- Line Showing, 4) Broadcasting, 5) Others (specify)

Use of Fertilizer: 1) Organic Manure, 2) Chemical Fertilizers, 3) Both, 4) No Use. Pest Control: 1) Bio-Pesticides, 2) Chemical Pesticides, 3) Both, 4) No Use

8. Whether you follow mixed farming or mono farming system? **1. Mixed 2. Mono**
If mixed, with which are the crops(s)?
9. How do you store your seed and grain?
(i) Jute Bag (ii) Earthen Pot (iii) Bamboo Basket (iv) Pura (paddy rope)
(v) Open Hanging (vi) Other (Specify)
10. Had your seed or grain got damaged during last year? **1. Yes 2.No**
11. Have you done weeding for the millets cultivation? **1. Yes 2. No**
12. If Yes, Number of times you do weeding in your millet fields, by each method?
1) Manually_____ 2) By Weeder_____ 3) Both_____
13. If By Weeder, Sources of weeder?
i) Own ii) Rental iii) Borrowed from Neighbours iv) Govt. Provided v) Other
14. If HH is not cultivating any of the millets, what is the reason?
(i) Not profitable (ii) Shortage of land (iii) Non-availability of Seeds
(iv) Lack of Irrigation (v) Others (pl. specify)
15. How many years have you not cultivated Millets.....?
16. Do you like to cultivate Millets under this programme? **1.Yes 2.No**

Part-III: Consumption of Millets

17. Does your households consume millets? **1. Yes 2. No**
If Yes, Types of millets your HH consumed in different seasons (Put Tick Mark)

Sl. No.	Name of the Millets	Winter				Summer				Rainy			
	Times	Breakfast	Lunch	Evening Snacks	Dinner	Breakfast	Lunch	Evening Snacks	Dinner	Breakfast	Lunch	Evening Snacks	Dinner
a	Mandia												
b	Suan/ Kosla / Gurji												
c	Koda												
d	Any Other Millets (Specify)												

18. **Millets Requirements of the HH:**

Sl. No.	Seasons	Millets Consumed (in Kg.)	Total Requirement of Millets (Kg.)	Sources of Millet Consumed by HH (in Kg)				Total
				Produced	Purchased	Borrowed/ Exchanged	Other Sources	
a	Winter							
b	Summer							
c	Rainy							
d	Total							

19. **Consumption of Millets in different Recipes (Put Tick Mark)**

Sl. No.	Name of The Millets	Pitha/ Tampo	Chhatua	Jau/ Torani	Khiri	Idli/ Upama	Sweets Items	Others (Specify)	Remarks
a	Mandia								
b	Suan/ Kosla/ Gurji								
c	Kodo								
d	Any Other Millets (Specify)								

20. Is there any special occasion when you prepare millets based items?

1. Yes 2. No

If yes, what is/are the occasion(s) (specify)? _____

21. For this what type of millet is required (specify)? _____

22. Do you purchase Millet Based Products from market for consumption?

1.Yes 2.No

23. If Yes, what are the millets-based items you usually purchase from the market?

1. Biscuit/Mixture 2. Idli/Upama 3. Chhatua 4. Pakoda 5. Others (Specify)

24. How do you like the taste of millet-based products you purchased from market?

1. Liked it 2. So-so 3. Do not Like it

Part-IV: Processing of Millets

25. Do you process the millet products in your house?

1.Yes 2.No

26. If Yes, who among your family members involved in the processing of millets?

i). Nos. of Male members _____. ii). Nos. of Female members _____

27. How do you process the millets? a) Traditionally b) Machinery c) Both d) Others (Specify)

28. If traditionally, please elaborate the methods of processing.

29. If Machinery, how far is the location of the processing unit from your village? _____ km

Part-V: Marketing of Millets

Sl. No.	Millet Crops	Yes /No	Sources of Millets You Sale	Quantity	Price / Kg.	Govt. Price (MSP)	Where did you sell your millets	Distance in Km	Mode of Transportation Used for Millets Sale	Reason for Sale
a	Mandia									
b	Suan/ Kosla /Gurji									
c	Koda									
d	Any other (specify)									

Sources of Millets You Sell: 1. Own Produced, 2. Purchase from Farmers, 3. Others (Specify)

Where Sold Your Millets: 1. Govt. *Mandi*, 2. Middlemen/ Local Businessman, 3. Moneylender/ *Sahukar*, 4. Daily market/ Haat
5. Others (pl. specify)

Mode of Transportation: 1. Headload, 2. Cycle, 3. Cart, 4. Own Vehicle, 5. Hired Vehicle, 6. Public Transport, 7. Others (Specify)

Reason for Sale: 1. Better Price, 2. Immediate Need of Cash, 3. Loan Repayment, 4. Non-Availability of Market, 5. Any Others (specify)

30. Do you sell millets?

1. Yes 2 . No

31. Types of Millets, you Sell and Quantity

32. Any instance of distress sale (less than the market price) of Millets? **1.Yes** **2.No**

33. If yes, what is the sale price and what is the market price.....

34. What are the marketing processes followed by you? a) Barter b) Money c) Others (specify)

35. Do you sell any millet based value-added products? **1.Yes** **2.No**

36. If yes, provide the details about the Millet Based Value Added Products you sale.

37. Remarks

Contact no of Respondent

Signature of the Researcher/Field Investigator

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