BASELINE SURVEY: PHASE VI

MALKANGIRI 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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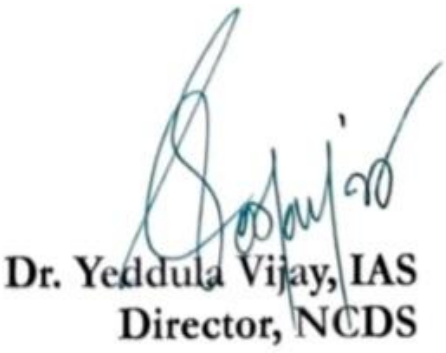
FOREWORD

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 Malkangiri 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

Malkangiri district is one of the districts where the "Special Programme for the Promotion of Millets in Tribal Areas of Odisha or (hereafter) Shree Anna Abhiyan (SAA)" Phase VI has begun in the Kharif 2021 covering its two GPs of Malkangiri block of the district. Under Phase VI, of Shree Anna Abhiyan (SAA) in Malkangiri district, 273 target households are identified for the programme. Out of these 273 HHs, 80 households were selected through multi-stage random sampling method and conducted Baseline Survey, 2022.

As per the Baseline Survey 2022, out of the total 82.50 per cent sample HHs belonged to Scheduled Tribe (ST), while only 2.50 per cent belonged to Scheduled Caste (SC) and another 13.75 per cent to the Other Backward Class (OBC)/ Socially and Educationally Backward Class (SEBC). Out of the total sample population in the Malkangiri Block, 51.79 per cent are male and 48.21 per cent are female and all sample HHs belonged to Hindu religion. 98.75 per cent of the sample population also possess Ration Card. Out of the total 392 sample population, 51.52 per cent are farmers, and 2.03 per cent wage labour, 1.01 per cent business owners and Govt. and Private employee constitute about 0.68 per cent and 1.36 per cent. The share of housewife are 35.59 per cent while the rest 7.12 per cent are unemployed.

Majority of the sample population (62.50 per cent) have Semi-Pucca houses, 30 per cent have Kutcha houses, while only 7.50 per cent have Pucca houses. Total operational area of the sample households in the two selected GPs of Malkangiri block is 358.66 acres, out of which 29.98 per cent is under millets cultivation with a production of 146.76 quintals and average yield of 1.36 quintals per acre. Out of the total sample HHs 65.00 per cent are satisfied with the quality seeds they use. The most common method of millets cultivation among the sample households is broadcasting (77.50 per cent), while 11.25 per cent follow LS and LT methods.

As observed, during the Kharif 2021 out of the total 62.50 per cent of the households used organic manure/ fertilisers, while 35.00 per cent used chemical pesticides for their millet's cultivation ,rest per 2.5 cent used both organic and chemical fertilisers as well as pesticides.

It is also found that out of the total 392 population, 96.17 per cent consume millets. Out of the total 80 sample HHs 86.25 per cent are consuming millets during both rainy and summer season and 78.75 per cent in winter season. Majority of people consume millets during lunch (86.25 per cent), followed by 61.25 per cent during evening snacks, 78.75 per cent during dinner, and another 47.5 per cent during their breakfast. 86.25 per cent are consuming *Jau/ Torani, which is accepted as a* popular recipe, followed by *Tampo/Pitha, Idli/ Upma and Khiri*.

The survey findings reveal that out of the total 80 millet cultivating sample households only 69 households process their millets 60.87 per cent process millets by using machines, 11.59 per cent use traditional methods and 27.54 per cent process by following both traditional and machinary. Out of the total sample households, 68.75 per cent sell their millets at different local selling points. Out of which, 42.11 per cent sell in the government promoted Mandi, 18.42 per cent sell to the local businessman, and 13.16 per cent sell to middleman, 7.89 per cent sell local Moneylender/Sahukar while another 5.26 per cent sell to the agencies. Moreover, it is also found that 23.68 per cent of the households experienced distress sale during the year 2021.

CONTENTS

List of Tables

List of Figures

Abbreviations

AAO	:	Assistant Agriculture Officer
AL	:	Agricultural Labour
ATMA	:	Agricultural Technology Management Agency
AWC	:	Anganwadi Centre
CBOs	:	Community Based Organisation
CCD	:	Centre for Community Development
CRPs	:	Cluster Resource persons
CSOs	:	Civil Society Organisations
DAFP	:	Directorate of Agriculture and Food Production
DDA	:	Deputy Director, Agriculture
FA	:	Facilitating Agencies
FGD	:	Focused Group Discussion
FPC	:	Farmer Producer Company
FPO	:	Farmer Producer Organizations
GP	:	Gram Panchayat
FAQ	:	Fair Average Quality
Ha	:	Hectares
HHs	:	Households
ICDS	:	Integrated Child Development Scheme
ITI	:	Industrial Training Institute
LS	:	Line Sowing
LT	:	Line Transplanting
MDM	:	Mid-Day Meal
MFP	:	Minor Forest Produce
MGNREGA	:	Mahatma Gandhi National Rural Employment Guarantee Act
MGNREGS	:	Mahatma Gandhi National Rural Employment Guarantee Scheme
MSP	:	Minimum Support Price
NCDS	:	Nabakrushna Choudhury Centre for Development Studies
OBC	:	Other Backward Classes
OC	:	Other Castes
OFS	:	Odisha Finance Service
SAA	:	Odisha Millet Mission
PDS	:	Public Distribution System
SC	:	Scheduled Castes
SMI	:	System of Millet Intensification
SP	:	Sale Price
ST	:	Schedule Tribes
WASSAN	:	Watershed Support Service 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 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.

The United Nations designating 2023 as the International Year of Millets, it gets further attentions of general public including the farmers. 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 Tribal Areas of Odisha (also known as Shree Anna Abhiyan, 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.

The SAA program launched in 2017-18 by the govt of odisha tried to revive these nutrient-rich millets in the agricultural landscape. 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 2021-22, the SAA (formerly OMM) was expanded to 58 blocks of 17 districts, including Malkangiri block of Malkangiri district. This baseline survey report aims to provide status of millets production, consumption, processing and marketing in these two blocks before the implementation of the programme.

1.2 District Profile

Malkangiri district is situated in the lush green forests of southern part of Odisha. The district derives its name from its administrative centre, Malkangiri. Initially, during the establishment of Odisha Province in 1936, Malkangiri served as a 'Taluk' within the Nabarangpur sub-division of Koraput District. In 1962, it was upgraded to a sub-division of Koraput District. However, on October 1, 1992, Malkangiri gained separate district status through the reorganization of districts in Odisha, as outlined in an official notification. This transformation came into effect on October 2, 1992.The district comprise of 7 blocks and 7 Tehsil.

The district is sparsely populated (106 Sq. Km.), with a relatively balanced ratio of males to females (1020). The majority of the area is covered by dense forests, with only a small fraction of the population residing in urban areas. Geographically, this district can be divided into two distinct physical divisions. The eastern part is characterized by steep Ghats, plateaus, and valleys, inhabited sparsely by indigenous tribes, including the Bondas, Koyas, Parajas, and Didayis. The district exhibits moderate literacy rates (48.54 per cent), with a higher number of literate males compared to literate females, i.e., 59.07 per cent and 38.28 per cent, respectively. The climate in Malkangiri District generally experiences cold winters and hot summers, with temperatures ranging from 13 degrees Celsius to 47 degrees Celsius. The average annual rainfall is approximately 1700 mm, and relative humidity remains high, particularly during the monsoon and post-monsoon months. In the rainy season, extensive areas of the district become marshy and impassable, often leading to severe floods that isolate the region from the outside world. Additionally, the district falls within a malaria-prone belt.

1.2.1 Geography and Topography

Malkangiri district, encompassing a land area of 5,791 square kilometres situated between latitudes 17 degrees 45'N and 18 degrees 40'N, as well as longitudes 81 degrees 10'E and 82 degrees E. Malkangiri district is the south western most district of Odisha. The geography of Malkangiri District, characterized by an undulating terrain adorned with numerous hills, streams, forests, and a pleasant climate. The district, located in Orissa, primarily boasts dense dry deciduous forests, covering approximately 51 percent of its total area. These forests yield valuable resources such as timber, firewood, and various minor forest products, including tamarind, Kendu leaves, Mahua flowers, Mahua seeds (Tola), different types of fibres, oilseeds, and medicinal plants.

Malkangiri District is blessed with major rivers such as Sabari River, Silleru, Potteru, Kolab River, and Machhkund, which contribute to its geographical diversity. The district's soil composition mainly consists of Regur soil, characterized by its deep black colour and high organic matter content. Additionally, sandy soils dominate the entire district. Notably, the Machhkund valley is encompassed by prominent hills, towering about 1000 feet above the riverbed. As we move northwards, the plateau gradually descends, reaching an altitude of 900 feet in the low-lying tracts of Malkangiri. Further south-west, near Motu, the elevation decreases to around 150 feet, forming the district's extreme corner. The remaining region is predominantly a flat plain, interspersed with rocky wooded hills that add variation to the landscape. The small plateau lies in the extreme south-western part of this district. This region consists of some portions of Motu, Kalimela, Orkel and Malkangiri. The average height of the region is 350m above the mean sea level. It has the highest point of 926 m. above the mean sea level on the border of Andhra Pradesh and Odisha under Malkangiri police station. About half of the plateau is plain. This region is enriched with the valleys of the rivers Potteru Vegu and Sabari. The hills are covered with reserved forests made of dense mixed jungles.

1.2.2 Economy:

Malkangiri is primarily an agrarian district with agriculture being the main occupation of the people. The region is suitable for the cultivation of crops such as paddy, maize, pulses, and oilseeds. A significant portion of the population relies on subsistence farming for their livelihoods. Malkangiri district has a total cultivated land area of approximately 142,740 hectares, accounting for 24.65 % of the district's total geographical area of 579,100 hectares. Despite challenges such as frequent natural calamities, erratic monsoons, and uneven rainfall distribution, agricultural production has been increasing. Malkangiri also has a considerable forest cover, which provides opportunities for forestry-related activities. Minor forest produces like timber, bamboo, and Tendu leaves contribute to the local economy. Infrastructure development and industrialisation have been relatively limited in Malkangiri. Lack of proper road connectivity and basic amenities have hindered the growth of industries and trade. Despite it poses sizeable amount of minerals such as Bauxite, Graphite, and Quartz and Granite district has no large-scale industries. The district has a few small-scale industries involved in activities such as rice milling, handloom weaving, and cottage industries.

1.2.3 People and Culture

According to the 2011 census, the total population of Malkangiri district is 613192, where 563664 are living in rural areas and 49,528 are in urban areas. The Scheduled Tribe (ST) and Scheduled Caste (SC) populations comprise 57.83 per cent and 21.20 per cent of the district population, respectively. The district is mainly inhabited by tribes such as Bondas, Gadabas, Kondhs and Koyas. The population density is 106 people per sq.km with a decadal growth rate of 21.62 per cent, compared to the state's population density of 270 people per sq. km and decadal growth rate of 14.0 per cent.

The district has 995 census villages spread across 7 Blocks and 7 Tehsils. The literacy rate in the district is 48.54 per cent, compared to the state's rate of 72.87 per cent. While the level of urbanisations is very slow only 8.07 per cent of the total district population lives in urban areas. According to the 2011 Census of India, the language distribution in the district was as follows: 34.06 per cent of the population spoke Odia, 23.40 per cent spoke Koya, 21.48 per cent spoke Bengali,

4.18% spoke Desia, 2.97 per cent spoke Telugu, 2.59 per cent spoke Kuvi, 1.99 per cent spoke Bhuiyan, 1.72 per cent spoke Proja, and 1.36 per cent spoke Halbi as their first language. Additionally, there are several other languages spoken in the district, including Bonda and Didai. The Bengali language is predominantly spoken by descendants of refugees from Bangladesh (formerly East Pakistan). The Odia language, along with its dialects Desia and Paraja, is the dominant language in the area. Malkangiri district is a composite of various religions, majority of Hindus, followed by Christians and Muslims. The tribal population, which constitutes half of the district's population, worships Hindu gods, and other tribal God and Goddesses.

The tribal people, comprising the majority of Malkangiri District's population, showcase the district's culture through their vibrant song and dance performances. The prominent tribes in the area include Bondas, Gadabas, Kondhs, and Koyas. Music serves as the primary source of entertainment for these tribes, and it holds a special place during festive seasons, becoming their favourite pastime. The tribes utilize a variety of rustic musical instruments in their performances. Although each tribe possesses its unique music style and instruments, the craftsmanship involved in creating and playing these instruments is so intricate that it is nearly impossible to replicate them, despite their apparent simplicity. Women engage in collective singing while working in the fields, while men and boys fill their solitary hours of cattle watching by indulging in their own melodious tunes. The tribals in the district still follow their traditional religion, although it has been heavily influenced by Hindu customs. Generally, the tribes have certain similarities, such as totemistic clans, similar settlement patterns, and the usage of Mahua. Some major festivals unique to the tribal of Malkangiri include Pus Parab (Pousha Parba), Magha Parab, and Chaitra Parab.

1.2.4 Administrative Structure

Malkangiri town serves as the administrative headquarters of Malkangiri district, encompassing one sub-division, i.e., Malkangiri. It has 7 Tehsils, namely Malkangiri, Chitrakonda, Motu, Kalimela, Mathili, K. Gumma, and Khairput.

The blocks of the districts are, Malkangiri, Kalimela, Podia, Korukonda, Kudumulugumma, Khairput, and Mathili.There are 995 villages in Malkangiri district, which fall under 111 Gram Panchayats, one Municipality (Malkangiri), one NAC (Balimela), and 12 Police Stations. It has two Assembly Constituencies (Vidhan Sabha), Malkangiri and Chitrakonda. While Malkangiri district comes under Malkangiri Parliamentary constituency (Lok Sabha).

Table 1.1: Socio-economic and Demographic Features of Malkangiri District	
Indicators	*Value*
Population (in Lakh.) (as per Census 2011)	6.13
Male (in Lakh.)	3.03
Female (in Lakh.)	3.09
Scheduled Castes (in Lakh.)	1.38
Scheduled Tribes (in Lakh.)	3.54
Total HHs (in Lakh.)	1.36
Average HH Size (in Nos.)	4.50
Sex Ratio (in)	1020
Total Worker (in Lakh)	3.10
Main (in Lakh)	1.80
Marginal (in Lakh)	1.30
Non-Worker (in Lakh)	3.00
Work Participation Rate (WPR)	50.70
Literacy Rate (in)	48.54
Land Use Pattern 2018-19 (Area in '000 Hectares)	
Total Geographical Area	579
Forest	335
Land Put to Non-Agricultural Use	23
Barren & Non-Cultivatable Land	38
Permanent Pasture and Other Agricultural Land	21
Net Area Sown	142
Cultivable waste Land	4
Other Fallow	15
Current Fallows	0
Misc. Trees and Groves	1
Agriculture 2018-19*	
Average Fertilizer Consumption per ha (in kg/ha)	38.58
Total Production of Major Crops (In '000 MT)	202.25
Total Ragi Production (in '000 MT)	4.89
Irrigation Potential Created – 2017-18* (Area in '000 Hectares)	
Kharif	99.266
Rabi	45.993
Other Information	
No. of Village Electrified (as on 31.03.21)	706
No. of Banks (as on 31.03.21)	07
No. of AWC	1250
No. of PDS centres (2011)	78076
No. of Job Curd Issued (since inception in Lakh)	100882
No. of HH provided employment under MGNREGA during 2017- 18 (in Lakh)	10048

Source: District Statistical Handbook, Malkangiri 2018 and Odisha Agricultural Statistics 2018-19

1.3 Objectives

The Baseline Survey, 2022 intended to collect primary data from the millets farming households at the village level on the current practices on cultivation, including production, consumption, processing and marketing. The collected information would provide background information for planning and implementing the programme as a whole as well as it will be useful for evaluation of the programme in the future. The objectives are as follows:

- To assess the socio-economic condition of the HHs;
- To outline millet 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

The SAA programme has been implemented in phased manner. It started with 8 districts of the state in Phase I during 2017-18 however, later it has been expanded to all the 30 districts in different phases. Under Phase VI of the implementation of the programme, the Government of Odisha's Department of Agriculture and Farmers Empowerment introduced the "Special Programme for Promotion of Millets in Odisha" included an additional 58 blocks across 17 districts of the state including Malkangiri blocks of the district.

From the list provided by the SAA Programme Secretariat, there were 2714 beneficiary households in 169villagesunder 39 Gram Panchayats covering 4 blocks in the Malkangiri district. For conducting the Baseline Survey 2022, Phase VI, multi-stage sampling methods has been followed. In the first stage, one block, i.e. Malkangiri has been purposively selected for the study as SAA is going to be implemented in the Malkangiri block of the district under Phase VI.

The programme is going to be implemented in two GPs of Malkangiri block. In the second stage, two GPs from Malkangiri block have been selected for the study in consultation with the respective facilitating agencies (FAs) and district level officials of the agriculture department. Markapali and Pandripani GP from Malkangiri block have been selected for the present study.

In the third stage, two villages from each GP have been randomly selected for the study and in the final stage 20 households from each village have been randomly selected for the study. Therefore, a total of 80sample households from four villages, two GPs and one block have been selected for the study as presented in the**Error! Reference source not found.**.

Table 1.2 Sample HHs across the Block

Block	Programme HHs (No.)	Sample HHs (No.)	%
Malkangiri	273	80	29.30

Source: State Professional Agency (WASSAN), 2022

1.4.1 Data Collection, Compilation and Analysis

This comprehensive baseline survey report is based on both secondary and primary data. Primary data was collected by using a structured household interview schedule (Annexure II) and Focus Group Discussions (Annexure III) from the concerned villages of the districts. Additionally, secondary data on geographical information, population, agriculture, education, irrigation, forest, and institutions were collected from various published and unpublished sources, including the 2011 Census reports, Odisha Agricultural Statistics, and so on.

To supplement and complement the findings of the Baseline Survey, Focus Group Discussions were conducted in each sample village. The FGDs comprise of key respondents from the villages, including community leaders, village officials and other stakeholders to gather more information and insights about the villages, especially, the status, problems and opportunities of millets cultivation. 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 aimed to collect data on various socio-economic indicators such as household demographics, income, livelihoods, education, health, and access to basic amenities like water and sanitation facilities. The findings of the survey and FGDs were analysed 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. It provides recommendations for improving the overall development indicators of the region.

1.5 Limitations of the Study

The present Baseline Survey, 2022 focuses solely on Malkangiri block of the 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 80 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.

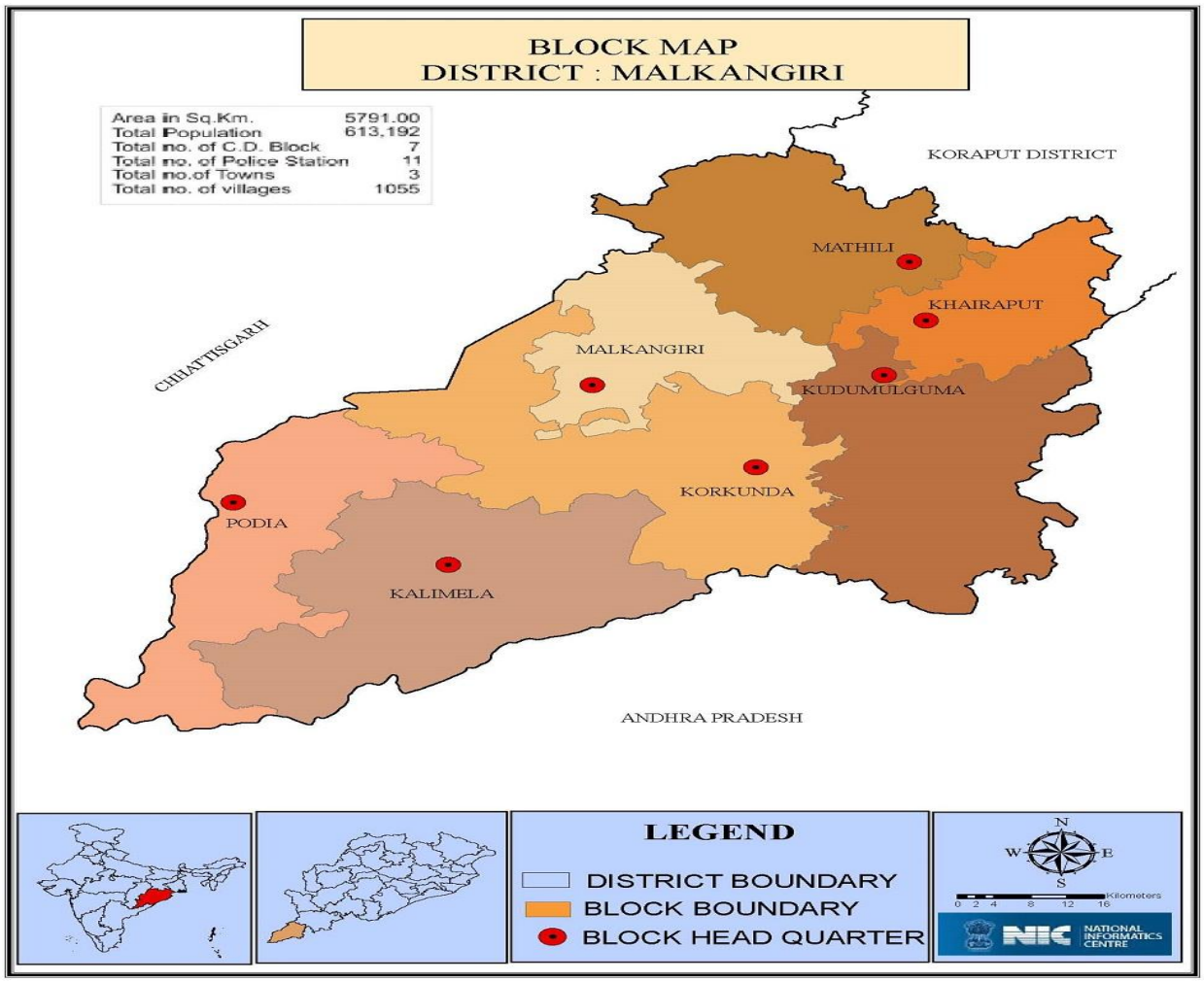
It is essential to consider these limitations while interpreting the findings of the survey. Future studies can address these gaps and improve the accuracy of the data collection process. Despite

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

This "Baseline Survey Report 2022, Phase VI" has been divided into six chapters, including the current Introductory Chapter I1, which provided a 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 the Consumption Pattern of Millets. Chapter V elucidates the Processing and Marketing of Millets.

Figure 1.1:Block-Wise Map of Malkangiri District



Source: Malkangiri District Website

Chapter II

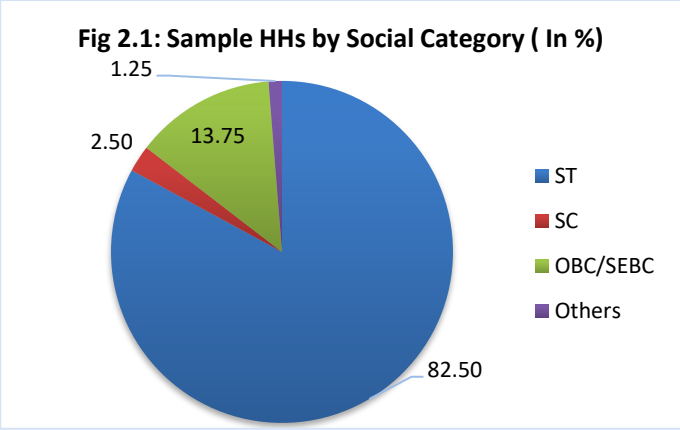
SOCIO-ECONOMIC PROFILE

2.1 Introduction

This chapter looks into the social and demographic profile of households surveyed under the Baseline Survey, 2022 Phase VI, which includes the distribution of sample households by their social groups, and the distribution of the population by gender as well the distribution of population by their education status in Malkangiri block of the district. Further it provides information about the religious distribution of sample households in the two GPs of Malkangiri block. It also provides information regarding occupational distribution. Additionally, it provides information about possession of ration card by the sample households and distribution households by their house structure.

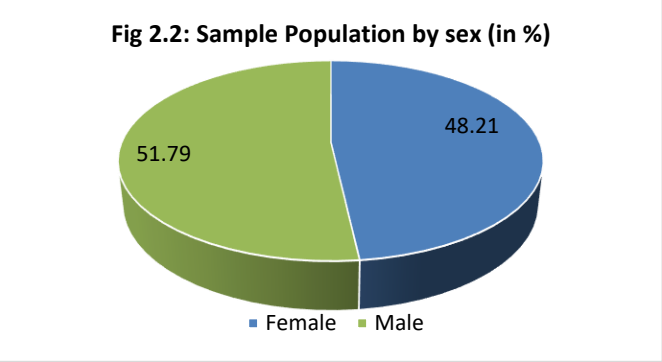
2.2: Social Category

Fig 2.1. shows that out of total of 80 surveyed households, with a significant majority of about 66 HHs (82.50 per cent) belongs to Scheduled Tribes (STs), are Other Backward Classes (OBCs)/ Socially and Educationally Backwards Classes (SEBCs) households constitute about 11 HHs (13.75 per cent), Schedule Castes (SCs) households constitute 2 HHs (2.50 per cent) while Other social categories constitute of 1 HHs (1.25 per cent).



2.3 Sex

The distribution of sample population by their gender is presented in fig 2.2. It reveals that out of total of 392 people, about 203 people (51.79 per cent) are male and 189 people (48.21 per cent) of them are female.

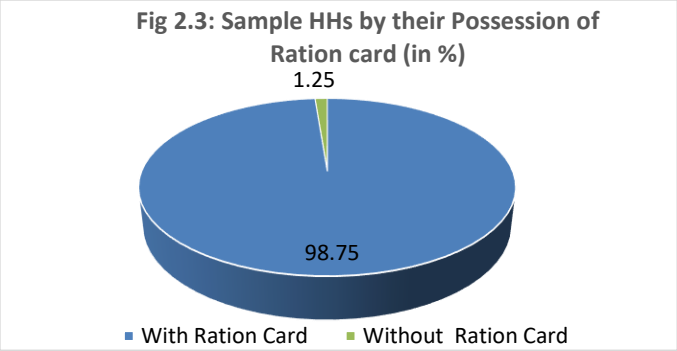


2.4 Religion

The religious distribution of the sample households across the Malkanagiri block of Malkangiri district reveals that all the sample households are Hindus.

2.5 Ration Card

Fig 2.3 shows the distribution of sample households by their possession of ration cards. It shows that out of the total 80 sample households almost all of them 79 HHs (98.13 per cent) possess ration cards and 1 HH (1.25 per cent) not possess ration card.



2.6 Age Group

Table 2.1 shows the distribution of the sample population by age group. Out of the total 392 individuals surveyed, 19 (4.85 per cent) are infants, 28 (7.14 per cent) are in the pre-school age group, and 51 (13.01 per cent) are children. The adolescent group comprises 68 individuals (17.35 per cent), while adults form the largest category with 143 individuals (36.48 per cent). The middle-aged group includes 55 individuals (14.03 per cent), and 28 individuals (7.14 per cent) belong to the old age category.

Table 2.1: Distribution of the Sample population by their age group

Block	Age Group	N	%
Malkangiri	Infant	19	4.85
	Pre-school	28	7.14
	Children	51	13.01
	Adolescent	68	17.35
	Adults	143	36.48
	Middle Age	55	14.03
	Old age	28	7.14
Total		392	100

Source: Baseline Survey, 2022

2.7 Education

Table 2.2 shows the distribution of the sample population by their level of education. Out of the total 348 individuals surveyed, 120 (34.48 per cent) are illiterate, while 5 (1.44 per cent) have completed primary education. About 66 individuals (18.96 per cent) have attained secondary education, and 139 individuals (39.94 per cent) have completed higher secondary education. A smaller proportion, 16 individuals (4.6 per cent), are graduates,

Table 2.2 Distribution of Sample population by their Education

Block	Education	N	%
Malkangiri	Illiterate	120	34.48
	Primary	5	1.44
	Secondary	66	18.96
	Higher Secondary	139	39.94
	Graduation	16	4.6
	Post-Graduate	2	.58
Total		348	100

Source: Baseline Survey, 2022

and only 2 individuals (0.58 per cent) have completed post-graduation.

2.8 Occupation

The occupational distribution of the sample population highlights several important socio-economic patterns. Table 2.3 indicates that the majority of 152 respondents (51.52 per cent) are engaged in farming**,** indicating that agriculture remains the primary occupation and likely the main source of livelihood in the surveyed area. A significant portion of the population 105 (35.59 per cent) are categorized as housewives**,** relatively small share of respondents is engaged in Wage labour 6 (2.03 per cent), Business 3 (1.01 per cent), Private service 4 (1.36 per cent), Government service 2 (0.68 per cent) and 21 (7.12 per cent) of the respondents are unemployed. The "Others" category accounts 2 (0.68 per cent)**,** potentially including informal sector jobs.

Table 2.3: Distribution of Sample Population by their Occupation

Block	Particulars	No	%
Malkangiri	Farmer	152	51.52
	Wage Labourer	6	2.03
	Business	3	1.01
	Govt. Service	2	0.68
	Private Service	4	1.36
	Housewife	105	35.59
	Unemployed	21	7.12
	Others	2	0.68
Total		295	100

Source: Baseline Survey, 2022

2.9 Annual Income

Household annual income is the total gross income received by all members of a household within a year. Table 2.4 indicates that the largest share of 34 HHs (42.50 per cent) falls in the income range of Rs. 40,001–80,000. Households earning up to Rs. 40,000 and those earning between Rs. 80,001– Rs. 1,20,000 each comprise 16 HHs (20.00 per cent) of the sample. Only 6 HHs (7.50 per cent) earn Rs. 1,20,001 – Rs.160000 annually, with just 4 HHs (5.00 per cent) in the highest income category (above Rs. 2,00,001)

Table 2.4: Distribution of Sample HHs by their Annual Income (in Rs)

Block	Up to Rs. 40000		Rs. 40001-80000		Rs. 80001-120000		Rs. 120001-160000		Rs 160001-200000		Above Rs. 2,00,001	
	No	*%*	*No*	*%*	*No*	*%*	*No*	*%*	*No*	*%*	*No*	*%*
Malkangiri	16	20.00	34	42.50	16	20.00	6	7.50	4	5.00	4	5.00

Source: Baseline Survey, 2022

2.10 Land Ownership

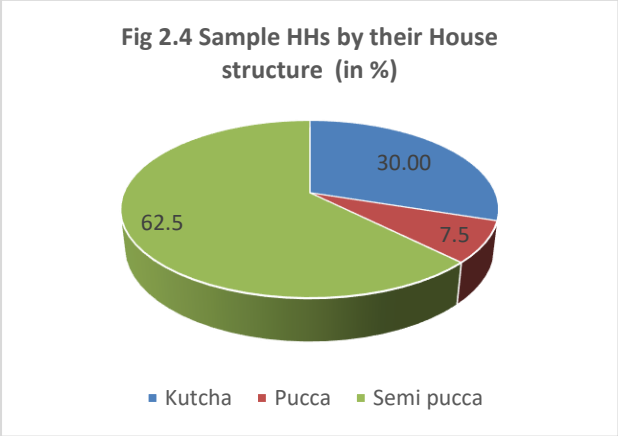
The primary occupation of family depends on quantity of land what they possess. Table 2.5 highlights the land holding status of the sample households. Out of the total sample HHs, 5 HHs (6.25 per cent are large land owner and at 6 HHs (7.50 per cent) are landless. It is seen that, 37 HHs (46.25 per cent) having small land and followed by 15 HHs (18.75 per cent) are Marginal and owner. Rest 17 HHs (21.25 per cent) households are medium land owners.

Table 2.5: Distribution of Sample HHs by Land Ownership										
Block	Landless		Marginal		Small		Medium		Large	
Malkangiri	N	%	N	%	N	%	N	%	N	%
	6	7.5	15	18.75	37	46.25	17	21.25	5	6.25

Source: Baseline Survey, 2022
NB: Marginal (0-2 acre), Small (2-5 acre), Medium (5-10 acre), Large (above 10 acre)

2.11 House Structure

Fig 2.4 shows that out of the total 80 sample households across the two selected GPs in Malkangiri Block of the district majority of them, i.e., 50 households have *Semi-Pucca* houses which constitute about 62.50 per cent of total households, about 24 households (30.00 per cent) of them have *Kutcha* houses while rest of the 6 households (7.50 per cent) of them have Pucca houses.



2.12 Conclusion

The survey data shows that sample households in Malkangiri block of Malkangiri district are predominantly from Scheduled Tribes, with a balanced gender distribution and a strong presence of working-age adults. Education levels vary, with a significant number having completed secondary and higher secondary education, though some illiteracy persists. Agriculture is the main occupation, supported by household work and informal activities, while most households have small or marginal land holdings and live in semi-pucca or kutcha houses.

Chapter III

PRODUCTION OF MILLETS

3.1 Introduction

Baseline Survey, 2022 was conducted to assess the situation of millets production in the target villages before the implementation of the programme interventions. This chapter analyses the data collected from the two selected GPs of Malkangiri block of the district. The analysis focuses on the distribution of area under millets and other crops, the usage of types millet seeds and agronomic practices, as well as the production and yield of millets. The chapter also highlights the challenges and opportunities for promoting millets in the district.

3.2 Cropping Pattern

Table 3.1 illustrates the distribution of Sample households based on their cropping patterns. It shows that, 75 sample HHs (93.57 per cent) are cultivating paddy. All the 80 Sample households (100 per cent) of them are cultivating millets, 35 Sample HHs (43.75 per cent) of them cultivating vegetables while 73 Sample HHs (91.25 per cent) of them are cultivating various crops such as, maze, sunflower, cashew, and lemon.

Table 3.1: Distribution of Sample HHs by their cropping Pattern

Block	Total Sample HHs	Paddy		Millets		Vegetable		Others	
		No	%	No	%	No	%	No	%
Malkangiri	80	75	93.75	80	100	35	43.75	73	91.25

Source: Baseline Survey, 2022

3.3 Area, Production and Yield of Millets

The distribution of operational area under millets and other crops in the Malkangiri block of the district (Table 3.2) reveals that out of the total 358.66 acres of operational areas of the sample households about 107.50 acres is under millet cultivation, which constitute 29.98 per cent of total operational area. The production of Millet is 146.70 quintals by 80 HHs, and the average yield in is 1.36 quintals per acre.

Table 3.2: Area, Production and yield of Millets

Block	Operational Area under Millets	Total Operational Area	Production (in Qtl)	Yield (Qtl./Acre
Malkangiri	107.50	358.66	146.70	1.36

Source: Baseline Survey, 2022

3.4 Type of Millet Seeds used

All the 80 Sample HHs prefer using local seeds for millet cultivation rather than certified or high-yielding variety (HYV) seeds. They primarily rely on their own saved seeds. None of the sample households reported purchasing seeds from the market, NGOs, government/community seed centres, or borrowing.

3.5 Perception on Quality of Millet Seeds

Most of the time, the quality of seeds are used to determine the volume of production. High-quality seeds are preserved for the next crop to reap the benefits. Table 3.3 shows that out of the total 80 surveyed households 52 HHs (65.00 per cent) has reported that the seed quality as good, 7HHs (8.75 per cent) has reported it as average, and 21HHs (26.25 per cent) consider the seed quality as bad.

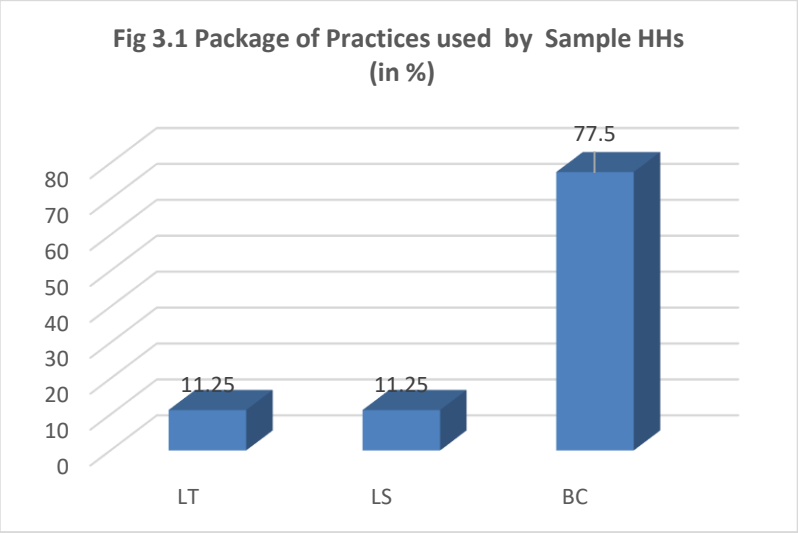
Table 3.3: Distribution of Sample HHs by Perception on Quality of Millet Seeds

Block	Good		Average		Bad		Total	
	No	*%*	*No*	*%*	*No*	*%*	*No*	*%*
Malkangiri	52	65.00	7	8.75	21	26.25	80	100

Source: Baseline Survey, 2022

3.6 Package of Practices

Fig. 3.1 presents the distribution of agronomic practices among the sample households. Out of the total 80 millet cultivating sample HHS, 62 HHs (77.50 per cent) are following Broadcasting method of sowing, about 9 HHs (11.25 per cent) of them each follow Line Sowing (LS) and 9 HHs (11.25 per cent) Line Transplantation methods. No sample HHs adopt SMI method.



3.7 Use of Fertiliser and Pesticides

Table 3.4 shows the pattern of fertiliser and pesticide used among the sample households in Malkangiri block. Out of 80 households, the majority of 50 HHs (62.50 per cent) are reported using organic or bio-fertilisers**,** indicating a strong preference for traditional and environmentally friendly practices. About 28 HHs (35.00 per cent) are found to be using chemical pesticides. A small proportion 2 HHs (2.5 per cent) are reported using both organic and chemical inputs**.**

Table 3.4: Distribution of Sample HHs by use of Fertilisers and Pesticides			
Malkangiri	Fertilisers/Pesticides	No	%
	Organic/ Bio-Fertiliser	50	62.50
	Chemical Pesticides	28	35.00
	Both	2	2.5
Total		80	100.00

Source: Baseline Survey, 2022

3.9 Conclusion

The analysis of cropping patterns and millet cultivation in Malkangiri block highlights that millets are cultivated by all sample households, indicating their importance in the local farming system. Paddy is also widely grown, while a smaller proportion of households cultivate vegetables and other crops. Farmers rely predominantly on local seeds for millets cultivation, which they preserve and reuse, reflecting traditional practices and self-sufficiency in seed management. Most households perceive the quality of their seeds as good, although some report average or poor quality. Broadcasting is the dominant sowing method, while line sowing and line transplantation are less common, and no households adopt SMI methods. Fertilizer and pesticide use shows a preference for organic or bio-fertilizers, with fewer households using chemical pesticides or a combination of inputs. Overall, the data reflects that sample households are relying on traditional millet cultivation practices, with moderate productivity and a strong emphasis on local knowledge and sustainable farming methods.

Chapter IV

CONSUMPTION OF MILLETS

4.1 Introduction

The main objective of this chapter is to analyse the trends and patterns of millets consumption among the sample households across the two GPs of the Malkangiri block of the district. This chapter also explores the types of millet varieties, recipes and dishes that are consumed by the sample households and how they prepare them. By doing so, this chapter aims to provide a comprehensive picture about the patterns of millets consumption and preferences among the sample households in Malkangiri district, which is one of the focus areas of SAA.

4.2 Consumption of Millets in different Age groups

The patterns of millets consumption in Malkangiri block of the district is presented in the Table 4.1. It is observed that the rate of millets consumption is relatively lower among the younger population, i.e., 36.84 per cent among infant. While all the population belong to the age groups of preschools (3-5 years), adolescent (13-18 years), adults (19-44 years), middle aged (45-59 years) and Old (60 years & above) consume millets. All the 80 sample HHs consume millets and the average Consumption is 50.37 Kg. per year.

Table 4.1 Distribution of Sample Population by Consumption of Millets in different age groups

Block	Age Groups	Total No	Sample population consume millets	
		No	No	%
Malkangiri	Infant (0-2 Years)	19	7	36.84
	Preschool (3-5 Years)	28	28	100.00
	Children (6-12 Years)	51	49	98.00
	Adolescent (13-18 Years)	68	68	100.00
	Adults (19-44 Years)	143	143	100.00
	Middle Age (45-59 Years)	55	55	100.00
	Old (60 years & above)	28	28	100.00
Total		392	378	96.17

Source: Baseline Survey, 2022

4.3 Consumption of Millets during the different Meals of the day

Table 4.2 shows the distribution of sample households by their millet consumption during different meals of the day. Out of the total 80 households surveyed, 38 households (47.5 per cent) consumed millets during breakfast, while 69 households (86.25 per cent) included millets in their lunch. Similarly, 49 households (61.25 per cent) consumed millets as evening snacks, and 63 households

(78.75 per cent) consumed millets during dinner. The data indicates that millet consumption is highest during lunch and dinner.

Table 4.2: Distribution of Sample HHs by Consumption of Millets during the different Meals of the day									
Block	Total Consuming HHs	Breakfast	%	Lunch	%	Evening Snacks	%	Dinner	%
Malkangiri	80	38	47.5	69	86.25	49	61.25	63	78.75

Source: Baseline Survey, 2022

4.4 Consumption of Millets Across seasons

Table 4.3 presents the distribution of sample households by their millet consumption across different seasons. Out of the total 80 sample households, 69 households (86.25 per cent) reported consuming millets during the rainy season, while 63 households (78.25 per cent) consumed millets during the winter season. Millet consumption again increased to 69 households (86.25 per cent) in the summer season**.**

Table 4.3: Distribution of Sample HHs by Consumption of Millets across Seasons				
Block	Total Consuming HHs	Seasons	No	%
Malkangiri	80	Rainy	69	86.25
		Winter	63	78.75
		Summer	69	86.25

Source: Baseline Survey, 2022

4.5 Consumption of different Millet Recipes

Table 4.3 presents the distribution of sample households in Malkangiri block according to their consumption of various millet-based recipes. Out of 80 sample households, the highest proportion 69 households, (86.25 per cent) have reported consuming Jau/Torani, making it the most popular millet recipe preparation in the area. This is followed by Tampo/Pitha, consume by 39 households (48.75 per cent). Other recipes are less common. About 9 households (11.25 per cent) have reported consuming Idli/Upma and 5 households (6.25 per cent) consume Khiri. Only 1 household (1.25 per cent) prepare millet in the form of Sweet.

Table 4.4: Distribution of Sample HHs by Consumption of different Millet Recipes			
Block	Recipes	No	%
Malkangiri	Tampo/Pitha	39	48.75
	Jau/Torani	69	86.25
	Khiri	5	6.25
	Idli/Upma	9	11.25
	Sweet	1	1.25

Source: Baseline Survey, 2022

4.5 Conclusion

The survey findings reveal that millets are widely consumed by households in Malkangiri block across all age groups, with infants showing relatively lower consumption. Millets form an important part of daily meals, especially during lunch and dinner, and their consumption remains consistent across seasons. Among millet-based recipes, Jau/Torani is the most popular, followed by Tampo/Pitha, while other preparations such as Idli, Upma, Khiri, and sweets are less common. Overall, the findings indicate that millets are a staple in the local diet, reflecting cultural preferences and traditional food practices.

Chapter V

PROCESSING AND MARKETING OF MILLETS

5.1 Introduction

This chapter explores the various methods used by the respondents for processing millets, including dehulling, milling, roasting, and popping. It also examines the availability and accessibility of processing units in the study area, along with the factors influencing the choice of processing methods. Furthermore, the chapter analyses the different modes of millet marketing, such as direct sales, sales to cooperatives and middlemen etc. The main objective of this chapter is to assess the current status of millet processing and marketing in the sample area and to identify the challenges and opportunities for strengthening the millet value chain.

5.2 Processing of Millets

Table present the methods of millets processing is being used by the millets cultivating sample households. The data shows that out of 69 millet-processing households in Malkangiri block, 8 households (11.59 per cent) process millets using traditional methods, 42 households (60.87 per cent) use machinery, and 19 households (27.54 per cent) use both traditional and machine-based methods

Table 5.1: Distribution of Sample HHs by methods of Processing Millets

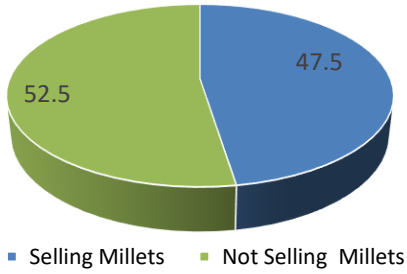
Block	HHs processing millets	Traditional		Machinery		Both	
	No	No	%	No	%	No	%
Malkangiri	69	8	11.59	42	60.87	19	27.54

Source: Baseline Survey, 2022

5.3 Marketing of Millets

Fig 5.1 shows that, out of the total 80 millet cultivating sample households 38 HHs (47.50 per cent) are selling their millets and 42 households (52.50 per cent) are not selling millets.

Fig 5.1: Sample HHs by Marketing of Millets (in %)



5.4 Seling points of Millets

Table 5.2 reveals that out of the total millets cultivating sample households, 38 millet-selling households in Malkangiri block, 16 households (42.11 per cent) sell their produce through government mandis, 7 households (18.42 per cent) sell to local businessmen, and 5 households (13.16 per cent) each sell to middlemen and local markets (Hata). Additionally, 3 households (7.89 per cent) sell to moneylenders or Sahukars, and 2 households (5.26 per cent) sell to other agencies. It is also observed that out of the total millet selling households, only 9 HHs (23.68 per cent) of households experienced distress sale.

Table 5.2: Distribution of Sample HHs by Selling Points of Millets

Block	Selling Points	Total	
		No	%
Malkangiri	Govt. Mandi	16	42.11
	Middlemen	5	13.16
	Money lender/ Sahukar	3	7.89
	Daily Market/ Haat	5	13.16
	Local Businessmen	7	18.42
	Other	2	5.26
Total		38	100

Source: Baseline Survey, 2022

5.5 Conclusion

The analysis of millet processing and marketing in Malkangiri block of Malakangiri district shows that most households use machines to process millets, while a smaller proportion rely on traditional methods or a combination of both. This indicates a shift towards mechanized processing, although traditional practices are still maintained by some households. In terms of marketing, nearly half of the millet-cultivating households sell their produce, primarily through government mandis, local businessmen, and middlemen. A few households sell to moneylenders or other agencies, and distress sales are relatively limited. Overall, the data reflects that millet processing is gradually modernizing, and households utilize multiple marketing channels to sell their produce.

Annexure-1: Mapping of Baseline Survey, 2022 Data

Indicators	***Unit***	***Baseline Value***
		Malkangiri Block
% of Sample Households Cultivating Millets (N 80)	%	100
Types of Millets Cultivated (2021)		
a) Mandia	%	100
Area under Millets Cultivation/HH (Acre)	Acre	107.50
% of Millets area to total Cultivated Area	%	29.98
Production Millets HHs	Qnt.	146.70
Package of Practice		
a) Broadcasting	%	77.5
b) LS	%	11.25
c) LT	%	11.25
Yield Rate (Qnt./Acre)	Qnt.	1.36
Percentage of Sample Population Consuming Millets		
a) Breakfast	%	47.50
b) Lunch	%	86.25
c) Evening Snacks	%	61.25
d) Dinner	%	78.75
Popular Millets Recipes (% of HHs)		
a) Tampo/Pitha	%	48.75
b) Jau/Torani	%	86.25
c) Khiri	%	6.25
d) Idli/Upma	%	11.25
e) Sweets	%	1.25
Percentage of Sample HHs using Processing Millets (N 69)		
a) Traditionally	%	11.59
b) Machines	%	60.87
c) Both	%	27.54
Percentage of Sample HHs Selling Millets (N 38)		
a) Mandi	%	42.11
b) *Haat*	%	13.16
c) Middleman	%	13.16
d) *Sahukar*/Moneylenders	%	7.89
e) Local Businessmen	%	18.42
Percentage of Sample HHs Experienced Distress Sale	%	23.68

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 Householdsss

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.)
1	Agriculture	Land Preparation	Transplantation / Sowing	Weeding	Fertilizers / Pesticides	Harvesting	Others	
	a) Millet							
	b) Paddy							
	c) Vegetables							
	d) Any Other Crops							

	(Specify)							
2	Households Expenses							
3	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 HH (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. Do 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, pleases 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

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)

31. Do you sell millets? **1. Yes 2 . No**
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.
35. If yes, what is the sale price.....and what is the market price.....
36. What are the marketing processes followed by you? a) Barter b) Money c) Others (specify)
37. Do you sell any millet based value-added products? **1.Yes 2. No**
38. If yes, provide the details about the Millet Based Value Added Products your sale.
39. Remarks

Contact no of Respondent ……. **Signature of the Researcher/Field Investigator**

STUDY TEAM

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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.

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