

BASELINE SURVEY: PHASE VI

KALAHANDI DISTRICT

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



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



ନବକୃଷ୍ଣ ଚୌଧୁରୀ ଉନ୍ନୟନ ଗବେଷଣା କେନ୍ଦ୍ର
Nabakrushna Choudhury Centre for Development Studies
ICSSR Institute in Collaboration with Government of Odisha

BASELINE SURVEY: PHASE VI

KALAHANDI DISTRICT

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



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



ନବକୃଷ୍ଣ ଚୌଧୁରୀ ଉନ୍ନୟନ ଗବେଷଣା କେନ୍ଦ୍ର
Nabakrushna Choudhury Centre for Development Studies
ICSSR Institute in Collaboration with Government of Odisha

Citation: "Baseline Survey: Kalahandi District 2022, Phase VI (Special Programme for Promotion of Millets in Odisha or Shree Anna Abhiyan, SAA)" Nabakrushna Choudhury Centre for Development Studies, Bhubaneswar.

©Copyright: Nabakrushna Choudhury Centre for Development Studies (NCDS)

STUDY TEAM

Dr. Sandhya R. Mahapatro

Project Director, SAA

Dr Biswabas Patra

Associate Project Director, SAA

Research Associate

Dr. Doleswar Bhoi

Project Associate

Mr. Sneh Srivastava

Research Assistant

Ms. Mimansa Sahoo



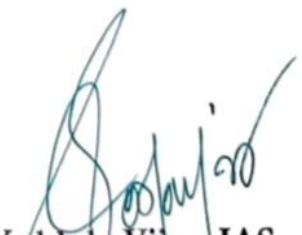
ନବକୃଷ୍ଣ ଚୌଧୁରୀ ଉନ୍ନୟନ ଗବେଷଣା କେନ୍ଦ୍ର
Nabakrushna Choudhury Centre for Development Studies
ICSSR Institute in Collaboration with Government of Odisha

FOREWORD

It is with great pleasure that I extend my warmest greetings to you through this foreword letter, reflecting on the remarkable journey of the "Special Programme for Promotion of Millets in Odisha," fondly referred to as the Shree Anna Abhiyan, SAA. The roots of the SAA delve deep into a significant consultation meeting convened on 27th January 2016 at the Nabakrushna Choudhury Centre for Development Studies (NCDS). Chaired by Mr. R. Balakrishnan, the then Development Commissioner-cum-Additional Chief Secretary (DC-cum-ACS) of the Government of Odisha and Chairperson, NCDS, this gathering brought together a diverse array of stakeholders. Representatives from various line departments of the Government of Odisha, esteemed members of civil society groups from across the nation and within the state, including notable organizations like the Alliance for Sustainable and Holistic Agriculture (ASHA), the Millets Network of India (MINI), and the Revitalizing Rain-fed Agriculture (RRA) Network of India, graced the occasion. Distinguished figures from academia, such as Dr. T. Prakash, the then Chairperson of the Karnataka Agricultural Price Commission, lent their expertise to the discourse.

NCDS took the initiative to submit a proposal to the Government of Odisha, emphasizing the imperative to revive millet production in the state. The resounding impact of this proposal was swiftly acknowledged, evident in the budget speech delivered on 18th March 2016 by the Government of Odisha, which articulated their commitment to reviving millets. This pivotal moment marked the inception of a journey marked by collaboration, dedication, and transformative action. Subsequently, a memorandum of understanding (MoU) was signed on 27th February 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 target blocks of the SAA. These surveys, designed to evaluate the status of millet production, marketing, consumption, and processing, represent a critical step towards informed intervention and strategic decision-making.

As the Director of NCDS, I extend my heartfelt appreciation to all the members of our dedicated team for their unwavering commitment and tireless efforts in realizing the objectives of the SAA. Your diligence and perseverance have been instrumental in bringing our collective vision to fruition. I extend my deepest gratitude to all our partners, stakeholders, and collaborators for their invaluable support and steadfast dedication to the cause of promoting millets in tribal areas of Odisha, especially completion of the Baseline Study, 2022. Together, let us continue to forge ahead, leaving an indelible mark on the landscape of sustainable agriculture and rural development.



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, 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 Kalahandi 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

Kalahandi district is one of the 17 districts where the “Special Programme for the Promotion of Millets in Odisha or (hereafter) Shree Anna Abhiyan (SAA)” Phase VI has begun in the Kharif 2021 in its four blocks, namely Golamunda, Koksara, Karlamunda and M. Rampur. Under the Baseline Study, 2022 a total 320 households were selected through the random sampling method.

The socio-economic profile reveals a predominantly tribal and agrarian population facing significant economic vulnerabilities and inadequate living conditions. Over half of the surveyed households belong to Scheduled Tribes, particularly concentrated in M. Rampur block. The demographic structure is largely workforce-driven, with adults aged 19 to 44 constituting the largest segment, while educational attainment is limited, with 18.12% of individuals being illiterate. Housing conditions are poor, as more than 70% of households reside in katcha (temporary) structures, though nearly all households possess ration cards, indicating access to government welfare programs. The local economy is heavily reliant on agriculture, engaging over one-third of households, with formal sector employment being almost non-existent and unemployment rates considerable. Annual income distribution underscores widespread economic fragility, as the majority of households earn between 40,000 and 80,000 rupees. Landholding patterns are characterized by small and marginal ownership, with no landless households identified.

In terms of millet production, the survey found that nearly all surveyed households (99.06%) cultivate millets, specifically Mandia, alongside paddy. Ragi cultivation was observed across 317 households, covering 365.49 acres and yielding 909.4 quintals, with Koksara exhibiting the highest area, production, and yield. A significant majority (94.69%) of households utilize "Desi" (traditional) seeds, with only a small fraction (5.31%) using hybrid varieties. The most common cultivation practices include Line Transplanting (35.96%) and Line Sowing (30.6%), while the System of Millet Intensification (SMI), considered more efficient, was adopted by 29.97% of farmers, notably higher in M. Rampur. Broadcasting, an inefficient method, was minimally used.

Regarding consumption patterns, millets are most widely consumed during the summer season, followed by the rainy and winter seasons, with Karlamunda showing the highest total average consumption. Millets are primarily consumed at breakfast (40.48%) and lunch (30.61%), with minimal consumption at dinner. Traditional recipes such as "Tampo/Pitha" (92%), "Jau/Torani" (80%), and "Khiri" (67%) are highly popular, whereas modern millet-based preparations like "Idli/Upma" and "Sweets" have limited adoption, and "Cake" or "Handia" are not consumed.

Millet processing predominantly relies on manual methods (68.44% of households), reflecting limited access to modern machinery, although 25.63% reported using a combination of manual and machine-based methods. Koksara exhibits complete dependence on manual processing, while Golamunda shows nascent signs of mechanization. In terms of marketing, nearly all households (98%) sell millets, underscoring its importance as an income source. However, instances of distress sales, although few (5 households in total), were reported, particularly in Karlamunda, highlighting underlying economic vulnerabilities and the need for improved market linkages and support mechanisms. The findings collectively emphasize the necessity for targeted interventions to enhance education, diversify livelihoods, improve infrastructure, promote modern processing technologies, and strengthen market support for millet farmers in the Kalahandi district.

CONTENTS

Sl.	Title	Page
	<i>Foreword</i>	<i>i</i>
	<i>Acknowledgement</i>	<i>ii</i>
	<i>Executive Summary</i>	<i>iii</i>
	<i>Contents</i>	<i>iv</i>
	<i>List of Tables</i>	<i>v</i>
	<i>List of Figures</i>	<i>vi</i>
	<i>Abbreviations</i>	<i>vii</i>
Chapter I	Introduction	1-7
1.1	Background	1
1.2	District Profile	2
1.3	Objectives	5
1.4	Methodology	5
1.5	Limitations of the study	6
1.6	Chapters	7
Chapter II	Socio-economic Profile	8-14
2.1	Introduction	8
2.2	Social and Demographic Profile	7
2.3	Distribution of Population by their Sex	9
2.4	Population Distribution by Age Groups	9
2.5	Religious Distribution	10
2.6	Education Status	10
2.7	Type of House	10
2.8	Ration card Holding status	11
2.9	Occupation	12
2.11	Annual Income	12
2.12	Land ownership Pattern	13
2.13	Conclusion	14
Chapter III	Production of Millets	15-17
3.1	Introduction	15
3.2	Cropping pattern of Households	15
3.3	Area, Production and Yield of millets	15
3.4	Types of Millets Seeds Used by Households	16
3.6	Package of Practices	17
3.7	Reasons for not Cultivating Millets	17
3.8	Conclusion	17
Chapter IV	Consumption of Millets	18-20
4.1	Introduction	18
4.2	Quantity of Consumption	18
4.2	Millets consumption across seasons	19
4.3	Consumption of Millets during Different Meals of the Day	19
4.4	Consumption of Different Millets Recipes	20
4.5	Conclusion	20
Chapter V	Processing and Marketing of Millets	21-24
5.1	Introduction	21
5.2	Processing of Millets	21
5.3	Marketing	22
5.4	Distress sell	23
5.4	Conclusion	24

LIST OF TABLES

<i>Sl.</i>	<i>Title</i>	<i>Page</i>
Table 1.1	Socio-economic and Demographic Features of Kalahandi District	4
Table 1.2	Sample Households in Kalahandi District	6
Table 2.1	Distribution of Households by Social Groups across Blocks	8
Table 2.2	Distribution of Population by Gender across Blocks	9
Table 2.3	Distribution of Households by ration card status across Blocks	10
Table 2.4	Distribution of Households by Economic Activities across Blocks	10
Table 2.5	Distribution of Households by House Structure across Blocks	11
Table 3.1	Area, Production and Yield of Millet in Kalahandi District	13
Table 3.2	Perception of Respondents regarding Quality of Seeds Used	13
Table 3.3	Package of Practices for Millets Cultivation in selected blocks	14
Table 4.1	Millets Consumption during different Meals of the Day	16
Table 4.2	Season wise millet Consumption	17
Table 4.3	Distribution of HHs Consumed different Millet Recipes across blocks	18
Table 5.1	Different Methods of Processing Millets	21
Table 5.2	Processing Units Outside Village	22
Table 5.3	Households Marketing of Millet	23
Table 5.4	Distribution of HHs Selling Points of Millets	24
Table 5.5	Incidences of Distress sale	25

LIST OF FIGURES

<i>Sl.</i>	<i>Title</i>	<i>Page no.</i>
Fig 1.1	Map of Kalahandi District with Blocks	3
Fig 2.1	Distribution of Households by Social Groups	8
Fig 2.2	Distribution of population by Gender	9
Fig 2.3	Distribution of HHs by Ration card holding status	9
Fig 2.4	Distribution of HHs economic Activities	10
Fig 2.5	Distribution by House structure	11
Fig 3.1	Area, Production and Yield	12
Fig 3.2	Perception of HHs regarding quality of seeds	13
Fig 4.1	Millet Consumptions in Different Meals of the day	15
Fig 4.2	Season Wise Millets Consumption	17
Fig 5.1	Methods of Millets Processing	20
Fig 5.2	Selling points of Millets	23

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 Transplant
ITDA	:	Integrated Tribal Development Agency
MDM	:	Mid-Day Meal
MFP	:	Minor Forest Produce
MSP	:	Minimum Support Prices
NAL	:	Non-Agricultural Labour
NCDS	:	Nabakrushna Choudhury Centre for Development Studies
NSSO	:	National Sample Survey Organization
OBC	:	Other Backward Classes
OMM	:	Odisha Millets Mission
PDS	:	Public Distribution System
PVT	:	Participatory Variety Trial
Qtls	:	Quintals
SAA	:	Shree Anna Abhiyan
SC	:	Scheduled Caste
SMI	:	System of Millet Intensification
ST	:	Scheduled Tribe
WASSAN	:	Watershed Support Services and Activities Network

Chapter I

INTRODUCTION

1.1 Background

Millets have been a staple food for millions of people in India for centuries, especially in the central tribal belts. They are drought-resistant, highly nutritious, and can be cultivated in a wide range of soil and climatic conditions. Millets are also low in Glycemic index and gluten-free, making them an ideal choice for people with various health conditions. In recent times, there has been a renewed interest in millets cultivation due to its numerous health benefits and its potential to address food security challenges in the country. The Government of India has been promoting the cultivation of millets as part of its efforts to increase farmers' incomes, reduce dependence on water-intensive crops like rice, and promote sustainable agriculture. In this context, it is essential to understand the significance of millets cultivation and its associated challenges and opportunities.

Millets are cereal grain belonging 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.

The United Nations designating 2023 as the International Year of Millets, it helps this mission to gets further attention of general public including the farmers and agriculturist. In the Indian state of Odisha, millets have always been an integral part of the traditional diet and have been cultivated for centuries, primarily among the tribal population. However, during last couple of decades, the popularity of millets has declined due to the increasing adoption of modern food habits and the promotion of high-yielding crops like rice and wheat. This shift has led to a decline in soil fertility and an increased vulnerability to climate change. To address these challenges, the Government of Odisha has launched several initiatives to promote the cultivation of millets, including “The Special Programme for Promotion of Millets in Odisha (also known as SAA) with a novel organisational structure was initiated by the Government of Odisha in 2017-18 emphasising production, consumption, processing, and marketing of millets. The program aims to increase production, consumption, processing, and marketing of millets in tribal areas, where they have been a staple food for generations. In this context, it is crucial to understand the significance of millets cultivation in Odisha and its potential to promote sustainable agriculture and improve food security. Among other millets found in Odisha, Mandia constitutes a significant share of about 95 per cent.

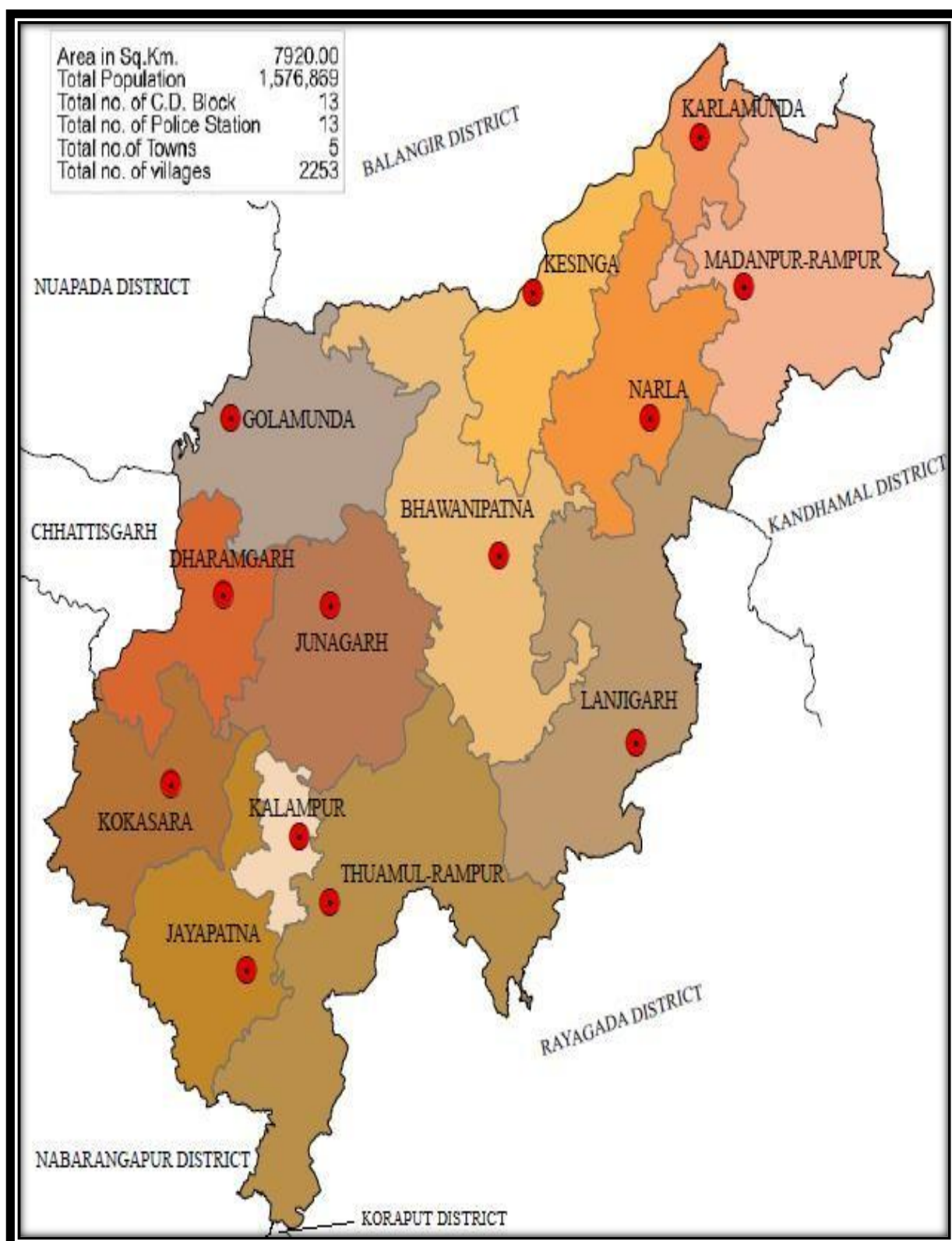
Shree Anna Abhiyan (SAA) program tried to revive these nutrient-rich millets in the agricultural

landscape, which were fading away after its launch in 2017-18 by the Government of Odisha. It aimed to promote the production, consumption, processing, and marketing of millets, with a particular focus on tribal areas. The program had a unique structure that emphasized cultivating traditional millets such as Ragi, Gurji, Kosla (small millet), Kodo, Kangu (foxtail millet), and Jowars, which were forest dwellers' age-old foods. This initiative gave millet crops the much-needed attention they deserved and revived their growth across the state. In 2021, the implementation of SAA phase VI began in 17 districts, including Kalahandi district and this baseline study aims to provide information on the program's dimensions in the district. The profile of the Kalahandi district is presented below.

1.2 District Profile

Kalahandi lies between 19.17° to 20.46° North latitude and between 82.61° to 83.80° East longitudes. It is bounded by Kalahandi district in the north, Kandhamal district in the east, Rayagada district in the east and south, Koraput district in the south, Nabarangpur district in the south and west, Chhattisgarh state as also Nuapada district in the west (Fig 1.1). The district of Kalahandi has an area of 7920 Sq. km and 15.8 Lakh of population as per 2011 Census. The district accounts for 5.1 per cent of the state's territory and 3.8 per cent of the State's population. The density of population of the district is 199 persons per sq. km as against 270 persons per sq.km for the state. The district has 2253 villages that are spread over 13 blocks.

Fig1.1Map of Kalahandi district with Blocks



Source: <https://gisodisha.nic.in/Block/KALAHANDI.pdf>

Table1.1: Socio-Economic and Demographic Features of Kalahandi	
<i>Indicators</i>	<i>Value</i>
Census – 2011	
Population (In Lakh)	15.7
Male (In Lakh)	7.8
Female (In Lakh)	7.9
Scheduled Caste (In Lakh)	2.9
Scheduled Tribe (In Lakh)	4.5
Others (In Lakh)	8.4
Household (In Lakh)	4.0
Average HH Size	3.9
Sex Ratio	1003
Total Worker (In Lakh)	7.5
Main Worker (In Lakh)	3.8
Marginal Worker (In Lakh)	3.7
Non-Worker (In Lakh)	8.2
Work Participation Rate (WPR, %)	47.7
Cultivator as % of Total Worker	19.3
Agricultural Laborers as % of Total Worker	58.1
Literacy Rate (%)	59.2
Total Geographical Area (sq.km)	7920
Land Use Pattern (Area in '000ha),2014-15	
Forest	101.2
Land put to Non-agricultural use	46.4
Barren and Non-Cultivable Land	34.5
Permanent Pasture and Other Agricultural Land	25.1
Net Area Sown	244.4
Cultivable Wasteland	25.5
Old Fallow	30.2
Current Fallows	70.9
Miscellaneous Trees and Groves	2.2
Total Area under Survey	580.4
Agriculture, 2014-15	
Average Fertilizer Consumption (kg/ha)	54.5
Irrigation, Kharif ('000ha)	146.9
Irrigation, Rabi('000ha)	111.3
Other Information	
Proportion of Villages Electrified (as on March 2014)	100.0
Credit Deposit Ratio (as on December 2015)	68.1
No. of Anganwadi Centers, 2014-15	2185
No. of Job Card Issued (cumulative, March 2015)	301865
HH provided employment as % of demand, MGNREGS cumulative 2014-15	81.9

Source: District Statistical Hand Book, Kalahandi, 2015

As per 2011 Census, the Scheduled Caste (SC) population is 17.7 per cent and Scheduled Tribe (ST) population is 28.7 per cent, Table 1.1. There are 36 communities from among SCs and 46cSAAunities from among STs in the district. Among the STs, 12 tribal communities consisting of *Kaniha*, *Gond*, *Shabar*, Bhottada, Paroja, *Banjara*, *Munda*, *Holva*, *Saora*, *Kondadora*, *Mirdha* and *Binjhal* (mentioned in a descending order as per their share in the tribal population of the district and each of them having more than 1000 persons in the district) constitute more than 98 per cent of the total tribal population of the district. The literacy rate of the district is 59.2 per cent as against 72.9 per cent of the State. The languages spoken by the people of this district are Odia, Telugu, Hindi, English, and different tribal languages.

The characteristic of soil in the district is as follows: 54 per cent of clay and sandy loams soil, 32 percent red soil and 14 per cent black soil (*District Human Development Report: Kalahandi*, Planning and Coordination Department, Government of Odisha, 2012, p.8). Land under cultivation in the district may be classified as: (a) *Aatt* lands (unbounded low fertile rain fed uplands), (b) *Maal* lands (bounded uplands terraced to catch run-off, low fertile and rain fed), (c) *Berna* lands (medium lands with average fertility), (d) *Bahal* lands (plain fertile land suitable for paddy cultivation), (e) *Dongar* lands (lands in hill slopes occasionally used for slash and burn/shifting cultivation or *Podu*, and (f) *Bari* lands (adjacent to homesteads, generally used for growing kitchen gardens). From these, millets can be grown in *Aatt*, *Maal*, *Berna* and *Dongar* lands.

1.3 Objectives

The objectives of the baseline survey were to obtain information on proposed interventions under SAA around production, consumption, processing and marketing. 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 millets production, productivity and package of practices;
- To examine the consumption pattern of millets and
- To elucidate the method of processing and mode of marketing.

1.4 Methodology

1.4.1. Sample Design

Multi-stage sampling method has been used to select the sample HHs. In the first stage, Kalahandi District has been selected purposively for the study as it is one of the seven districts where state Government has introduced this programme. In the second stage, four blocks namely Golamunda, Koksara, Karlamunda, M. Rampur has been selected purposively. In the third stage, two GP from each block has been randomly selected, and in the last stage, 20 HHs from each village have been randomly selected. Therefore, the total number of 320 HHs from sixteen villages' and eight GP has been randomly selected for this study. The details have been presented in the following table.

Table 1.2: Sample households in Kalahandi District				
Blocks	Programme Households (No)	Sample Households (No)	% of Target Sample Households	% of HHs Covered under the Survey to Programme HHs
Golamunda	563	80	100	14.20
Karlamunda	570	80	100	14.03
M. Rampur	706	80	100	11.33
Koksara	302	80	100	26.49
Total	2141	320	100	14.94

Sources: Field Survey and Facilitating Agency, 2022

1.4.2 Data Collection, Compilation and Analysis

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

This baseline survey report is based on both secondary and primary data. The primary data was collected from the respondents in the concerned districts by using a pre-tested interview schedule (Annexure 1) and Focus Group Discussion (Annexure 2). The secondary data on the geographical information, population, agriculture, education, irrigation, forest and institutions has been collected by using various published and unpublished sources including the 2011 Census. In addition, to supplement and complement the findings made under the Baseline Survey, Focused Group Discussions (FGDs) were conducted in each selected village.

1.5 Limitations of the Study

The present Baseline Survey focuses solely on Four Blocks of the Kalahandi 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 320 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, sample 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 to measure the progress made in the future.

1.6 Chapters

The baseline survey has been divided into six Chapters including the current Introductory Chapter, which provides District Profile, Objectives, Methodology and Limitations. Chapter II provides Socio-economic Profile of Surveyed HHs. Chapter III provides details on Production and Productivity of Millets. Chapter IV discusses Consumption Pattern of Millets. Chapter V discusses on the Processing and Marketing of Millets.

Chapter II

SOCIO-ECONOMIC PROFILE

2.1 Introduction

This chapter looks into social and demographic profile of HHs surveyed that is their distribution by social group, religion, and gender. In addition, for the HHs surveyed, it provides the distribution by population of ration cards, economic activities and type of houses. It also provides information about the distribution of households by their landownership and operational holdings.

2.2 Social and Demographic Profile

Out of 13 blocks of Kalahandi District, in phase VI, total 320 sample households have been surveyed across the four selected blocks namely, Golamunda, Koksara, Karlamunda, and M. Rampur. Fig 2.1 and Table 2.1 shows that majority of social group belongs to Other Backward Classes (OBC) which is 39.38 per cent followed by SC category which is 6.25 per cent. On the other hand, ST category occupies 54.38 per cent. Interestingly, no sample HH belong to General category.

The block-wise distribution of sample HHs by their social category reveals that SC, ST and Other are found in all the four surveyed blocks. However, the percentage have STs are much more in M.Rampur (90.00 per cent) and Golamunda (76.30 per cent) blocks compare to other two blocks. In these blocks OBCs are the dominated social groups.

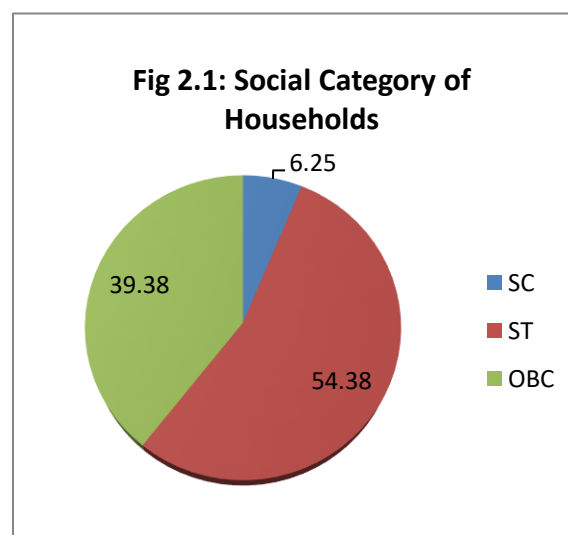


Table 2.1 Distribution of households by Social Group										
Social Category	Golamunda		Koksara		M. Rampur		Karlamunda		Total	
	HHs	%	HHs	%	HHs	%	HHs	%	HHs	%
SC	4	5.00	5	6.25	1	1.25	10	12.5	20	6.25
ST	61	76.30	23	28.75	72	90.00	18	22.5	174	54.38
OBC	15	18.75	52	65.00	7	8.75	52	65.00	126	39.38
Total	80	100	80	100	80	100	80	100	320	100

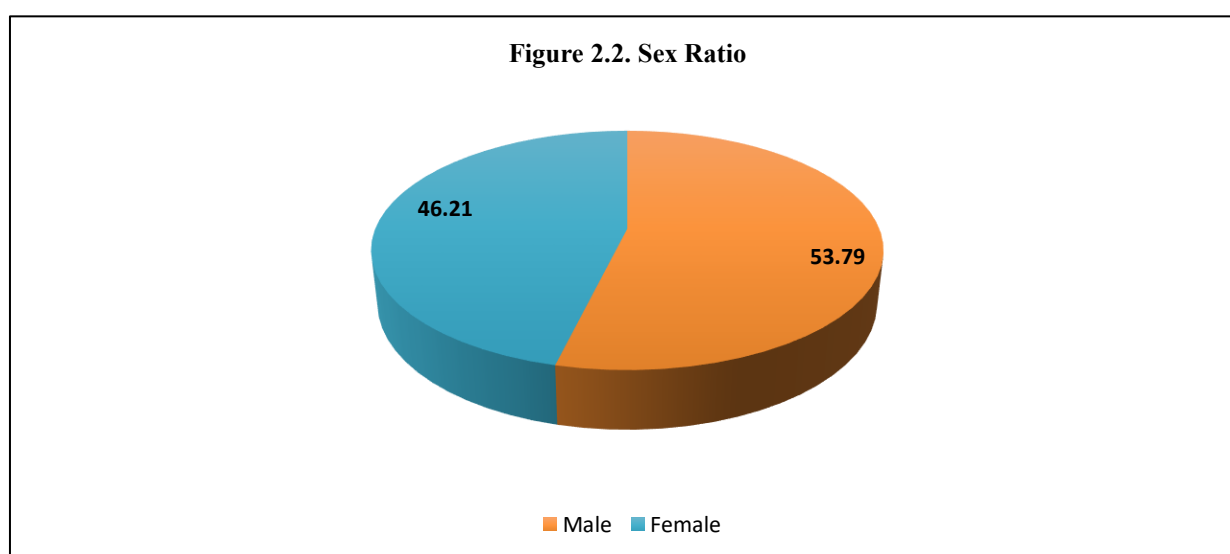
Source: Baseline Survey, 2022

2.3 Distribution of population by their sex

Total population from the surveyed HHs is 1253; the share of male population was higher than the female population. From the total population, 53.79 per cent were male and 46.21 per cent were female. According to block wise surveyed data, this gap is slightly high in Golamunda block as compared to other three blocks. The detailed distribution of population is represented in the following Table 2.2.

Table 2.2 Gender Distribution of Population										
Gender	Golamunda		Koksara		M.Rampur		Karlamunda		Total	
	Person	%	Person	%	Person	%	Person	%	Person	%
Male	175	52.24	152	51.88	184	55.26	163	55.82	674	53.79
Female	160	47.76	141	48.12	149	44.74	129	44.18	579	46.21
Total	335	100.00	293	100.00	333	100.00	292	100.00	1253	100.00

Source: Baseline Survey, 2022



2.4. Distribution of sample population by their age group

The distribution of members of surveyed households across different age groups reveals notable demographic patterns in the study area as presented in Table 2.3. Out of a total population of 1253 individuals, infants aged 0 to 2 years constitute 1.36 per cent, with Karlamunda reporting the highest share at 2.74 per cent, while Koksara reported no infants in the surveyed households. The proportion of pre-school children aged 3 to 5 years is 4.55 per cent, with minor variations across blocks. Children aged 6 to 12 years account for 10.22 per cent of the total population, with a slightly higher concentration in Koksara at 12.29 per cent. Adolescents in the age group of 13 to 18 years constitute 13.09 per cent, with the highest share observed in M. Rampur at 14.71 per cent. Adults in the age group of 19 to 44 years form the largest group, comprising 41.42 per cent of the total, with Koksara reporting the highest proportion at 48.12 per cent. The middle-aged population aged 45 to 59 years accounts for 22.51 per cent, with the highest representation in Karlamunda at 28.42 per cent. Older adults aged 60 years and above make up 6.86 per cent of the total population, with Golamunda having the highest proportion at 10.15 per cent and Koksara the lowest at 3.41 per cent. Overall, the adult population dominates the age structure, reflecting a workforce-driven demographic profile, while the relatively lower share of older adults and infants indicates a youthful but gradually ageing population.

Table 2.3. Distribution of Members of Surveyed Households by their age group															
Districts	Total	Infant		Pre-School		Children		Adolescent		Adults		Middle Age		Old	
		(0-2 Year)		(3-5Year)		(6-12 Year)		(13-18 Year)		(19-44 Year)		(45-59 Year)		(60 Year & Above)	
	No.	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Golamunda	335	5	1.49	17	5.07	38	11.34	48	14.33	119	35.52	74	22.09	34	10.15
Koksara	293	0	0.00	17	5.80	36	12.29	24	8.19	141	48.12	65	22.18	10	3.41
M.Rampur	333	4	1.20	15	4.50	37	11.11	49	14.71	146	43.84	60	18.02	22	6.61
Karlamunda	292	8	2.74	8	2.74	17	5.82	43	14.73	113	38.70	83	28.42	20	6.85
Total	1253	17	1.36	57	4.55	128	10.22	164	13.09	519	41.42	282	22.51	86	6.86

Source: Baseline Survey, 2022

2.5 Distribution of the Respondent HHs by their Religion

The religious distribution of the surveyed households across the four selected blocks reveals that overwhelming presence of Hindu HHs under the Baseline Survey 2022, Phase VI of Kalahandi district. It shows that in across all the block all sample households are belongs to Hindu.

2.6. Educational Status of Sample Household Members

The educational status of members of the sample households is presented in Table 2.4 and highlights considerable variations across the surveyed districts. Out of a total of 1253 individuals, 18.12 per cent are illiterate, with the highest proportion found in Golamunda at 34.93 per cent, considerably higher than in other districts. The share of individuals with primary education stands at 28.25 per cent, with Koksara reporting the highest at 33.79 per cent. Those with secondary education constitute the largest group at 34.88 per cent, with Karlamunda and Koksara showing relatively higher proportions at 38.70 per cent and 39.59 per cent respectively. Higher secondary education is attained by 8.86 per cent of the population, with M. Rampur recording the highest share at 11.41 per cent. Only 3.51 per cent of individuals have completed graduation, with the highest proportion in M. Rampur at 5.41 per cent. Post-graduates account for a mere 0.56 per cent of the total population, with negligible differences across districts. The category of others, which may include vocational or informal education, constitutes 5.83 per cent of the surveyed population. Overall, while secondary education is fairly widespread, the data reflects significant educational deprivation, especially in terms of higher education, with illiteracy rates remaining high in specific regions like Golamunda

Table 2.4. Educational Status of members of Sample Households																
Districts	Illiterate		Primary		Secondary		Higher Secondary		Graduation		Post-Graduate		Others		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Golamunda	117	34.93	79	23.58	98	29.25	12	3.58	7	2.09	1	0.30	21	6.27	335	26.74
Koksara	32	10.92	99	33.79	116	39.59	31	10.58	1	0.34	1	0.34	13	4.44	293	23.38
M.Rampur	42	12.61	101	30.33	110	33.03	38	11.41	18	5.41	4	1.20	20	6.01	333	26.58
Karlamunda	36	12.33	75	25.68	113	38.70	30	10.27	18	6.16	1	0.34	19	6.51	292	23.30
Total	227	18.12	354	28.25	437	34.88	111	8.86	44	3.51	7	0.56	73	5.83	1253	100

Source: Baseline Survey, 2022

2.7. Type of House

The distribution of house structure across the surveyed blocks is presented in Table 2.6, highlighting significant variations in housing conditions. Out of a total of 320 households, a majority, 71.88 per cent, reside in katcha houses, reflecting poor housing conditions, with the highest proportion

observed in Golamunda at 86.25 per cent. The proportion of pucca houses is relatively low at 8.75 per cent, though Karlamunda reports a comparatively better situation with 18.75 per cent of households living in pucca structures. Semi-pucca houses account for 19.38 per cent of the total, with M. Rampur showing the highest concentration at 35 per cent. Overall, the data indicates that the housing condition across the blocks is predominantly katcha, reflecting the states of their poverty.

Table 2.5: Distribution of House structure across Blocks										
Type of Household	Golamunda		Koksara		M.Rampur		Karlamunda		Total	
	N	%	N	%	N	%	N	%	N	%
Katcha	69	86.25	58	72.50	48	60	55	68.75	230	71.88
Pucca	5	6.25	4	5.00	4	5	15	18.75	28	8.75
Semi-pucca	6	7.50	18	22.50	28	35	10	12.50	62	19.38
Total	80	100	80	100	80	100	80	100	320	100

Source: Baseline Survey, 2022

2.8. Ration Card Holders

Table 2.3 and Fig 2.3 show the distribution of sample households by their possession of ration card. It shows that out of 320 sample households, a very significant majority i.e., 99.38 per cent households possess ration card. The block wise distribution of sample households by their ration card possession reveals that in Golamunda and Karlamunda blocks highest 98.75per cent sample households possess ration card, while in Koksara and M. Rampur blocks all the sample households possess ration card.

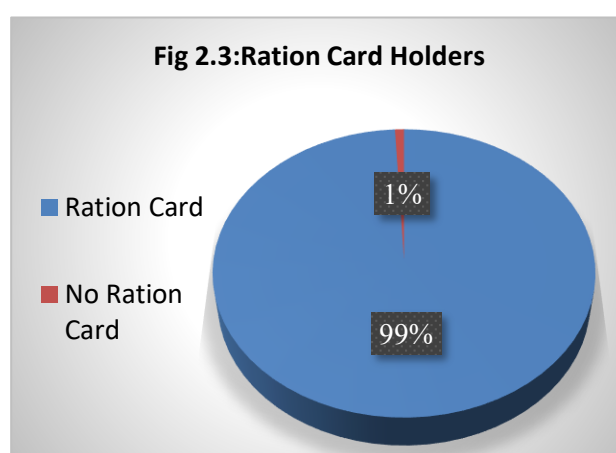


Table 2.6: Distribution Of Households By Ration Card Across Blocks										
Blocks	Golamunda		Koksara		M .Rampur		Karlamunda		Total	
	No	%	No	%	No	%	No	%	No	%
Having Ration Card	79	98.75	80	100	80	100	79	98.75	318	99.38
Having No Ration Card	1	1.25	0	0.00	0	0.00	1	1.25	2	0.62
Total	80	100	80	100	80	100	80	100	320	100

Source: Baseline Survey, 2022

2.9. Occupation

The distribution of households by occupation across the surveyed blocks, as shown in Table 2.8, highlights the predominance of agriculture and informal sectors in the local economy. Agriculture remains the major source of livelihood, engaging 36.39 per cent of households across the study area. The dependence on agriculture is particularly high in Koksara, where nearly 44.71 per cent of households are engaged in farming activities, followed by Karlamunda with 35.96 per cent and M. Rampur with 32.43 per cent. Daily labour constitutes the second most common economic activity, accounting for 6.62 per cent of households, with Golamunda reporting the highest share at 9.55 per

cent, reflecting the reliance on unskilled, casual labour in this block.

Formal sector employment is negligible, with no households engaged in government sector jobs across all blocks, and private sector employment remaining very low at 1.20 per cent. Business activities are also minimal, contributing only 0.32 per cent of total households, indicating a weak entrepreneurial environment. The artisan category is similarly limited, representing just 0.56 per cent of households.

A significant proportion of the population is engaged in non-income-generating roles. Housewives account for 27.05 per cent of the total, with the highest concentration in M. Rampur at 31.23 per cent. Students form 2.63 per cent of households, reflecting the presence of younger, dependent members still pursuing education. Unemployment levels are relatively high, affecting 15.88 per cent of households, with Golamunda reporting the highest unemployment rate at 17.91 per cent, pointing towards limited livelihood opportunities.

The category of others, which includes diverse activities not captured under the defined economic categories, constitutes 9.34 per cent of households. Overall, the findings reveal a predominantly agrarian and informal economy, with limited avenues for formal employment or entrepreneurship. The high unemployment rate, low engagement in skilled sectors, and the significant share of dependent populations like housewives and students underline the economic vulnerability of the region and the pressing need for livelihood diversification and skill development interventions.

Table 2.7: Distribution of Households by Economic Activities across Blocks										
Economic Activity	Golamunda		Koksara		M.Rampur		Karlamunda		Total	
	No.	%	No	%	No	%	No.	%	No	%
Agriculture	112	33.43	131	44.71	108	32.43	105	35.96	456	36.39
Daily Labour	32	9.55	10	3.41	22	6.61	19	6.51	83	6.62
Business	1	0.30	0	0.00	0	0.00	3	1.03	4	0.32
Private sector	3	0.90	2	0.68	5	1.50	5	1.71	15	1.20
Artisan	0	0.00	0	0.00	5	1.50	2	0.68	7	0.56
Student	7	2.09	2	0.68	9	2.70	15	5.14	33	2.63
House wife	76	22.69	82	27.99	104	31.23	77	26.37	339	27.06
Unemployed	60	17.91	51	17.41	53	15.92	35	11.99	199	15.88
Others	44	13.13	15	5.12	27	8.11	31	10.62	117	9.34
Total	335	100	293	100	333	100	292	100	1253	100

Source: Baseline Survey, 2022

2.9. Annual Income

The distribution of households by their annual income across the surveyed blocks is presented in Table 2.8, reflecting the overall economic status of the population. A sizable proportion of households, nearly 49.06 per cent, fall within the annual income bracket of 40,000 to 80,000 rupees, with the highest concentration in Karlamunda block at 52.50 per cent, followed closely by Koksara block at 55 per cent. Households with annual incomes ranging from 80,000 to 1,20,000 rupees constitute 36.25 per cent, with M. Rampur showing the highest proportion in this category at 46.25 per cent.

A relatively small share of households, only 8.44 per cent, earn up to 40,000 rupees annually, show that the households with extreme poverty and comparatively low.

Block wise data reveals that Golamunda reporting the highest share in this category at 15 per cent. Households earning between 1,20,000 and 1,60,000 rupees annually account for only 4.37 per cent of the total, while those with incomes between 1,60,000 and 2,00,000 rupees make up merely 0.63 per cent. Very few households, just 1.25 per cent, earn above 2,00,000 rupees annually, with M. Rampur and Karlamunda each reporting two such households.

Overall, the income distribution indicates a predominantly low-income profile of the surveyed households, with the majority concentrated in the lower-middle-income brackets. The limited presence of high-income households and a sizeable proportion of households earning below 80,000 rupees annually reflect their economic vulnerability.

Table 2.8 Distribution of HHs by their Annual Income (in Rs)													
Blocks	Up to		40000-		80000-		120000-		160000		Above		Total
	40000		80000		120000		160000		200000		200000		
	N	%	N	%	N	%	N	%	N	%	N	%	N
Golamunda	12	15	37	46.25	26	32.5	3	3.75	1	1.25	1	1.25	80
Koksara	3	3.75	44	55	30	37.5	3	3.75	0	0	0	0	80
M.Rampur	2	2.5	34	42.5	37	46.25	6	7.5	0	0	1	1.25	80
Karlamunda	10	12.5	42	52.5	23	28.75	2	2.5	1	1.25	2	2.5	80
Total	27	8.4375	157	49.0625	116	36.25	14	4.375	2	0.625	4	1.25	320

Source: Baseline Survey, 2022

2.10. Land Ownership

The distribution of the sample households by their land ownership status is presented in Table 2.10, highlighting the extent of landholding across the surveyed blocks. Notably, there are no landless households in the sample, indicating that all surveyed households possess some amount of land. A considerable proportion of households, accounting for 50.94 per cent, fall under the small landholding category with land sizes between 2.5 to 5 acres. This is particularly prominent in Koksara, where 63.75 per cent of households are small landholders, followed by M. Rampur with 53.75 per cent.

Marginal landholders, owning up to 2.5 acres of land, constitute 30.63 per cent of households, with the highest concentration observed in Karlamunda at 43.75 per cent, and Golamunda at 33.75 per cent. Medium landholders, with landholdings between 5 to 10 acres, represent 16.88 per cent of households, fairly evenly distributed across the blocks.

Table 2.9. Distribution of the sample households by their Land Ownership										
Blocks	Marginal		Small		Medium		Large		Total	
	(0 to 2.5 Ac)		(2.5 to 5 Ac)		(5 to 10 Ac)		(10 Ac. & above)			
	N	%	N	%	N	%	N	%	N	%
Golamunda	27	33.75	40	50	11	13.75	2	2.5	80	100
Koksara	14	17.5	51	63.75	15	18.75	0	0	80	100
M.Rampur	22	27.5	43	53.75	15	18.75	0	0	80	100
Karlamunda	35	43.75	29	36.25	13	16.25	3	3.75	80	100
Total	98	30.63	163	50.94	54	16.88	5	1.56	320	100

Source: Baseline Survey, 2022

Large landholders, owning more than 10 acres of land, account for a very small proportion, just 1.56

per cent of the total, with such households present only in Golamunda and Karlamunda. Overall, the data reflects a predominantly small and marginal landholding structure, indicative of limited agricultural resources and land fragmentation in the region. The absence of landless households suggests widespread, though often minimal, access to agricultural land among the surveyed population.

2.11. Conclusion

The socio-economic profile of the surveyed households in Kalahandi district reflects a predominantly tribal and agrarian population marked by low income levels, limited livelihood opportunities, and poor living conditions. Over half of the households belong to Scheduled Tribes, with a outstanding concentration in M. Rampur block. The population is largely workforce-driven, with adults aged 19 to 44 years forming the largest segment, while the proportion of older adults and infants remains relatively low. Educational attainment is limited, with 18.12 per cent of individuals being illiterate, and access to higher education remains minimal across all blocks. Housing conditions are inadequate, as over 70 per cent of households reside in katcha structures, though access to government welfare is evident through near-universal possession of ration cards. The economy is heavily dependent on agriculture, engaging over one-third of households, while formal sector employment is almost absent and unemployment levels are considerable. Income distribution reflects widespread economic vulnerability, with the majority of households earning between 40,000 to 80,000 rupees annually and only a small share reporting higher income. Landholding patterns reveal that most households are small or marginal landowners, with no landless households recorded. Overall, the findings shows the socio-economic challenges of the region and highlight the need for targeted interventions to improve education, diversify livelihoods, and strengthen rural infrastructure.

Chapter III

PRODUCTION OF MILLETS

3.1 Introduction

In this chapter an attempt has been made to throw some light on the status of production and productivity of millets, usage of seeds, and package of practices in Kalahandi district. From HHs surveyed in Golamunda, Koksara, Karlamunda and M. Rampur the analysis focuses on the distribution of area under millets and other crops, the usage of seeds and agronomic practices, as well as the production and yield of millets in the sampled villages. The chapter also highlights the challenges and opportunities for promoting millets in the district.

3.2. Cropping pattern of Households

The distribution of households by their cultivation of crops, as presented in Table 3.1, reflects a predominantly paddy and millet-based agricultural system across all surveyed blocks. Paddy cultivation is nearly universal, with 99.06 per cent of households engaged in it, and complete participation observed in M. Rampur. Similarly, millet cultivation is widespread, with 99.06 per cent of households cultivating millets, and only minor variations across blocks. Vegetable cultivation, however, remains limited, with only 3.44 per cent of households growing vegetables, the highest being in Koksara at 7.5 per cent. The cultivation of other crops shows considerable variation, with 100 per cent of households in Koksara engaged in it, followed by 60 per cent in Golamunda, while no households in M. Rampur reported cultivation of other crops. Overall, the data indicates heavy reliance on traditional crops like paddy and millets, with limited crop diversification, particularly in vegetable cultivation, highlighting the need to promote diversification for enhancing nutritional security and income opportunities.

Table 3.1. Distribution of HHs by their Cultivation of Crops									
Blocks	Total Sample HHs	Paddy		Millets		Vegetable		Others	
		N	%	N	%	N	%	N	%
Golamunda	80	79	98.75	80	100	3	3.75	48	60
Koksara	80	79	98.75	80	100	6	7.5	80	100
M.Rampur	80	80	100.00	79	98.75	1	1.25	0	0
Karlamunda	80	79	98.75	78	97.5	1	1.25	21	26.25
Total	320	317	99.06	317	99.06	11	3.44	149	46.56

Source: Baseline Survey, 2022

3.3 Area, Production and Yield

The data on Ragi cultivation across the selected blocks highlights significant variations in area, production, and yield. A total of 317 households cultivated Ragi over an area of 365.49 acres, producing 909.4 quintals. Among the blocks, Koksara recorded the largest area under Ragi cultivation (112.4 acres) and the highest production (311.8 quintals), accounting for nearly one-third of the total in both cases. Golamunda followed with 95.27 acres of land and 216.2 quintals of production. While M. Rampur and Karlamunda had comparatively lower cultivated areas and production levels, their

shares remained broadly equal to each other. In terms of yield, Koksara reported the highest productivity, with 2.77 quintals per acre and 3.90 quintals per household, indicating relatively better cultivation practices or resource conditions. By contrast, M. Rampur recorded the lowest yield per acre (2.26 quintals), whereas Karlamunda had the lowest yield per household (2.28 quintals). The overall average yield across the study area stood at 2.49 quintals per acre and 2.87 quintals per household, reflecting moderate productivity with considerable inter-block disparities.

Table-3.2: Area, Production and Yield of Ragi								
Blocks	Households		Area in Acre		Production (in Qntl)		Yield	
	No.	%	No	%	No.	%	Qtl/Ac	Qtl/HH
Golamunda	80	25.24	95.27	26.07	216.2	23.77	2.27	2.70
Koksara	80	25.24	112.4	30.75	311.8	34.29	2.77	3.90
M.rampur	79	24.92	90	24.62	203.5	22.38	2.26	2.58
Karlamunda	78	24.61	67.82	18.56	177.9	19.56	2.62	2.28
Total	317	100.00	365.49	100.00	909.4	100.00	2.49	2.87

Source: Baseline Survey, 2022

3.4 Types of Millets Seeds used by the Households

Seed quality plays vital role in production and yield of millets. Good quality seeds increase the production result in high yield. Table 3.3 and Fig 3.1 describe about HHs who have cultivated millets on the basis of their perception on quality of seed used in their fields for cultivation. It shows that 94.69 percent HHs used Desi seeds and only 5.31 per cent HHs used hybrid seeds.

Table 3.3: Perception of Respondent HHs on the Quality of Seeds being used										
Seed Variety	Golamunda		Koksara		M. Rampur		Karlamunda		Total	
	No	%	No	%	No	%	No	%	No	%
Desi	70	87.50	76	95.00	77	97.50	77	98.75	300	94.69
Hybrid	10	12.50	4	5.00	2	2.50	1	1.25	17	5.31
Total	80	100	80	100	79	100	78	100	317	100

Source: Baseline Survey, 2022

3.5 Package of Practices

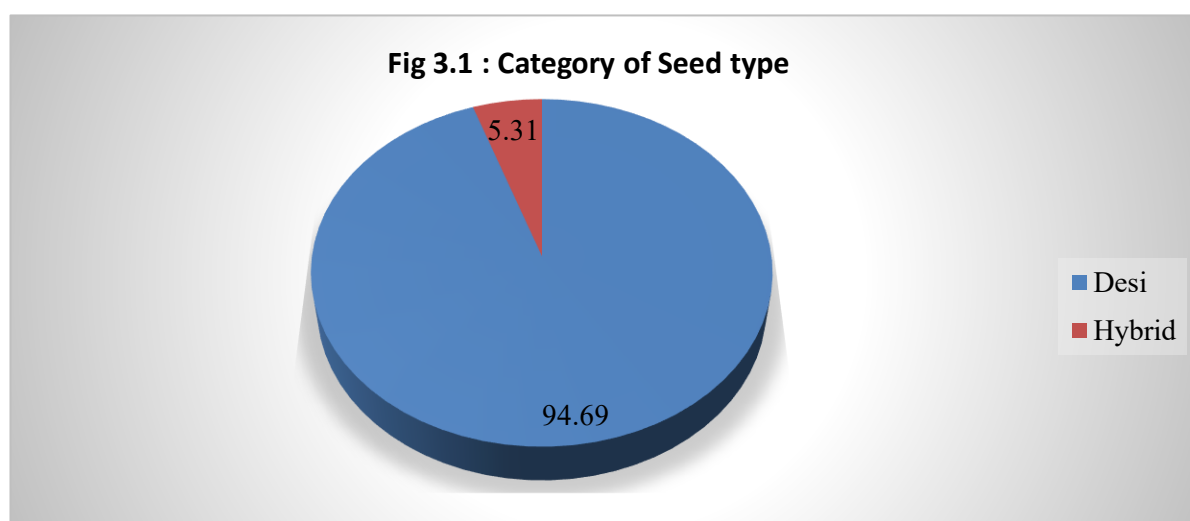


Table 3.4 presents the distribution of different package of practices adopted for millet cultivation across the selected blocks. Understanding the package of practices is crucial as it directly influences productivity, resource use efficiency, and overall crop performance. The data reflects considerable variation in the adoption of cultivation methods among farmers in different blocks. The System of Millet Intensification (SMI), which is regarded as a more scientific and resource-efficient method, was adopted by the majority of farmers in M. Rampur, where 56.96 per cent of the respondents reported using this practice. In Karlamunda, SMI was also fairly common, with 32.05 per cent of farmers adopting it, while its uptake remained lower in Koksara and Golamunda at 17.5 per cent and 13.75 per cent respectively.

The Line Transplanting (LT) method, which promotes better plant spacing and crop management, recorded the highest adoption in Koksara, where 47.5 per cent of farmers followed this practice. In Karlamunda and Golamunda, LT was adopted by 41.03 per cent and 26.25 per cent of farmers respectively, while its presence in M. Rampur was comparatively limited at 29.11 per cent. Line Sowing (LS), which ensures uniform crop establishment, emerged as the most preferred practice in Golamunda, with 58.75 per cent of the farmers adopting this method. In the other blocks, LS was adopted by nearly 25 per cent of respondents, while its use was particularly low in M. Rampur at 12.66 per cent. The traditional Broadcasting method, known for its inefficiency and lower productivity, was adopted by only a small fraction of farmers across all blocks, with the overall share standing at 3.47 per cent. Notably, its use was slightly higher in Koksara at 10 per cent, while it was almost negligible in other blocks. At the aggregate level, LT emerged as the most commonly adopted method across the study area, accounting for 35.96 per cent of respondents, followed by LS at 30.6 per cent and SMI at 29.97 per cent.

Table 3.4: Package of Practices for <i>Mandia</i> Cultivation in selected Blocks										
Package of practices	Golamunda		Koksara		M.Rampur		Karlamunda		Total	
	N	%	N	%	N	%	N	%	N	%
SMI	11	13.75	14	17.5	45	56.96	25	32.05	95	29.97
LT	21	26.25	38	47.5	23	29.11	32	41.03	114	35.96
LS	47	58.75	20	25	10	12.66	20	25.64	97	30.60
Broadcasting	1	1.25	8	10	1	1.27	1	1.28	11	3.47
Total	80	100	80	100	79	100	78	100.00	317	100

Source: Baseline Survey, 2022

3.6 Reasons for not Cultivating Millets

The reasons cited by households for not cultivating millets across the two sample blocks. Out of the total 320 households, 3 households (0.93 per cent) are not cultivating millets, while 317 households (99.06 per cent) continue to do so. Among the non-cultivating households, the major reason reported is that shortage of land and non-availability of seeds.

3.7 Conclusion

All surveyed households who produced millets during the Baseline year of 2022, cultivated only *Mandia*. More than one third HHs reported that quality of seeds was good, nearly two third uses average quality seeds and a small number of HHs use low quality seeds. Most HHs cultivated millets through line sowing or line transplanting and some by broadcasting. Two-third of the HHs had adopted SMI method. In the next Chapter we will discuss consumption of millets.

Chapter IV

CONSUMPTION OF MILLETS

4.1 Introduction

Baseline Survey 2022 was conducted to assess the trend and patterns of millets consumption in the target villages before implementing the programme in the selected blocks of Kalahandi district, namely Golamunda, Karlamunda, Koksara and M. Rampur. The main objective of this chapter is to analyse how the households that participated in the survey vary in their millet's intake across different seasons, meals, times of the day and generations. The chapter also explores the diversity of millet varieties, recipes and dishes that are consumed by these households and how they prepare them. By doing so, the chapter aims to provide a comprehensive picture about the patterns of millets consumption and preferences among the sample households in Kalahandi district, which is one of the focus areas of SAA.

4.2. Quantity of Consumption (in Kgs)

Table 4.1 presents the seasonal and spatial pattern of millet consumption among the sample households in the selected blocks. The data shows that millet consumption was highest during the summer season, with all households in Golamunda, Koksara and Karlamunda consuming millets, while in M Rampur the figure stood at 96.25 per cent. The average quantity consumed during summer was also the highest, with Karlamunda recording 24.23 kilograms, followed by M Rampur with 23.85 kilograms and Golamunda with 21.75 kilograms. During the rainy season, 73.24 per cent of the total households reported consuming millets, with M Rampur registering the highest proportion at 88.75 per cent. In terms of quantity, Karlamunda again recorded the highest average consumption at 12.91 kilograms. In the winter season, millet consumption was comparatively lower, with 54.41 per cent of households reporting consumption. The highest winter consumption was recorded in M Rampur where nearly 69 per cent of households consumed millets, followed by Karlamunda at 56.25 per cent. The total average millet consumption across all seasons was highest in Karlamunda at 48.18 kilograms and lowest in Koksara at 37.59 kilograms, indicating notable differences in dietary reliance on millets across blocks and seasons.

Table 4.1: Average Quantity of consumption (In Kgs/HH)										
Blocks	Winter			Rainy			Summer			Total average Consumption
	N	%	Consumption	N	%	Consumption	N	%	Consumption	
Golamunda	42	52.5	7.97	60	75	12.55	80	100	21.75	42.27
Koksara	43	53.75	6.25	57	71.25	9.59	80	100	21.75	37.59
M.rampur	55	68.75	7.21	71	88.75	9.83	77	96.25	23.85	40.89
Karlamunda	45	56.25	11.04	61	76.25	12.91	80	100	24.23	48.18
Total	185	54.41	32.47	249	73.24	44.88	317	93.24	91.58	168.93

Source: Baseline Study, 2022

4.3. Season-wise consumption of Millets

Table 4.2 presents the season-wise distribution of sample households consuming millets across the selected blocks. The data shows that millet consumption was the highest during the summer season, with all households in Golamunda, Koksara and Karlamunda reporting consumption, while in M Rampur the proportion was also high at 96.25 per cent. During the rainy season, 73.24 per cent of households consumed millets, with the highest consumption reported in M Rampur at 88.75 per cent, followed by Karlamunda and Golamunda. In the winter season, millet consumption declined across all blocks, with 54.41 per cent of households consuming millets on average. Among the blocks, M Rampur again recorded the highest winter consumption at 68.75 per cent, while Golamunda and Koksara reported the lowest at around 52 to 54 per cent. The overall seasonal trend indicates that millet consumption is most widespread during summer, followed by the rainy and winter seasons, reflecting the seasonal availability and dependence on millets as a key food source during lean agricultural periods.

Table 4.2: Distribution of Sample HHs by Season-wise consumption of Millets										
Seasons	Golamunda		Koksara		M.rampur		Karlamunda		Total	
	N	%	N	%	N	%	N	%	N	%
Winter	42	52.5	43	53.75	55	68.75	45	56.25	185	54.41
Rainy	60	75	57	71.25	71	88.75	61	76.25	249	73.24
Summer	80	100	80	100	77	96.25	80	100	317	93.24

Source: Baseline Survey, 2022

4.4 Millets Consumption during Different Meals of the Day

Table 4.3 presents the distribution of millet consumption among the sample households based on the time of the day across the selected blocks. The data shows that millet consumption is most common during breakfast, with 40.48 per cent of the total reported instances occurring at this time. Among the blocks, Karlamunda recorded the highest breakfast consumption at 41.84 per cent, followed closely by M Rampur and Golamunda. Lunch accounted for 30.61 per cent of millet consumption, with Karlamunda again reporting the highest share at 38.3 per cent. Consumption during evening snacks contributed 26.67 per cent of the total, with Koksara reporting the highest share in this category at 32.81 per cent. Dinner consumption of millets was minimal across all blocks, accounting for only 2.24 per cent of the total, with negligible shares reported in Koksara and Karlamunda. Overall, the data indicates that breakfast and lunch are the most preferred times for millet consumption among households, while its use during dinner remains limited across all blocks.

Table 4.3: Distribution of Sample HHs by Season-wise consumption of Millets										
Time of the Day	Golamunda		Koksara		M.rampur		Karlamunda		Total	
	N	%	N	%	N	%	N	%	N	%
Breakfast	167	40.83	143	37.24	181	41.71	177	41.84	668	40.48
Lunch	105	25.67	114	29.69	124	28.57	162	38.30	505	30.61
Evening Snack	113	27.63	126	32.81	120	27.65	81	19.15	440	26.67
Dinner	24	5.87	1	0.26	9	2.07	3	0.71	37	2.24
Total	409	24.79	384	23.27	434	26.30	423	25.64	1650	100.00

Source: Baseline Survey, 2022

4.5 Millet Recipes Consumed

Table 4.4 provides insights into the consumption patterns of different millet-based recipes among the sample households across the selected blocks. The data reveals that traditional preparations continue to dominate millet consumption, with *Tampo/Pitha* emerging as the most popular item, consumed by nearly 92 per cent of households. Its consumption remained consistently high across all blocks, reflecting its cultural significance and widespread acceptability. Similarly, *Jau/Torani*, a traditional millet-based drink, was consumed by almost 80 per cent of households, with Karlamunda reporting the highest share. The consumption of *Chhatua*, a nutritious millet-based preparation, was reported by over half of the households, with the highest share observed in Koksara. Another widely consumed item was *Khiri*, with nearly 67 per cent of households incorporating it into their diet, highlighting its popularity as both a nutritious and culturally preferred recipe, particularly in Karlamunda. In contrast, the consumption of *Idli/Upma*, often seen as a more modern millet-based recipe, remained limited to 20 per cent of households, although Koksara and Karlamunda reported relatively higher acceptance. Millet-based *Sweets* were consumed by only 12 per cent of households, with a noticeable preference observed in Koksara. Interestingly, no households across the study area reported consumption of millet-based *Cake* or *Handia*, indicating that these items are either culturally irrelevant or have not yet gained acceptance. The overall pattern suggests that millet consumption remains rooted in traditional food practices, and while modern recipes are slowly making inroads, their adoption remains limited, highlighting the need for awareness and promotion of diversified millet-based preparations to enhance both nutritional intake and dietary diversity.

Table 4.4: Distribution of sample HHs by Consumption different Millets Recipes										
Items	Golamunda		Koksara		M.rampur		Karlamunda		Total	
	N	%	N	%	N	%	N	%	N	%
<i>Tampo/ Pitha</i>	77	24.68	80	25.64	80	25.64	75	24.04	312	91.76
<i>Chhatua</i>	42	23.33	63	35.00	36	20.00	39	21.67	180	52.94
<i>Jau/ Torani</i>	73	26.94	56	20.66	69	25.46	73	26.94	271	79.71
<i>Khiri</i>	56	24.56	61	26.75	48	21.05	63	27.63	228	67.06
<i>Idli/ Upma</i>	7	10.29	26	38.24	9	13.24	26	38.24	68	20.00
<i>Sweet</i>	8	20.00	25	62.50	6	15.00	1	2.50	40	11.76

Source: Baseline Survey, 2022

4.6 Conclusion

Major finding of the Baseline Survey 2022 among the sample households across the four blocks of Kalahandi district shows that Millet consumption is higher in the Summer Season. Most of the respondents consume millets during breakfast time in the morning followed by lunch. *Tampo/ Pitha* are the most common millet recipes across the four blocks of Kalahandi district, followed by *Chhatua* and *Jau/Torani*.

Chapter V

PROCESSING AND MARKETING OF MILLETS

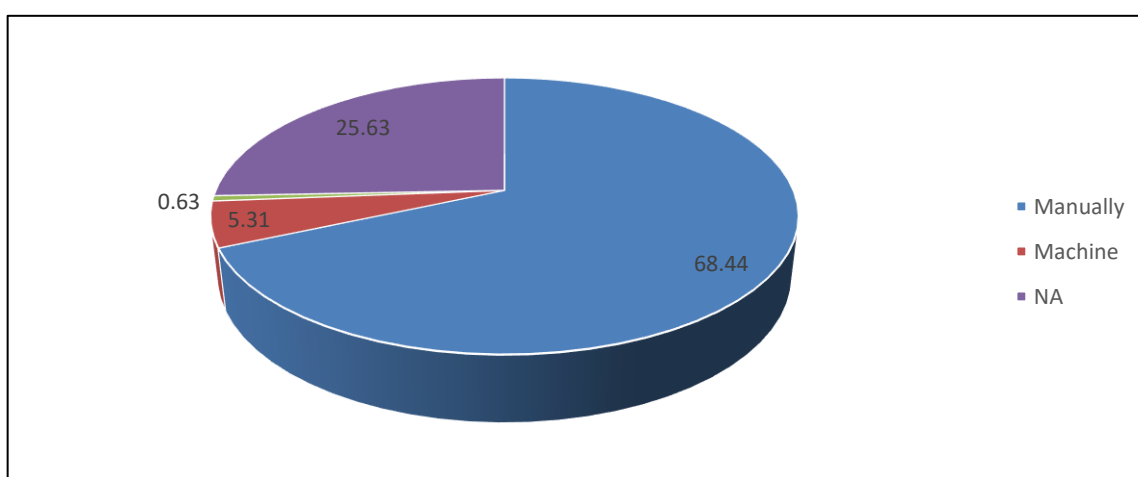
5.1 Introduction

The Baseline Survey, 2022 aimed at recording the processing and marketing practised by the sample households in Kalahandi districts across the four selected blocks namely, Golamunda, Koksara, Karlamunda and M. Rampur. This chapter explores the various practices for processing of millets, such as Dehulling, milling, roasting and popping. It also examines the availability and accessibility of processing units in the sample area and the factors that influence the choice of processing methods. Furthermore, this chapter analyses the different modes of selling millets, such as direct sales, cooperatives, middlemen and online platforms. It also evaluates the distance to selling points and the transportation costs involved. The main objective of this chapter is to assess the status of processing and marketing of millets in the sample area and to identify the challenges and opportunities for improving the value chain of millets.

5.2 Processing of Millets

Millet grains have a thin husk and small stone particles that need to be removed before consumption. This is a difficult and tedious task that requires a lot of manual labour. Women are usually responsible for processing millets using a stone grinder to make flour, according to focused group discussions (FGD). This process takes a lot of time and energy, which could be used for other productive activities. Therefore, millet processing units are essential for improving the efficiency and quality of millet production. Millet processing units can reduce the drudgery of women and increase the availability of nutritious millet products for food security and income generation.

Figure 5.1. Distribution of HHs by different methods of Processing of Millets



The distribution of households by different methods of millet processing highlights a continued dominance of traditional practices across the study area. A significant share of households, nearly 68.44 per cent, rely entirely on manual methods for processing millets, reflecting both the cultural

familiarity with these methods and limited access to modern alternatives. The use of machines for processing remains low, reported by only 5.31 per cent of households, suggesting that mechanisation in millet processing is yet to gain widespread acceptance. Interestingly, around 25.63 per cent of households reported using a combination of both manual and machine-based methods, indicating a gradual shift towards partially mechanised processing. A very small fraction of households, around 0.63 per cent, did not report any millet processing, which could be attributed to either non-consumption or reliance on market-purchased processed millets. Overall, the pattern reflects that while manual processing remains the most common practice, there is growing but limited adoption of machines, signalling the need for enhanced access to technology and awareness on the benefits of mechanised millet processing.

A block-wise analysis of millet processing methods highlights considerable variation in household practices across the study area. In Golamunda, manual processing remains the dominant method, followed by nearly 76 per cent of households, while this block also recorded the highest use of machines at 20 per cent and a small share of households using both manual and machine-based methods, indicating early signs of mechanisation. In contrast, Koksara reflects complete dependence on traditional practices, with all households processing millets manually and no reported use of machines, suggesting limited access to technology or awareness. In M Rampur, only half of the households reported manual processing, while the other half did not engage in any processing, pointing towards high market dependence for processed millets or declining millet consumption. A similar pattern is observed in Karlamunda, where 47.5 per cent of households rely on manual processing, 1.25 per cent use machines and over half reported no millet processing. The overall pattern suggests that while manual processing continues to dominate, especially in Koksara and Golamunda, the use of machines is still negligible across most blocks, with Golamunda showing the only significant signs of mechanisation. The large share of non-processing households in M Rampur and Karlamunda reflects changing consumption patterns or constraints in processing infrastructure, highlighting the need for improved access to processing technologies and targeted interventions to promote millet consumption and processing at the household level.

Table 5.1: Distribution of HHs by different Method of Processing of Millets										
Processing	Golamunda		Koksara		M.Rampur		Karlamunda		Total	
	No	%	No	%		%	No	%	No	%
Manually	61	76.25	80	100	40	50	38	47.5	219	68.44
Machine	16	20	0	0	0	0	1	1.25	17	5.31
Both	2	2.5	0	0	0	0	0	0	2	0.63
NA	1	1.25	0	0	40	50	41	51.25	82	25.63
Total	80	100	80	100	80	100	80	100	320	100.00

Source: Baseline Survey, 2022

5.3. Marketing

Like other crops, millets can provide income and livelihood support for farming households. This section analyses the modes and marketing practices followed by the millet farming households. However, in the surveyed area, most of the households only grew millets for their own use and sold the surplus to the middlemen, local traders or money lenders. They do not have an organized marketing system for their millets. Some of them sold their millets in the market and a few sold them to their neighbours blocks.

The data reveals that a vast majority of households, nearly 98 per cent, are engaged in selling millets, indicating the crop's continued importance as a source of income for rural households. In Koksara and Karlamunda, all households reported selling millets, reflecting the high market orientation of millet cultivation in these areas. In Golamunda, 97.5 per cent of households sold millets, with a very small proportion not participating in the sale. In M Rampur, while the majority of households, around 93.6 per cent, sold millets, a slightly higher share of households compared to other blocks did not engage in selling, possibly reflecting either self-consumption preferences or limited market access. In M Rampur, 5 HHs do not selling of millets. The overall pattern shows that millet continues to be an important cash crop across all the study blocks, with near-universal participation in its sale, though a few households, particularly in M Rampur, still retain a share of production for household use or face barriers to market participation.

Table 5.2 provides information on the selling of millets by households across the selected

Blocks	Golamunda		Koksara		M.Rampur		Karlamunda		Total	
	No	%	No	%	No	%	No	%	No	%
Millets Sold	78	97.5	72	90	74	93.6	70	89.74	294	92.74
Did not sell Millets	2	2.5	8	10	5	6.32	8	10.25	23	7.25
Total	80	100	80	100	79	100	78	100	317	100

Source: Baseline Survey, 2022

5.4. Distress Sell

Distress sale refers to a situation where farmers are forced to sell their produce at low or unfavorable prices due to urgent financial needs, lack of storage facilities, debt obligations, or immediate cash requirements. Such sales often occur when farmers have limited bargaining power, poor access to markets, or face crop failures and other economic shocks like crop failure. Distress selling not only reduces farmers' incomes but also pushes them into a cycle of poverty and indebtedness. Addressing this issue requires improved access to storage, credit facilities, market linkages, and price support mechanisms to ensure that farmers can sell their produce under favorable conditions.

Table 5.3: HHs by Incidents of Distress Sale across the blocks	
Blocks	NO
Golamunda	1
Koksara	0
M.rampur	1
Karlamunda	3
Total	5

Source: Baseline Survey, 2022

Table 5.3 presents information on incidents of distress sale of millets among the sample households across the selected blocks. A total of five households reported having to sell their produce under distress conditions, indicating that while such instances are limited, they do exist in the study area. The highest number of distress sale cases was reported from Karlamunda, where three households faced such circumstances, followed by one household each in Golamunda and M Rampur. Notably, no incidents were reported from Koksara. Although the overall occurrence of distress sale is low in the region, its presence reflects the underlying vulnerabilities faced by a section of millet-producing households, particularly in Karlamunda.

5.6. Conclusion

The baseline survey on millet processing and marketing in Kalahandi district reveals significant insights. Traditional processing methods dominate, with 68% of households relying solely on manual techniques, while only 5% use machines and 26% employ a combination. This indicates limited mechanization and access to modern technologies, with notable variations across blocks. Golaunda shows early signs of mechanization, while Koksara remains entirely dependent on manual processing. Marketing of millets is widespread, with 98% of surveyed households engaged in selling, highlighting its importance as an income source. A small number of households reported distress sales due to urgent cash needs, pointing to vulnerabilities faced by some millet farmers. These findings suggest a need for improved access to processing technologies, strengthened market linkages, and support mechanisms to prevent distress sales, in order to enhance the millet value chain in the region. Targeted interventions in these areas could significantly improve the overall millet ecosystem in Kalahandi district.

Annexure-1: Baseline Survey 2022 Data - Kalahandi District

Indicators	Unit	Baseline Value				Total
		Golamunda	Koksara	Karlamunda	M. Rampur	
% of Sample households Cultivating Millets	%	100	100	98.75	97.5	99.06
Types of Millets Cultivated (2021)						
Mandia		100	100	100	100	100
Avg. Area under Millets/HH (Acre)	Acre	1.29	1.34	1.12	0.87	1.16
Millets/ Ragi Production per HHs	Qtls	2.92	2.85	2.52	2.51	2.70
% per of millets area to total cultivated area	%	26.04	30.75	24.62	18.56	100
Package of Practices						
Broadcasting	%	1.25	10	1.27	1.28	3.47
LS	%	58.75	25	12.66	25.64	30.60
LT	%	26.25	47.5	29.11	41.03	35.96
SMI	%	13.75	17.5	56.96	32.05	29.97
Yield Rate (Qnt./Acre)	Qtls	2.27	2.27	2.27	2.27	2.27
% of HHs Consuming Millets						
Breakfast	%	40.83	37.24	41.71	41.84	40.48
Lunch	%	25.67	29.69	28.57	38.30	30.61
Evening Snacks	%	27.63	32.81	27.65	19.15	26.67
Dinner	%	5.87	0.26	2.07	0.71	2.24
Popular Millets Recipes (% HHs)						
Tampo/ Pitha	%	24.68	25.64	25.64	24.04	91.76
Jau/ Torani	%	26.94	20.66	25.46	26.94	79.71
Khiri	%	24.56	26.75	21.05	27.63	67.06
Chhatua	%	23.33	35.00	20.00	21.67	52.94
% of HHs Processing Ragi						
Manually	%	76.25	100	50	47.5	68.44
Machines	%	20	0	0	1.25	5.31
Both	%	2.5	0	0	0	0.63
% of HH Selling Millets						
Middleman	%	25.00	22.50	32.50	18.75	24.69
Mandi	%	0.00	0.00	0.00	0.00	0.00
Haat	%	63.75	40.00	51.25	60.00	53.75
Money lender/Sahukar	%	8.75	23.75	7.50	13.75	13.44
Distress Dale (% of Households)	%	86.25	58.75	78.75	77.50	75.31

Source: Baseline Field Survey, 2022

CONTRIBUTORS

Dr. Kishor Kumar Podh
Dr. Dolagobinda Kumbhar

Ms. Subhashree Lenka
Mr. Jitendra Sahoo
Mr. Md. Saidul Islam
Mr. Linus Lakra
Ms. Sandhyarani Dora
Ms. Kajal Pradhan

Ms. Gayatri Nayak
Mr. Smruti Ranjan Sahu
Ms. Swayamprajan Pattanaik
Ms. Pusapanjali Lenka
Mr. Hemanta Mahanandia
Mr. Prasanta Kumar Sahu
Mr. Sukant Kumar Pradhan
Ms. Madhusmita Choudhury



ନବକୃଷ୍ଣ ଚୌଧୁରୀ ଉନ୍ନୟନ ଗବେଷଣା କେନ୍ଦ୍ର
Nabakrushna Choudhury Centre for Development Studies
ICSSR Institute in Collaboration with Government of Odisha



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:.....

4. Operational Holdings Under Different Crops (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									

5. Annual Expenditure:

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							

6. Annual income of the HH (last year.)

7. 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

8. 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

9. Whether you follow mixed farming or mono farming system? **1. Mixed 2. Mono**
If mixed, with which are the crops(s)?
10. 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)
11. Had your seed or grain got damaged during last year? **1. Yes 2. No**
12. Have you done weeding for the millets cultivation? **1. Yes 2. No**
13. If Yes, Number of times you do weeding in your millet fields, by each method?
1) Manually _____ 2) By Weeder _____ 3) Both _____
14. If By Weeder, Sources of weeder?
i) Own ii) Rental iii) Borrowed from Neighbours iv) Govt. Provided v) Other
15. 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)
16. How many years have you not cultivated Millets.....?
17. Do you like to cultivate Millets under this programme? **1. Yes 2. No**

Part-III: Consumption of Millets

18. 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)												

19. 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							

20. 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)								

21. Is there any special occasion when you prepare millets based items? **1. Yes 2. No**

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

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

23. Do you purchase Millet Based Products from market for consumption? **1.Yes 2.No**

24. 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)

25. 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

26. Do you process the millet products in your house? **1.Yes 2.No**

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

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

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

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

30. If Machinery, how far is the location of the processing unit from your village? _____km

Part-V: Marketing of Millets

31. Do you sell millets?

1. Yes 2. No

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)

32. Types of Millets, you Sell and Quantity

33. Any instance of distress sale (less than the market price) of Millets?

1. Yes 2. No

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

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

36. Do you sell any millet based value-added products?

1. Yes 2. No

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

38. Remarks

Contact no of Respondent

Signature of the Researcher/Field Investigator



About NCDS, Bhubaneswar

The Nabakrushna Choudhury Centre for Development Studies (NCDS), established in March 1987, is registered under the Societies Registration Act, 1860. It is being jointly funded by the Indian Council of Social Science Research (ICSSR), Ministry of Human Resource Development, Government of India and Planning & Convergence Department, Government of Odisha. Focussing on socio-economic research, this institute is the only one of its kind that serves as a policy think tank in the state of Odisha.



Nabakrushna Choudhury Centre for Development Studies (NCDS)

An Indian Council of Social Science Research (ICSSR) Institute in Collaboration with Government of Odisha, Bhubaneswar - 751013, Odisha, India

☎ +91-674-2301094, 2300471 ✉ ncdsbbsr1987@gmail.com 🌐 <http://ncds.nic.in>

📘 @ncdsbhubaneswar 🐦 @ncds_