

# BASELINE SURVEY:

GANJAM DISTRICT 2018-19, Phase 3  
(Special Programme for Promotion of Millets in Tribal Areas of  
Odisha or Odisha Millets Mission, OMM)



Nabakrushna Choudhury Centre for Development Studies, Bhubaneswar, Odisha  
(an ICSSR Institute in Collaboration with Government of Odisha)

August 2020

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Citation: NCDS Study Team\*, “Baseline Survey: Ganjam District 2018-19, Phase 3 (Special Programme for Promotion of Millets in Tribal Areas of Odisha or Odisha Millets Mission, OMM)” Nabakrushna Choudhury Centre for Development Studies, Bhubaneswar August 2020.

(\* See next page for details of NCDS study team)

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## FOREWORD

The seeds for the "Special Programme for Promotion of Millets in Tribal Areas of Odisha" (Odisha Millets Mission, OMM) were sown at a consultation meeting held on 27 January 2016 at Nabakrushna Choudhury Centre for Development Studies (NCDS) under the Chairmanship of the then Development Commissioner-cum-Additional Chief Secretary (DC-cum-ACS), Government of Odisha, and Chairperson, NCDS, Mr. R. Balakrishnan (currently, Chief Advisor, Government of Odisha). The consultation meeting had representatives from different line departments of the Government of Odisha, members of different civil society groups from across the country and from within the state (which, among others, included the Alliance for Sustainable and Holistic Agriculture (ASHA), the Millets Network of India (MINI), the Revitalizing Rainfed Agriculture (RRA) Network of India), that brought in their experiences, and the academia that included among others the then Chairperson of Karnataka Agricultural Price Commission, Dr T. Prakash. As per the decision taken at the consultation meeting, NCDS submitted a proposal to the Government of Odisha on the revival of millets. Lo and behold, there was an announcement in the budget speech of 18 March 2016 conveying that the Government of Odisha intends to revive millets. This led to a series of interactions and a memorandum of understanding (MoU) was signed on 27 February 2017 between the Directorate of Agriculture and Food Production (DAFP) as the state level nodal agency that would monitor and implement the programme, NCDS as the state secretariat that would also anchor the research secretariat, and Watershed Support Services and Activities Network (WASSAN) that would anchor the programme secretariat as part of the state secretariat.

It was in 2017-18 that budget was apportioned for 30 selected blocks, the phase 1 blocks. In principle decision was taken to extend the programme to another 25 blocks in 2018-19, the phase 2 blocks, a further 17 blocks in 2019-20 (that includes 10 under the state plan and seven under District Mineral Fund (DMF), Keonjhar), the phase 3 blocks, and an additional 4 blocks under DMF, Sundargarh in Kharif 2021, the phase 4 blocks. The MoU with NCDS for 7 blocks under DMF Keonjhar was signed on 13 December 2018 and for 35 phase 2 and phase 3 blocks under state plan were signed on 25 February 2019. The current set of 10 baseline reports are based on surveys conducted during August 2019 February 2020 where the programme intervention had already started.

In each of the blocks, from the list provided by the facilitating agency through the programme secretariat that had names of participating farmer, village and gram panchayat. We first selected two of the gram panchayats randomly, and then, from each of the selected gram panchayat we selected two villages randomly. From each selected village, 15 farmer households were selected randomly and from a listing of non-participating farming households, five farmer households were selected. If a village did not have 15 participants then the sample size of non-participating households was increased so that the total number of sample households from each village was 20. As per this design, each block would have a sample of 80 farmer households. All respondent households were asked question regarding the scenario before the intervention of the programme, and hence, they were canvassed the same schedule. The survey was conducted by a third party. A sample of the surveyed households were re-visited by the research secretariat team for scrutiny and validation of data. Besides, during this visit, focus group discussions were also conducted in some villages by the research secretariat team.

The lead author for the current baseline report on Ganjam is Dr Narayani Rajashree Kanungo with assistance from Mr Guru Prasad Khuntia and Mr Sanket Mishra along with other members of the study team. As Principal Investigator of the team, I compliment all the members for their effort.

The Odisha Millets Mission, as per a recent report that I authored, comparing first year outcome with the baseline report of the phase 1 blocks indicate that the yield has more than doubled and the value of produce has more than trebled in the year one of its intervention. In 2019, mandia procurement in *swabhiman anchal* of Malkangiri district was the first ever procurement of any grain in the region even after 70+ years of independence. In 2020, in spite of the pandemic, ragi ladoos are being piloted as a consumption awareness campaign through Integrated Child Development Scheme in Keonjhar and Sundargarh under respective DMF. These expansions are also brining in oppourtunities of convergence across line departments, which is an important development for any pro people public policy engagement.

On the research front there have been engagements with a consortium of universities and institutes led by University of Cambridge through TIGR<sup>2</sup>ESS (Transforming India's Green Revolution by Research and Empowerment for Sustainable food Supplies). Agreements have been signed with Indian Institute of Millets Research (IIMR), Hyderabad, and Central Food Technological Research Institute (CFTRI), Mysuru, Fobenius Institute at Goethe University, Frankfurt and also exploring a research collaboration with them that includes scholars from Groningen University among others.

There has been interest in Odisha Millets Mission from the central as also other state governments. The unique institutional architecture that brings together the Government, civil society and the Academia led by NCDS to complement and supplement each other has been appreciated by policy makers (including National Institution for Transforming India, NITI Aayog), civil society and the Academia. So, the chant of OMM continues to reverberate.

**Srijit Mishra**  
**Director, NCDS**

## ACKNOWLEDGEMENTS

Baseline Survey- Ganjam is an outcome of dedicated team work. Nabakrushna Choudhury Centre for Development Studies (NCDS), Bhubaneswar, prepared the report with support from related government departments, organizations, and related stakeholders including farmers' associations.

First and foremost, we express our sincere gratitude to Mr. R. Balakrishnan, Indian Administrative Service (IAS), former Development Commissioner-cum-Additional Chief Secretary (DC-cum-ACS) and former Chairman, Nabakrushna Choudhury Centre for Development Studies (NCDS); Mr. Suresh Chandra Mahapatra, IAS, DC-cum-ACS, Government of Odisha and Chairman, NCDS; Dr. Saurabh Garg, IAS, Principal Secretary, DAFE; Mr. Bhaskar Jyoti Sarma, IAS, former Special Secretary, DAFE; Mr. Suresh Vashishth, Special Secretary, DAFE ; Dr. M. Muthukumar, IAS, Director, DAFP; Mr. Vijaya Amruta Kulange, IAS, Collector-cum-District Magistrate, Ganjam; Mr. Kashinath Khuntia, former Joint Director Agriculture (JDA), Millets & Integrated Farming, DAFP; Mr. Pradeep Rath, JDA, Millets and IF; Dr. Ananda Chandra Sasmal, former Agronomist, DAFE; Mr. Ansuman Pattnayak, former Assistant Agriculture Officer (AAO), Farm, Millets, DAFP; Mr. Sanjay Kumar Pani, former AAO, DAFP, and Ms. Kalpana Pradhan, AAO, DAFP.

Our heartfelt thanks to District Level Officials of Ganjam, Particularly Mr. Subhash Chandra Mahapatra, DPD, ATMA; Mr. Surya Naraya Rao, Scheme Officer, Ganjam; Mr. Kashinath Khuntia, Chief District Agriculture Officer, Ganjam; Mr. Prashant Kumar Patnaik, DAO, Aska; Mr. Promod Kumar Das, DAO, Khalikote; Assistant Agriculture Officers (AAO); Mr. Tapas Ranjan Panda (Dharakote); Mr. Rupak Kumar Mahalik (Patrapur); Mr. Anirudha Tarei (Polosara); and Mr. Raj Kishor Swain (Sorada) for their support in providing information.

We also extend our gratefulness to the NCDS office bearers including Mrs Sumati Jani, OFS, Secretary, NCDS; Mrs. S. M. Pani, Computer Programmer; Mr. D. B. Sahoo, PA to Director; Mr. P. K. Mishra, Sr. Asst.; Mr. P. K. Mohanty, Jr. Accountant; Mr. N. K. Mishra, Stenographer; Mr. P. K. Mallia, Computer Typist; Mr. Niranjana Mohapatra, Librarian; Mr. S. B. Sahoo, Xerox Operator for their support, help and cooperation.

A special mention to the entire team of the Programme Secretariat (WASSAN), who were instrumental during the time of field work including Mr. Ashima Choudhary, State Coordinator, and Mr. Anupam Burman, District Coordinator (OMM), Ganjam and also the



Facilitating agency coordinators Mr. Biswajit Swain, SACAL; Mr. Saroj Kumar Satpathy, VIEWS, Prabina Kumar Rout, INDIA; Mr.Tutu Bisoyi, PROGRESS, and field staff of the concerned areas under Study.

We would like to sincerely thank all farmer respondents without their cooperation collection of data could not have been possible.

**Narayani Rajashree Kanungo**  
**Post-Doctoral Fellow, NCDS**



## EXECUTIVE SUMMARY

### **\$1 Study Area**

- 1.1 Ganjam is one of the seven districts where the flagship programme "Special Programme for Promotion of Millets in Tribal Areas of Odisha, Phase 2 (hereafter, Odisha Millets Mission, OMM)" started in 2018-19 in four Blocks of the district, namely, Dharakote, Patrapur, Polsara, and Sorada.
- 1.2 A sample of 320 households (HHs) were covered under baseline survey and data were collected from 80 HHs each from all four Blocks.
- 1.3 Out of 320 HHs, 165 HHs are found cultivating millets in 2017-18, the period covered under Phase 2 of baseline survey.

### **\$2 Socio Economic Profile**

- \$2.1 Social category of surveyed HHs suggests that 56 per cent belong to Scheduled Tribe (ST) community and remaining 44 per cent belong to other social groups. Economic status of the HHs indicate that 96.2 per cent HHs live below poverty line.
- \$2.2 Agriculture is the predominant economic activity undertaken by the respondents indicating 97.5 per cent engaged in agricultural activities. However, HHs were also found engaged in other activities along with agricultural activities (a miniscule percentage are found not engaged in agricultural activity) such as horticulture (18.4 per cent), forest related activities (11.6 per cent), agricultural labourer (70.3 per cent), government services (4.4 per cent), livestock (43.1 per cent) and other activities (6.3 per cent).
- \$2.3 Dwelling status of respondents reveals that 54.4 per cent HHs reside in Kucchha houses, 9.4 per cent HHs resides in semi Pucca houses and remaining 36.3 per cent HHs reside in Pucca houses.

### **\$3 Production**

- \$3.1 Ganjam district witnessed production of millets only in form of *mandia* (finger millets) in year 2017-18.
- \$3.2 *Mandia* was found cultivated by 139 HHs in 28.3 hector land, producing 141.5 quintal with a total yield of 5 quintal per hector and 1 quintal per HH in Ganjam district.

\$3.3 As per the perception of farmers cultivating *mandia*, 36.7 per cent HHs used good quality seeds, 63.6 per cent used average quality seeds and only 1.4 per cent used lower quality seeds.

\$3.4 Respondents are found using different methods of cultivation techniques including broadcasting, line sowing/line transplanting, SMI method and combination of one or more methods used by different HHs. It indicates that from 139 *mandia* cultivating HHs, 56 HHs had adopted broadcasting method covering an area of 10.3 ha producing 61.5 quintals with a yield of 6.0 qtls/ha, 83 HHs had used line sowing or line transplanting method in 63.7 ha producing 79.4 qtls with a yield of 4.4 qtls/ha.

#### **\$4 Consumption**

\$4.1 Consumption of millets vary from season to season suggesting 60.9 per cent HHs consuming millets during summer, 44.1 per cent during rainy and 25.6 per cent during winter. It is also found that total 27 HHs from Dharakota Block, 8 HHs from Patrapur Block, 29 HHs from Polsara Block and 18 HHs from Soroda Block consume millets throughout the year.

\$4.2 Consumption of millets by HHs during different meals of the day revealed that 60.9 per cent HHs consume it in their breakfast, 17.2 per cent HHs in lunch and 0.6 per cent HHs in evening snacks. No HH was found consuming millets in dinner.

\$4.3 Consumption of *mandia*, as a staple food in Ganjam is an age old practice and is continued till date. Respondents are found consuming millets in forms of *jau* (porridge) and *pitha* (cake or pan cake). Out of 195 HHs, 15 HHs consume *mandia* in both *jau* and *pitha* form and rest consume *mandia* only as *jau*.

#### **\$5 Processing and Marketing**

\$5.1 Processing of millets such as dehusking and grinding is done by the surveyed HHs mostly manually, or in some cases, by using machine. Out of 181 HHs, 180 HHs are found processing millets manually by using pestle or mortar. Only one HH is found processing by using machine. Unavailability of processing units is found to be a major bottleneck identified by the HHs who resort to manual processing that is found tedious.

\$5.2 Marketing of millets involve varied methods. The most popular method of selling of millets in Ganjam district is at the local market. 52.8 per cent HHs are found selling millets at local market where as 44.9 per cent sells millets through middle men, and

only 2.3 per cent go to the money lender. For consistency in service, door to door collection and timely payment, middle men is cited as a preferred method.

\$5.3 Access of selling point varies for HHs determining marketing of surplus millets. Out of the 47 HHs selling millets, one HH has to travelled more than 10 Km, nine HHs were found travelling between 5 to 10 km, and 37 HHs have market access within 0 to 5 km.

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## ABBREVIATIONS

APL	Above Poverty Line
BPL	Below Poverty Line
CBO	Community Based Organisation
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
qtl	quintal
SC	Scheduled Caste
SRI	System of Rice Intensification
ST	Scheduled Tribe
WASSAN	Watershed Support Services and Activities Network



## INTRODUCTION

### 1.1 Background

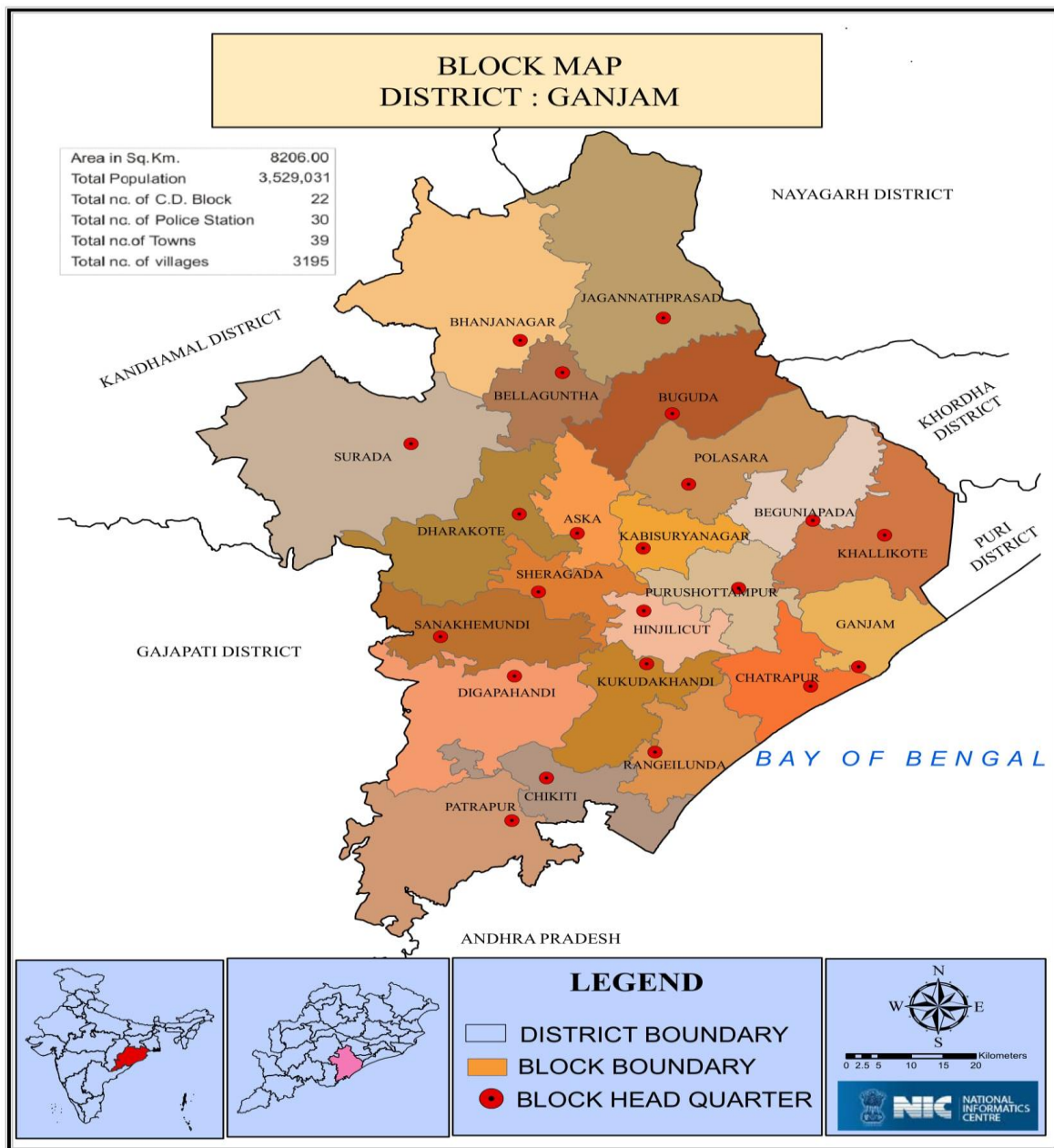
Millets are a group of highly variable small-seeded grasses, widely grown as cereal crops or grains for human food and as fodder. There is evidence of cultivation of millet in the Korean Peninsula dating to the Middle Jeulmun Pottery Period (around 3,500–2,000BC). In India, millets have been mentioned in some of the oldest Yajurveda texts, identifying foxtail millet (*priyangava*), Barnyard millet (*aanava*) and black finger millet (*shyaamaka*), thus indicating that millet consumption was very common, pre-dating to the Indian Bronze Age (4,500BC)(source-ICRISAT) as millets can grow in hardy and drought conditions where major cereals fail to provide sustainable yield (Hulse *et al.* 1980; Devi *et al.* 2014). Government of Odisha in 2017-18 launched a programme in 30 blocks of seven tribal districts namely Gajapati, Kalahandi, Kandhamal, Koraput, Malkangiri, Nuapada, and Rayagada that emphasised on four verticals - production, consumption, processing, and marketing of millets and. At the time of implementation of OMM, some of the millets cultivated in Odisha are *mandia/ragi* (finger millet), *suan/gurji* (little millet), *janha/jowar* (sorghum), *kangu* (foxtail millet), and *kodo* (kodo millet). In 2018-19, the phase 2 implementation of OMM covered additional blocks in 7 districts (including 3 old districts included in phase 1) and 22 blocks. Ganjam district is one of them. This baseline study attempts to provide necessary information on the above-mentioned verticals of the programme in Ganjam district.

### 1.2 District Profile

Ganjam District is on 19.4 to 20.17 degree North Latitude and 84.7 to 85.12 degree East Longitude. It covers an area of 8070.60 sq km. The district is broadly divided into two divisions, the Coastal plain area in the east and hill and table lands in the west. The District experiences normal annual rainfall of 1444 mms.

Agriculture is a traditional occupation and the way of living of the inhabitants of Ganjam District. The District is well known for its fertile soil and agricultural productivity. A large variety of crops are grown here including paddy, ground nut, sugar cane, oil seeds, ragi, moong and biri. Because of the agro climatic condition suitable to grow millets, Ganjam has been included as a Programme district.

**Fig 1.1 Map of Ganjam district with Blocks**



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

**Table 1.1: Key Indicators of Ganjam District**

<i>Indicator</i>	<i>Values</i>
<b>Census 2011</b>	
Population (in Lakh)	35.30
Males (in Lakh)	17.79
Females (in Lakh)	17.50
Scheduled caste (in Lakh)	6.89
Scheduled Tribe (in Lakh)	1.19
HHs (in Lakh)	7.58
Sex Ratio	983
Total Workers (in Lakh)	15.01
Main Workers (in Lakh)	9.01
Marginal Workers (in Lakh)	6.01
Non-Workers (in Lakh)	20.27
Work Participation Rate (WPR, %)	42.52
Cultivator as % of Total Worker	18.98
Agricultural Labourers as % of Total Workers	37.65
Literacy rate (%)	71.09
Total Geographical area (sq. km)	8206
<b>Land Use Pattern (Area in '000 ha) (2014-15)</b>	
Forest	56259
Land put to Non-agricultural use	70948
Barren and Non-Cultivable Land	53682
Permanent Pasture and Other Agricultural Land	15689
Net Area Shown	27760
Cultivable Waste Land	27248
Old Fellow	37048
Current Fellows	56788
Miscellaneous Trees and Groves	12875
<b>Agriculture, 2014-15</b>	
Fertilizer Consumption (kg/ha)	46.25
Irrigation, Kharif ('000 ha)	260.02
Irrigation, Rabi ('000 ha)	550.38
<b>Other Information</b>	
No. of Village Electified (as on march 2014)	2812
No. of banks	388
No. of AWC	4777
No. of BPL families	88616
No. of Job Card Issued (cumulative, March 2015)	467996
No. of beneficiaries provided employment through MGNREGS	138046

Source: *District Statistical Handbook, Ganjam, 2011* and *District at a Glance 2016*

Note: MGNREGS is Mahatma Gandhi National Rural Employment Guarantee Scheme

### 1.3 Objectives

The objectives of the baseline survey were to obtain information on proposed interventions under OMM around production, consumption, processing and marketing. It is also pertinent to have some background information of the HHs surveyed. 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
- To elucidate the method of processing and mode of marketing

### 1.4 Methodology

#### 1.4.1 Sample Design

From the list provided by Programme Secretariat there were 1719 participant farmer households spread across 62 villages 17 gram panchayats. From these, first stage sampling selected two gram panchayats randomly from each block, second stage sampling was to select two villages from each of the selected gram panchayat. The third stage sampling had two parts, one was to select 15 households randomly from each selected village from the list of participating farmer households, the other part was to prepare a village listing of non-participating farmer households and then select five households randomly and if the participating households in the village is less than 15 then increase the number of non-participating households in the sample so that the total sample in the village is 20. By design, 80 households have been surveyed from each block. From the 320 surveyed households, 165 were participant households and 155 were non-participant households.

**Table 1.2: Households Surveyed in Ganjam District**

<i>Block</i>	<i>Participant HHs</i>	<i>Surveyed HHs</i>	<i>Participant HHs 2018-19</i>	<i>Non-participant HHs 2018-19</i>
	(No.)	(No.)	(No.)	(No.)
Dharakote	341	80	38	42
Patrapur	237	80	44	36
Polsara	614	80	40	40
Sorada	527	80	43	37
Total	1719	320	165	155

Source: Programme Secretariat & Field Survey

Note: HHs denotes households

However, as the information pertained to 2018-19 when the programme was not implemented a common schedule was canvassed to all the surveyed households and the following analysis does not distinguish between the two categories of households.

#### 1.4.2 Data Collection

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 pre-tested interview schedule (Annexure 1) and Focus Group Discussion (FGD), (Annexure 2). The secondary data has been collected from different published and unpublished sources.

For background understanding on the total millets produced, consumed, stored, processed, and marketed by the surveyed HHs during the period 2018-19 is presented in Table 1.3.

**Table 1.3: Distribution of HHs by Production and Utilisation of Millets**

<i>Blocks</i>	<i>Production</i> (N=320)	<i>Consumption</i> (N=320)	<i>Storage for seeds</i> (N=320)	<i>Processing</i> (N=320)	<i>Marketing</i> (N=320)
Dharakote	45	55	31	55	21
Patrapur	9	32	9	32	20
Polsara	52	52	50	52	37
Sorada	33	56	24	42	11
Total	139	195	114	181	89

Source: Field Survey

Note: The total number of HHs who have consumed and processed millets is more than the total millets producing HHs implies that apart from producing millets HHs have obtained millets through other sources. Other sources include either purchase or received from friends/relatives. Difference is calculated by taking total no of surveyed HHs into account.

From the 320 surveyed HHs, 139 of them had produced millets 195 HHs from surveyed HHs had consumed millet during different season of a year as well as different meals of a day and 114 HHs had stored seeds for next year production. 181 HHs had processed millets and only 89 HHs had sold it.

#### 1.5 Limitations

As some of the information was based on memory, there could be some recall error. This is particularly so for actual income, expenditure, occupational status among others.

## **1.6 Chapterization**

The baseline survey has been divided into six chapters including the current introductory chapter, which provides district profile, objectives, methodology and limitations. Chapter 2 provides socio-economic profile of surveyed HHs. Chapter 3 provides a detailed overview of production and productivity of millets. Chapter 4 discusses consumption pattern of millets. Chapter 5 elucidates processing and marketing of millets. Chapter 6 summarizes the findings.

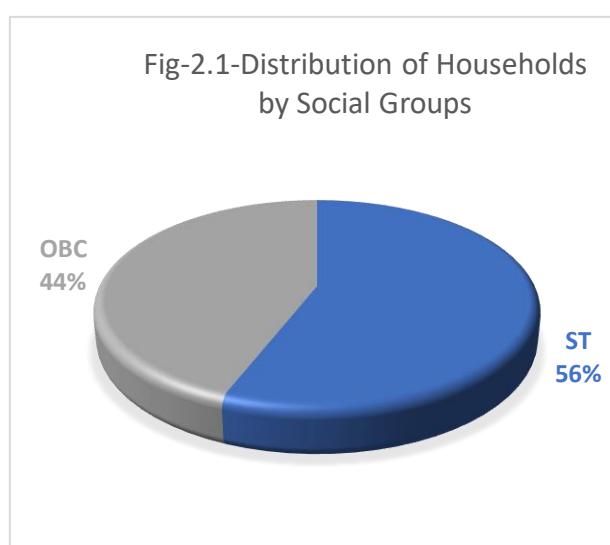
## SOCIO-ECONOMIC PROFILE OF HOUSEHOLDS SURVEYED

### 2.1 Introduction

This chapter looks into social and demographic profile of surveyed HHs i.e. distribution by social group and religion and the distribution of population by gender. In addition, for the HHs surveyed, it provides the distribution by poverty status (proportion below poverty line and proportion above), distribution by economic activities (not mutually exclusive, as a HH can have multiple economic activities), and distribution by house structure.

### 2.2 Social and Demographic Profile

Out of 14 blocks in Ganjam District, in phase 2, intervention took place in four Blocks, namely, Dharakote, Patrapur, Polsara, and Soroda. In these, 320 HHs have been surveyed. The distributions across social groups, Table 2.1 and Fig2.1, indicate that 179 HHs (56%) belong to Schedule Tribe (STs), and 141 HHs (44%) belong to other Backward Classes (OBC).



**Table 2.1: Distribution of Households by Social Groups across Blocks**

Social Groups	Dharakote		Patrapur		Polsara		Sorada		Total	
	HHs	%	HHs	%	HHs	%	HHs	%	HHs	%
ST	40	50	80	100	40	50	19	24	179	56
OBC	40	50	0	0	40	50	61	76	141	44
Total	80	100	80	100	80	100	80	100	320	100

Source: Field Survey

**Table 2.2: Distribution of Households by Religion across Blocks**

Religion	Dharakote		Patrapur		Polsara		Sorada		Total	
	HHs	%	HHs	%	HHs	%	HHs	%	HHs	%
Hindu	61	76.3	80	100	80	100	80	100	301	94.1
Christian	19	23.8	0	0	0	0	0	0	19	5.9
Total	80	100	80	100	80	100	80	100	320	100

Source: Field Survey

Table 2.2 indicates that 94.1 per cent are from Hindu community and 5.9 per cent belong to Christian community. Further, Table 2.2 also depicts that in Patrapur, Polsora and Soroda only Hindu respondents have been covered.

Table 2.3 shows that total population of surveyed HHs is 1366. The share of male population is 54 per cent and that for female population is 47.1 per cent. Block wise distribution of male population across blocks is 54.8 per cent, 50.8 per cent, 56.2 per cent and 53.5 per cent and that for female population is 45.2 per cent, 49.2 per cent, 43.8 per cent, and 46.5 per cent in Dharakote, Patrapur, Polsora and Soroda blocks, respectively.

**Table 2.3: Distribution of Population by Gender across Blocks**

<i>Gender</i>	<i>Dharakote</i>		<i>Patrapur</i>		<i>Polsara</i>		<i>Sorada</i>		<i>Total</i>	
	Person	%	Person	%	Person	%	Person	%	Person	%
Male	193	54.8	155	50.8	200	56.2	189	53.5	737	54.0
Female	159	45.2	150	49.2	156	43.8	164	46.5	629	46.0
Total	352	100.0	305	100.0	356	100.0	353	100.0	1366	100.0

Source: Field Survey

### 2.3 Poverty Status

The field survey data shows that 96.2 per cent HHs live below poverty line. The incidence of poverty is more than 90 per cent in all Blocks. The block wise and social group-wise distribution of BPL, APL HHs has been given in Table 2.4.

**Table 2.4: Distribution of Households by Poverty Status across Blocks**

<i>Economic</i>	<i>Dharakote</i>		<i>Patrapur</i>		<i>Polsara</i>		<i>Sorada</i>		<i>Total</i>	
	HHs	%	HHs	%	HHs	%	HHs	%	HHs	%
BPL	80	100	79	98.75	69	86.25	80	100	308	96.25
APL	0	0	1	1.25	11	13.75	0	0	12	3.75
Total	80	100	80	100	80	100	80	100	320	100

Source: Field Survey

Note: BPL is below poverty line and APL is above poverty line

### 2.4 Economic Activities

Table 2.5 shows the economic activities of surveyed HHs. It shows that 97.5 per cent HHs' income depends on agriculture activities out of which 42.5 per cent grow millets along with other crops, 18.4 per cent HHs depends on horticulture, 11.6 per cent HHs depends on forest related activities, 70.3 per cent HHs are engaged in agricultural labourer, 4.4 per cent HHs



are govt. servant, 17.8 per cent HHs are retired persons, 20.6 per cent HHs depends on remittance, 43.1 per cent depends on live stock, and only 6.3 per cent depends on other activities.

**Table 2.5: Distribution of Households by Economic Activities across Blocks**

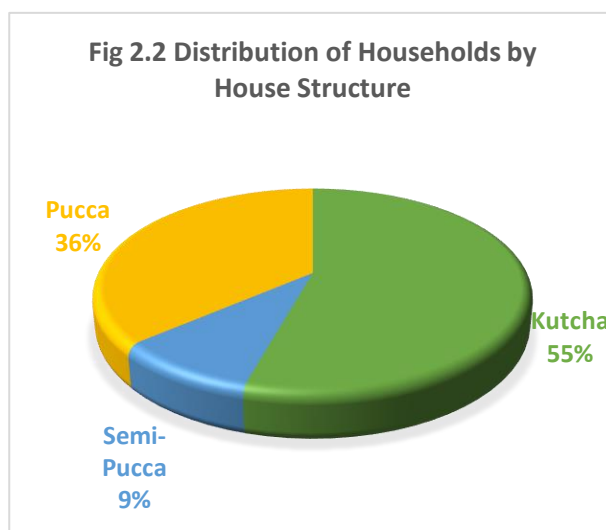
Economic Activity	Dharakote		Patrapur		Polsara		Sorada		Total	
	HHs	%	HHs	%	HHs	%	HHs	%	HHs	%
Agriculture	80	100.0	78	97.5	74	92.5	80	100.0	312	97.5
Millets	44	55.0	9	11.3	50	62.5	33	41.3	136	42.5
Horticulture	0	0.0	21	26.3	37	46.3	1	1.3	59	18.4
Forest	13	16.3	17	21.3	0	0.0	7	8.8	37	11.6
Ag.Labour	69	86.3	47	58.8	57	71.3	52	65.0	225	70.3
Salary	4	5.0	10	12.5	0	0.0	0	0.0	14	4.4
Pension	10	12.5	14	17.5	22	27.5	11	13.8	57	17.8
Remittance	5	6.3	25	31.3	18	22.5	18	22.5	66	20.6
Livestock	37	46.3	32	40.0	31	38.8	38	47.5	138	43.1
Others	2	2.5	2	2.5	15	18.8	1	1.3	20	6.3
Grand Total	80	100.0	80	100.0	80	100.0	80	100.0	320	100.0

Source: Field Survey

Note: Activities total are not additive, as activities are not mutually exclusive.

## 2.5 Structure of House

House structure in a sense reflects the economic condition of HHs. Table 2.6 and Fig 2.2. describes that out of the total surveyed HHs, 54.4 percent had *kutcha* houses, 9.4 per cent had *semi-pucca* houses and 36.3 percent had *pucca* houses. The percentage of *kutcha* houses was the highest in Dharakote (63.8%) whereas the percentage of *pucca* houses was the highest in Polsara (45%).



**Table 2.6: Distribution of Households by House Structure across Blocks**

<i>House Structure</i>	<i>Dharakote</i>		<i>Patrapur</i>		<i>Polsara</i>		<i>Sorada</i>		<i>Total</i>	
	0	%	HHs	%	HHs	%	HHs	%	HHs	%
Kutchha	51	63.8	40	50.0	36	45.0	47	58.8	174	54.4
Semi-Pucca	1	1.3	7	8.8	8	10.0	14	17.5	30	9.4
Pucca	28	35.0	33	41.3	36	45.0	19	23.8	116	36.3
Total	80	100.0	80	100.0	80	100.0	80	100.0	320	100.0

Source: Field Survey

## 2.6 Conclusion

The socio-economic profile of the surveyed HHs indicate that almost half the HHs (51%) belong to other social groups, nearly one-third (34%) are STs and remaining 17% are SCs. All the surveyed HHs are Hindus. More than nine-tenths (96.2%) HHs are of BPL Category. All HHs surveyed have indicated agriculture as one of their major economic activity. More than three-fifths (64.7%) of the HHs stay in kutchha house, more than one-tenths (13.7%) HHs resides in semi-pucca house and more than two-tenths (21.6%) HHs reside in pucca house. The next chapter looks into aspects related to millets productions.

## PRODUCTION

### 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 Ganjam district. These are based on baseline data for 2017-18 from HHs surveyed in Dharakote, Patrapur, Polsara, and Soroda blocks where OMM has been operational since *Kharif* 2018.

### 3.2 Area, Production and Yield

The surveyed HHs in Ganjam district indicated production of millets only in form of *mandia* (finger millets) in year 2017-18. As presented in Table 3.1, 139 HHs cultivated *mandia* in 28.3 hectares, producing 141.5 quintal with total yield of 5 quintals per hectare and 1.0 quintal per HH.

**Table 3.1: Area, Production and Yield of Mandia across Blocks in Surveyed Households**

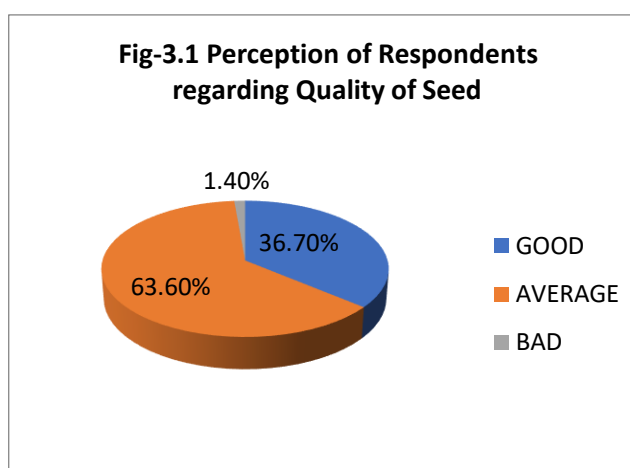
<i>Millets</i>	<i>HHs</i>		<i>Area</i>		<i>Production</i>		<i>Yield</i>	
	No	%	Ha	%	Qtl	%	qtl/ha	qtl/HH
Dharakote	45	100	7.5	100	49.4	100	6.5	1.1
Patrapur	9	100	2.6	100	7.7	100	3.0	0.86
Polsora	52	100	10.6	100	57.4	100	5.4	1.1
Kodo	33	100	7.6	100	26.4	100	3.5	0.8
Ganjam	139	100	28.3	100	140.9	100	5.0	1.0

Source: Field Survey

Block wise analysis shows the following. In Dharakote, 45 HHs cultivated *mandia* in 7.5 hectares producing 49.4 quintals with yield being 6.5 quintal per hectare and 1.1 quintal per HH. In Patrapur, 9 HHs cultivated *mandia* in 2.6 hectares producing 7.7 quintals with yield being 3.0 quintals per hectare and 0.86 quintal per HH. In Polsora, 52 HHs cultivated *mandia* in 57.4 hectares producing 10.6 quintals with yield being 5.4 quintals per hectare and 1.1 quintal per HH. In Soroda, 33 HHs cultivated *mandia* in 7.6 hectares producing 26.4 quintals with yield being 3.5 quintals per hectare and 0.8 quintal per HH.

### 3.3 Perception on Quality of Seeds Used

Seed quality plays a vital role in production and yield of millets. Good quality seeds increase the production resulting higher yield. Table 3.2 and Fig 3.1 describes about HHs who have cultivated millets in 2017-18 on the basis of their perception on quality of seed used in their fields for cultivation. It shows that 36.7 per cent HHs used good quality seeds, 63.6 per cent used average quality seeds and only 1.4 per cent used lower quality seeds.



**Table 3.2 Perception of Respondents regarding Quality of Seed**

Quality	Dharakote		Patrapur		Polsara		Sorada		Total	
	No	%	No	%	No	%	No	%	No	%
Good	16	35.6	3	33.3	24	46.2	8	24.2	51	36.7
Average	29	64.4	6	66.7	28	53.8	24	72.7	87	62.6
Bad	0	0.0	0	0.0	0	0.0	1	3.1	1	0.7
Total	45	100	9	100	52	100	33	100	139	100

Source: Field Survey

### 3.4 Package of Practices

Table 3.7 presents different method of cultivation techniques involved in the process of cultivation such as broadcasting, line sowing/line transplanting, Systematic Millets Intensification (SMI) method, and combination of one or more methods used by different HHs. From 139 HHs that cultivated *mandia*, 56 had adopted broadcasting method covering an area of 10.3 hectares producing 61.5 quintals with a yield of 6.0 quintals per hectare, 83 HHs had used line sowing or line transplanting method in 63.7 hectares producing 79.4 quintals with a yield of 4.4 quintals per hectare.

**Table 3.3: Package of Practices for Mandia Cultivation**

Package of practices	HHs		Area		Production		Yield
	No	%	ha	%	qtl	%	qtl/ha
Broadcasting	56	40.3	10.3	36.3	61.5	43.6	6.0
Line Sowing/transplant	83	59.7	18.0	63.7	79.4	56.4	4.4
Total	139	100	28.3	100	140.9	100	10.4

Source: Field Survey

### **3.5 Conclusion**

All surveyed households who produced millets during baseline year of 2018-19, cultivated only *mandia*. More than one third HHs used good quality seeds 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. None of the HHs had adopted SMI method. In the next chapter we will discuss consumption of millets.

## CONSUMPTION

### 4.1 Introduction

Demand for any product arises due to consumption. Hence, consumption plays a vital role in production and marketing. Efforts are made in this chapter to assess consumption of millets across seasons, consumption of millets during different meals of the day, and on different types of millet recipes consumed by the surveyed HHs.

### 4.2 Season-wise Consumption

Table 4.1 indicates that 60.9 per cent consumed millets during summer, 44.1 per cent consumed millets during rainy season and 25.6 per cent consumed millets during winter. It also shows that that 27 HHs of Dharakota block, 8 HHs of Patrapur block, 29 HHs of Polsara block and 18 HHs of Soroda block consumed millets in all seasons.

**Table 4.1: Season-wise Consumption of Millets**

<i>Season</i>	<i>Dharakote</i>		<i>Patrapur</i>		<i>Polsara</i>		<i>Sorada</i>		<i>Total</i>	
	No	%	No	%	No	%	No	%	No	%
Summer	55	68.8	32	40.0	52	65.0	56	70.0	195	60.9
Rainy	42	52.5	20	25.0	47	58.8	32	40.0	141	44.1
Winter	27	33.8	8	10.0	29	36.3	18	22.5	82	25.6
Total	55	68.8	32	40.0	52	65.0	56	70.0	195	60.9

Source: Field Survey

Note: Column totals are not additions across seasons, as a household can consume millets in all seasons and Percentage is calculated taking the total no of HHs.

### 4.3 Consumption during Different Meals of the Day

Table 4.2 on consumption of millets by HHs during different meals of the day indicates that that 60.9 per cent HHs consume it in their breakfast, 17.2 per cent HHs consume it in lunch, 0.6 per cent HHs consume it in evening snacks and no one consumes millets in dinner.

**Table 4.2: Millets Consumption during different Meals of the Day**

Season	Dharakote		Patrapur		Polsara		Sorada		Total	
	No	%	No	%	No	%	No	%	No	%
Breakfast	55	68.8	32	40.0	52	65.0	56	70.0	195	60.9
Lunch	32	40.0	1	1.3	0	0.0	22	27.5	55	17.2
Evening Snacks	2	2.5	0	0.0	0	0.0	0	0.0	2	0.6
Dinner	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	55	68.8	32	40.0	52	65.0	56	70.0	195	60.9

Source: Field Survey

Note: Column totals are not additions across meals, as a household can consume millets in all meals and Percentage is calculated taking the total no of HHs.

#### 4.4 Millet Recipes Consumed

Consumption of *mandia*, as a staple food in Ganjam is an age old practice that continues till date. Basically, People are found consuming *mandia* in several ways in form of *jau* (porridge) and *pitha* (cake or pancake). Table 4.3 depicts that out of 195 HHs, 15 HHs are consuming *mandia* in both *jau* and *pitha* form and rest are consuming *mandia* only as *jau*.

**Table 4.3: Distribution of HHs Consumed different Millet Recipes**

Item	Dharakote		Patrapur		Polsara		Sorada		Total	
	No	%	No	%	No	%	No	%	No	%
Jau	55	68.8	32	40.0	52	65.0	56	70.0	195	60.9
Pitha	2	2.5	1	1.3	12	15.0	0	0.0	15	4.7
Total	55	68.8	32	40.0	52	65.0	56	70.0	195	60.9

Source: Field Survey

Note: Column totals are not additions across item, as a household can consume millets in all items and Percentage is calculated taking the total no of HHs.

#### 4.5 Conclusion

Consumption pattern shows that most of the respondent HHs in Ganjam district consumes *mandia* in summer season, whereas consumption of *mandia* in rainy and winter season are less. More people consume millets as breakfast and some of them are found consuming *mandia* in lunch. Only a few consume as evening snacks and no one takes it in dinner. Common recipes of *mandia* include *jau* and *pitha*. *Pitha*, a form of pancake, though a delicacy, is not consumed on a regular basis. Next chapter is based on processing and marketing of millets in the district.

## PROCESSING AND MARKETING

### 5.1 Introduction

Processing and marketing play a vital role in agricultural activity. During processing goods are transformed so as to increase their shelf-life and to make them more acceptable to the consumer than in their original form. And marketing is essential to sell off surplus products. This chapter looks into processing of millets by traditional manual methods and by machines, and the mode by which millets are sold. It also attempts to make an analysis of millets produced, consumed, sold and stored.

### 5.2 Processing Units

Processing of millet grains is necessary for storage and for preparation of different recipes. The processing of grains may be in the form of decorticating/de-husking, grinding, malting, fermentation, roasting, and flaking to improve their edible, nutritional, and sensory properties. Traditionally, the burden of processing grains and the associated drudgery has largely been borne by women.

Table 5.1 shows processing of millets by different methods that includes dehusking and grinding by the surveyed HHs. It shows that out of 181 HHs, 180 HHs have processed millets manually by using pestle or mortar. Only one HH has processed it by using machine. Processing is higher in case of Dharakota and Polsara block whereas processing is less in Patrapur block. The Focus Group Discussion (FGD) indicates unavailability of processing unit as one of the major bottlenecks faced by the respondents as manual processing of millets is a tedious job.

**Table 5.1: Distribution of HHs by different Method of Processing of Millets**

<i>Processing</i>	<i>Dharakote</i>		<i>Patrapur</i>		<i>Polsara</i>		<i>Sorada</i>		<i>Total</i>	
	No	%	No	%	No	%	No	%	No	%
Manually	55	100	32	100	51	98.1	42	100	180	99.4
Machine	0	0	0	0	1	1.9	0	0	1	0.6
Total	55	100	32	100	52	100.0	42	100	181	100.0

Source: Field Survey



### 5.3 Marketing

Selling of millets include three methods. The traditional method includes selling of millet at the local market or at the *mandi*, and the other two methods include involvement of local trader or middle man and exchange with money lender. The common method for selling millets is identified as in local market. Table 5.2 indicates that 52.8 per cent HHs sell millets at the market, 44.9 per cent sells through middle men and only 2.3 percent go to the moneylender. For consistency in service, door to door collection and timely payment, middlemen service is preferred mode of marketing as pointed out in Focus Group Discussions (FGD).

**Table 5.2: Distribution of HHs by mode of selling Millet across blocks**

<i>Selling point</i>	<i>Dharakote</i>		<i>Patrapur</i>		<i>Polsara</i>		<i>Sorada</i>		<i>Total</i>	
	No	%	No	%	No	%	No	%	No	%
Market	19	90.5	0	0.0	17	45.9	11	100	47	52.8
Middle-Man/Local Trader	0	0.0	20	100	20	54.1	0.0	0.0	40	44.9
Money lender	2	9.5	0	0.0	0	0.0	0.0	0.0	2	2.3
Total	21	100	20	100	37	100.0	11	100	89	100.0

Source: Field Survey

Table 5.3 depicts the distance of selling points from the farmer HHs. It shows that out of 47, one HH has to travelled more than 10 kilometres, nine HHs have to travelled between 6 to 10 kilometres and 37 HHs have their market access within 0 to 5 kilometres.

**Table 5.3: Distance to Selling Point**

<i>Distance (kilometres)</i>	<i>Dharakote</i>		<i>Patrapur</i>		<i>Polsara</i>		<i>Sorada</i>		<i>Total</i>	
	No	%	No	%	No	%	No	%	No	%
0 to 5	19	100.0	0	0.0	17	100	1	9.1	37	78.7
6 to 10	0	0.0	0	0.0	0	0	9	81.8	9	19.1
11 to 15	0	0.0	0	0.0	0	0	1	9.1	1	2.1
Total	19	100.0	0	0.0	17	100	11	100.0	47	100.0

Source: Field Survey

### 5.4 Conclusion

Majority of HHs opt for manual method of processing millets due to unavailability of processing unit. Marketing of millet in the district is mainly done in the local market, or through local traders.

## MAJOR FINDINGS

- \$6.1** Findings obtained from Ganjam district, one of the seven districts where "Special Programme for Promotion of Millets in Tribal Areas of Odisha", was started in phase 2, 2018-19. It provides information regarding production, consumption, processing and marketing of millets for 2018-19, the baseline period.
- \$6.2** A sample of 320 HHs were covered under baseline survey and data were collected from 80 HHs each from all four (Dharakote, Patrapur, Polsara and Soroda) blocks.
- \$6.3** Out of 320 HHs, 165 HHs are participants of the programme and the others were non-participants during the time of survey.
- \$6.4** Agriculture is the predominant economic activities undertaken by the respondents indicating 97.5 per cent engaged in agricultural activities. However, HHs are also engaged in other economic activities along with agricultural activities (a miniscule percentage are found not engaged in agricultural activity) such as horticulture (18.4%), forest related activities (11.6%), agricultural labourer (70.3%), government services (4.4%), livestock (43.1%) and other activities (6.3%).
- \$6.5** The surveyed households cultivated only *mandia* (finger millet) in year 2017-18.
- \$6.6** Mandia was cultivated by 139 HHs in 28.3 hectares producing 141.5 quintals with yield of 5 quintals per hectare and 1 quintal per HH.
- \$6.7** Farmer HHs cultivating *mandia* rated quality of seeds used by them as good (36.7%), average (63.6%) and bad (1.4%) as per their perception.
- \$6.8** Respondents use different method of cultivation techniques including broadcasting, line sowing/line transplanting. Data suggests that from the 139 *mandia* cultivating HHs, 56 HHs had adopted broadcasting method covering an area of 10.3 ha producing 61.5 quintals with an yield of 6.0 quintals per hectare, 83 HHs had used line sowing or line transplanting method in 63.7 ha producing 79.4 quintals with a yield of 4.4 quintals per hectare.
- \$6.9** Consumption of millets vary from season to season indicating 60.9 per cent HHs consuming millets during summer, 44.1 per cent during rainy season and 25.6 per cent during winter. There were 27 HHs from Dharakota block, 8 HHs from Patrapur block, 29 HHs from Polsara block and 18 HHs from Soroda block who consumed millets in all three seasons.

- \$6.10 Consumption of *mandia* by HHs during different meals of the day revealed that 60.9 per cent HHs consume it in their breakfast, 17.2 per cent HHs in lunch and 0.6 per cent HHs in evening snacks. No HH was found consuming millets in dinner.
- \$6.11 Consumption of *mandia*, as a staple food in Ganjam is an age-old practice and is continued till date. Respondents are found consuming millets in the form of *jau* (porridge) and *pitha* (cake or pan cake). Out of 195 HHs, 15 HHs consume *mandia* in both *jau* and *pitha* form and rest consumed *mandia* only as *jau*.
- \$6.12 Processing of millets such as de-husking and grinding by the surveyed HHs is done mostly manually, or by using machine. Out of 181 HHs, 180 HHs are found processing millets manually by using pestle or mortar. Only one HH is found processing by using machine. Unavailability of processing units is found to be a major bottleneck identified by the HHs who resorts to manual processing that is found tedious.
- \$6.13 The most popular method of selling of millets in Ganjam district is at the local market (52.8%), and then to middle men (44.9%). Only 2.3 per cent go to the money lender. For consistency in service, door to door collection and timely payment, middle men is cited as a preferred method during FGDs.
- \$6.14 Out of the 47 HHs selling millets, one HH travelled more than 10 kilometres, 9 HHs have to travel between 5 to 10 kilometres, and 37 HHs have market access within 0 to 5 kilometres.

## ANNEXURE



**HOUSEHOLD SCHEDULE ON  
SPECIAL PROGRAMME FOR PROMOTION OF MILLETS IN TRIBAL AREAS  
OF ODISHA  
Nabakrushna Choudhury Centre for Development Studies, Odisha, Bhubaneswar-  
751013**

### 1. Identification of the HHs

- a. Name of the (i) Village \_\_\_\_\_  
(ii) Gram Panchayat: \_\_\_\_\_  
(iii) Block: \_\_\_\_\_  
(iv) District: \_\_\_\_\_
- b. Category i) SC ii) ST iii) OBC iv) SEBC v) Others (Specify)
- c. Sub-caste/ Sub-tribe: \_\_\_\_\_
- d. Religion i) Hindu ii) Muslim iii) Christian iv) Animism v) Others
- e. Category of HH: BPL/APL
- f. House structure: Pucca/Kutchra/Semi-Pucca

2. Are you indebted? Yes/ No. If yes, what is the amount: Rs. \_\_\_\_\_

3. Land Details (last year, Acre) i) Owned \_\_\_\_\_, ii) leased in \_\_\_\_\_  
iii) Leased out \_\_\_\_\_ iv) Encroached \_\_\_\_\_  
v) FRA \_\_\_\_\_ v) Other \_\_\_\_\_  
vi) Cultivable Land \_\_\_\_\_

4. Total irrigated land owned (last year, Acre): \_\_\_\_\_

5. Cropping systems i) Mono ii) Mixed [specify the crop(s)] \_\_\_\_\_  
iii) Inter cropping [specify the crop(s)] \_\_\_\_\_

6. Seed (last year) i) Quantity of seed used (in kg): \_\_\_\_\_  
ii) Is it the quantity adequate? (Yes/No)  
iii) Seed Treatment (Yes/No)  
iv) Seed quality: Good/Average/Bad

**7. Package of practices for millets (Last Year, put tick mark)**

- i) Germination test: Yes/No  
 ii) Weeding: Weeder/Manual/Both  
 iii) Number of weeding: 1/2/3/4  
 iv) Application of Fertiliser: Organic/Chemical/Both  
 v) Application of Pesticides: Organic/Chemical/Both

**8. Production and Utilization of Millets (2017-18)**

Type of Millet	Total Production (qtl.)	Family consumption (qtl)	Kept for Seed (qtl)	Marketed (qtl)	Selling Price (Rs/qtl)
Mandia					
Suan					
Kangu					
Gurji					
Any other (Specify)					

**9. Season-wise Average Requirement/Consumption (in kg)**

Season	Summer	Winter	Rainy
Requirement			
Consumption			

10. Time of consumption: Breakfast/Lunch/Evening snacks/Dinner  
 11. Whether Purchased: Yes/No  
 12. Whether received from friends/relatives: Yes/No  
 13. Processing millets: Manually/ Machine/ Both  
 14. If by machine, is it your own machine: Yes/No  
 15. Food items prepared: i) Jau ii) Tampo iii) Pitha iv) Mandis Torani v) Handia v) Others  
 16. Sale of millets/Distance: a) Mill \_\_\_\_\_ b) Middle-man/Local trader \_\_\_\_\_  
 d) Market \_\_\_\_\_ e) Money lender \_\_\_\_\_  
 f) Any Other (Specify) \_\_\_\_\_

### 17: Household Particulars

Sl. No.	Name - start with Respondent of the HH	Relationship with HH (Use Code)	Marital Status	Sex M-1 F-2	Age	Education (Use Code)	Occupation/Income (Use Code)			Millet Based Activities (Use Code)
							Main	Sub-sidiary	Avg. annual income	

**Note: 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-Grand-son, 12- Grand-daughter, 13- Father-in-law, 14-Mother-in-law, 15-(Specify)

**Marital Status:** 1- Married, 2- Unmarried, 3- Widow, 4- Widower, 5- Divorced, 6- Separated, 7- (Specify)

**Education:** 1-Illiterate, 2-Just literate, 3-Upto Class 5, 4-Class 6-10, 5-Higher Secondary, 6- Graduate, 7- Post Graduate, 8- Technical (Diploma), 9- Technical (Degree), 10-Professional/Management, 11-Other (Specify)

**Occupation:** 1- Agriculture, 2- Daily labour/ Wage labour, 3- Business/ Entrepreneurship, 4- Government Servant, 5- Private service, 6-Migrants,7- Artisans, 8-Service Provider,9- MFP collection, 10-Student, 11-Housewife, 12-Other (Specify)

**Millet Based Activities:** 1=Production, 2=Consumption, 3= Processing, 4= Marketing

### 18: Crop-wise and Method-wise Details of Production (Last Year i.e. June 2017-May 2018):

(Area in Acre, Production in Quintal)

Sl.No	Name of the Crop	SMI		Line Transplanting		Line Sowing		Broadcasting		Any other (Specify)	
		A	P	A	P	A	P	A	P	A	P
<b>Kharif</b>		A	P	A	P	A	P	A	P	A	P
1	Mandia										
2	Suan										
3	Kangu										
4	Koda										
5	Gurji										
6	Jawar										
7	Bajra										
8	Any oth (Specify)										
Rabi	(Take details as in Kharif)										

Note: A stands for Area and P stands for Production(Use additional sheets for Rabi)

**19: Expenditure pattern**

Sl.No	Sources	Annual Expenditure (In Rs)
1	Food	
2	Clothes	
3	Education	
4	Medicine	
5	Social Function	
6	Marriage & Ceremony	
7	Agriculture	
8	Construction	
9	Durable Assets	
10	Others	

**20: Sources of Income**

Sl.No	Sources	Annual Income (In Rs.)
1	Agriculture	
2	Millets	
3	Horticulture	
4	Forest	
5	Ag.Labour	
6	Salary	
7	Pension	
8	Remittance	
9	Livestock	
10	Others (Specify)	

**Remarks:****Signature of the investigator**

## ANNEXTURE II

### Phase 2 Base line Study

#### Focused group discussion

<b>Date:</b>
<b>Name of the Village:</b>
<b>Name of the Block:</b>
<b>Name of the District:</b>
<b>Stratification: Ethnicity/caste/genger</b>
<b>Sex:</b>
<b>Number of Individuals:</b>
<b>Number of Children:</b>
<b>Verbal consent obtained: yes/no</b>
<b>Researcher's name and observation:</b>

Participant's name	Age	Sex	Education	Job	Notes
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

*[For the benefit of the enumerator: the focused group discussion aims to capture the millet related activities prior to OMM intervention in the community. Thus, focus of the discussion may attempt to capture the existing production activities, whether millet as a crop is being produced, processed, consumed and marketed in the locality.]*



## Discussion points

- How many HH are there in the village/hamlet? Economic status, Social and religious composition, education, health status et al.
- Please give a brief description of the basic amenities available in the village. (For example, water sources, drinking water facilities, electricity, AWC, primary school, health care facilities, market place, transport facilities etc.)
- What are the primary livelihood activities practised in the village?
- What are major activities around the farm that you undertake? (sowing, reaping, processing, weeding, storage practices). Who generally does what?
- Give a brief description on types of land, irrigation facilities, major crops produced, preservation of seeds/procurement of seeds, agriculture related government programmes, processing of produced crops, marketing of agricultural goods etc.
- Is millet production a part of agriculture practice in the village? How many HH cultivate millets in the village? Please elaborate on the cultivation process.
- What are the common food consumption practices in the village? (also probe: include episodically consumed food/status food, festivities and feasts, death and mourning, food offering to God)
- Is millet consumed in the locality? Source, how frequently, in what form, reason for consumption)
- Are you aware of the nutri benefits of millets? Elaborate.