

Strengthening NTFP based livelihood systems through a market led approach

NTFP Survey Report

conducted by



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for

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Jharkhand State Livelihood Promotion Society

Contents

	Page No.
Abbreviations and Acronyms	
1. Introduction	4
1.1. About Jharkhand	4
1.2. About Jharkhand State Livelihood Promotion Society	4
1.3. About the Assignment	4
1.4. Objectives of the Assignment	5
1.5. Coverage	5
1.6. Methodology followed for the assignment	5
2. NTFP and Local Economy Survey	7
2.1. Purpose of the study	8
2.2. Methodology of the study	8
2.3. Coverage under the study	9
2.4. Limitation of survey (challenges)	10
3. Profile of the study area	11
3.1. West Singhbhum District	11
3.2. Bandgaon Block	12
3.2.1. Major NTFPs	12
3.2.2. Infrastructure profile	14
3.3. Goelkera Block	15
3.3.1. Major NTFPs	15
3.3.2. Infrastructure profile	17
4. Seasonality of NTFP collection and trading	18
5. Market Profile	20
6. Capacity Building Needs	25
7. Value Chain Analysis of NTFPs	27
7.1. Profile of major NTFPs	27
7.2. Value Chain Analysis of major NTFPs	28
7.2.1. Mahua Flower (<i>Madhuca indica</i>)	28
7.2.2. Mahua Seed (<i>Madhuca indica</i>)	32
7.2.3. Tamarind (<i>Tamarindus indicus</i>)	36
7.2.4. Char Seed (<i>Buchanania lanzan</i>)	40
7.2.5. Sal Leaf (<i>Shorea robusta</i>)	43
7.2.6. Lac (Kusum)	45
8. Enabling Environment	49
8.1. JHAMCOFED	49
8.2. JHASCOLAMPF	49
8.3. TRIFED	49

8.4. Ranger (Goelkera and Songra)	50
8.5. Loan and Subsidy to NCDC Aided Self Supporting Co-operative Societies	50
8.6. Birsa Agriculture University (Forestry)	50
8.7. Block Development Officer, Goelkera	51
8.8. National Horticulture Mission	51
9. Livelihood Promotion Strategy	52
9.1. Collective Marketing Strategy	52
9.2. Business Plan for Collective Marketing of NTFPs	56
9.2.1. Mahua Flower	56
9.2.2. Mahua Seed	59
9.2.3. Tamarind	61
9.2.4. Lac	63
9.3. Strategy for starting Micro Projects for processing based IGA	65
9.3.1. Business plan for Sal Leaf plate and cup making	69
9.3.2. Business plan for Oil expeller (Mahua seed)	70
9.4. Strategy of Promoting Business and Marketing Cadre	73
Annexure 1: Don't whine, have 'nutritious' wine, say CISH scientists	
Annexure 2: Market Players (Traders, Processors) Interacted	
Annexure 3: Product Wise Potential Villages	
Annexure 4: Drying Alternatives	
Annexure 5: Weighing Scales	
Annexure 6: Coin Box Operated Pay Phone	
Annexure 7: Proposed Work Plan: January - February 2010 (2 months)	

Abbreviations and Acronyms

Bandh	:	Strike
Bania	:	Hindi for Trader
Bati	:	Local measurement unit(generally equivalent to 700 gms)
Bicholia	:	Hindi for Intermediaries
BDS	:	Business Development Service
BP	:	Business Plan
BRGF	:	Backward Region Grant Fund
CBO	:	Community Based Organization
CBNA	:	Capacity Building Need Assessment
DFO	:	Divisional Forest Officer
DRDA	:	District Rural Development Agency
FGD	:	Focus Group Discussion
Guthli	:	Seed
ICFG	:	Institute for Community Forest Governance
IGA	:	Income Generating Activity
JHASCOLAMF	:	Jharkhand State Co-operative Lac Marketing & Procurement Federation Ltd.
IINRG	:	Indian Institute of Natural Resins and Gums
JHAMCOFED	:	Jharkhand State Minor Forest Produce Co-operative Development and Marketing Federation Ltd.
JSLPS	:	Jharkhand State Livelihood Promotion Society
LAMP	:	Large Area Multi Purpose Societies
MFP	:	Minor Forest Produce
NTFP	:	Non Timber Forest Produce
NGO	:	Non Government Organization
PACS	:	Primary Agriculture Credit Societies
q	:	Quintal
SHG	:	Self Help Group
Tina	:	Local Measurement unit (usually equivalent to 11 kg)
Tola	:	Hamlet
TRI	:	Tribal Research Institute
TRIFED	:	Tribal Cooperative Marketing Development Federation of India Ltd.
VLI	:	Village Level Institution
WFP	:	World Food Programme

1. Introduction

1.1. About Jharkhand

Jharkhand state is having 24 districts and 32,620 revenue villages with a spread of 79,714 sq. kms., accounts for 2.4 per cent of the total geographical area of the country and a population of 2.69 crore, which is 2.6 % of India. The rural population is 77.7 %.

The challenges is large proportion of the population are poor, particularly among STs and SCs. Their poverty ratio is 54% and 57.5% respectively, higher than all India level. 10.5% of all households in Jharkhand face seasonal food insecurity and roughly 2.5% of the households face chronic food shortages. Food supply is only assured for about three to four months of the year, i.e. from the late October to early March. A major part of Jharkhand is on the Chhotanagpur plateau and undulating. On an average, the state gets 1200 mm rainfall a year. Forests in Jharkhand extend over 23605 sq. km. representing 29.61% of the total geographical area of the State.

1.2. Jharkhand State Livelihood Promotion Society

In order to meet these challenges, and to make existing livelihoods stronger and sustainable, the proposed Jharkhand Livelihood Promotion Mission is going to bring about a systematic support at both state and district/block levels to establish feasible and scalable models of livelihood security and promotion in collaboration with the Department of Rural Development, Government of Jharkhand (GoJ). UNDP is partnering with the GoJ for livelihood promotion at the state level and piloting initiatives focusing on disadvantaged groups in 5 districts of the state. This project will enable the state government, community based organizations, technical institutions, banks, private sector and other stakeholders to effectively articulate and address the livelihood issues in Jharkhand.

This new State Level Support for Livelihood Promotion Strategies – Jharkhand focuses on livelihood promotion for the disadvantaged groups (women, SCs, STs, minorities, migrants, displaced and disabled). To implement the project, GoJ has established Jharkhand State Livelihood Promotion Society (JSLPS) and the state-level team has been set up. It is being implemented in 5 backward districts of Jharkhand viz. West Singhbhum, Ranchi, Palamu, Hazaribagh and Pakur.

1.3. About the assignment

MART proposed to strengthen NTFP based livelihood systems through a market led approach in the 50 villages of 2 blocks namely Bandgaon and Goelkera in West Singhbhum district. It was appointed the Technical Support Agency (TSA) for the district wherein over a period of 14 months it proposed to achieve the below objectives. The first task under the assignment was to conduct a comprehensive survey of the area to ascertain the supply possibility of major NTFPs and their demand pattern.

1.4. Objectives of the Assignment

The overall objective of assignment is to provide technical and handholding support to SHGs involved in NTFP based activities by strengthening their traditional knowledge, provide fixture for need based infrastructure along with means for primary processing and market linkages. The specific objectives are

1. Assessment of NTFPs to develop a comprehensive intervention strategy
2. Build capacity of SHGs on various aspects of NTFP collection, processing and marketing
3. Ensure better collection and processing practices by the villagers
4. Facilitate creation of infrastructure and need based facilities at village and cluster level to augment income of the villagers through improved collection, processing and market linkages

1.5. Coverage

MART will cover 50 villages across 2 blocks (Bandhgaon and Goelkera) of West Singhbhum district. The target group would be the tribal, forest dwellers who are economically excluded.

MART will intervene with the assessment of the demand side of available produce at the each cluster level which will lead in identifying the potential cluster with tradable volume of the produce. For designing of the strategy there will be a need to identify the gaps/problems in the value chain of that particular product. The implementation strategy can be designated in terms of Capacity Building plan, technical support, infrastructure development plan, scientific harvesting, Linkage with private players, Linkage with line departments etc. This plan will be implemented in the select villages of Bandgaon and Goelkera blocks.

1.6. Methodology followed for the assignment

In order to accomplish the tasks as outlined in the overall approach to the assignment, MART proposes the following methodology.

Task	Activities	Expected Output
Task1: Review the current status of NTFP trade	<ul style="list-style-type: none"> ○ Secondary review of NTFP database available with JHACOMP ○ Village and market visit ○ Ascertaining total number of functional and matured SHGs involved in NTFP trading in the decided 2 blocks ○ Mapping of the NTFP and related activities undertaken by SHGs ○ Identifying seasonality of various NTFPs ○ Assessing existing level of skills at SHGs for collection, primary processing, value added product making, quality control, storage, packing, and marketing etc. ○ Assessing availability and requirement of funds at SHG level ○ Need assessment for aggregation for different activi- 	<ul style="list-style-type: none"> ○ Consultative meeting organized for reviewing status of SHG involved in NTFPs ○ Inception Report § Demand of various produce in the market at cluster and state level § Identified cluster with tradable volume available of NTFP season wise § NTFP status report § Database of private players

	<p>ties like collection, bulk storage, processing and marketing etc.</p> <ul style="list-style-type: none"> ○ Identification of modern/scientific practices for collection, storage, processing, packing. ○ Understanding market (town and state) dynamics for major NTFPs and existing market pattern / selling systems ○ Identification of private players for different NTFPs at cluster level and state level ○ Understanding mandate of service providers located at district and state level like line departments, traders, private players, other village level institutions, technical & training institutions, resource agencies, experts and exploring areas of convergence and collaboration ○ Identification of various types of infrastructure requirements 	
<p>Task2: Identifying potential produce, inherent problems and an outline of proposed economic activities for major NTFPs</p>	<ul style="list-style-type: none"> ○ Identification of gaps/problems in various practices of identified produce in the district like collection, storage, processing, packing, marketing etc. ○ Identification of economic activities around NTFPs to intervene as per problem identified ○ Developing infrastructure plans (setting up drying platform, bulk storage, weighing scales etc.) ○ Developing a package of Capacity Building Plan across <ul style="list-style-type: none"> § scientific harvesting/collection, Capacity building (technical and business, enterprise and management) through trainings and exposure, storage Infrastructure development, quality control mechanism etc. § Developing IEC materials for dissemination of information and sensitization of community on the benefits of proposed interventions e.g. visual depiction of the benefits of drying platform ○ Preparing NTFP status report at district level 	<ul style="list-style-type: none"> ○ Report on potential NTFP and related economic activities § Gaps / problems across identified NTFPs § Plan for key intervention areas like Capacity building plan, Technical input plan, Infrastructure Development Plan etc. § List of IEC materials to be prepared § Decision on the geographical canvas for implementation (no. of produce per block, no. of GPs, no. of villages and no. of SHGs)
<p>Task 3: Initiation towards Implementation</p>	<ul style="list-style-type: none"> ○ Mobilizing SHGs into appropriate village level institutions of the identified districts for implementation with the support of existing NGOs or social agencies ○ Identification and selection of places for storage, processing and packing etc. ○ Finalizing modalities with resource agencies and experts to conduct TOTs for selected SHGs on scientific harvesting, bulk storage, primary processing etc. ○ Finalizing modalities and developing linkages with 	<ul style="list-style-type: none"> ○ Interim report § Village level institutions organized § Database of various service providers in the District and state level § Convergence plan with various GOs/NGOs

	<p>identified service providers like market players, technologists, machine suppliers, and financial institutions etc.</p> <ul style="list-style-type: none"> ○ Organizing and conducting trainings on skill up gradation, business orientation and exposure visits to best practices 	<p>§ Number of skill up-gradation and business orientation trainings</p>
Task 4: Implementation	<ul style="list-style-type: none"> ○ Establishing of infrastructure at appropriate locations ○ Linkages with financial institutions ○ Negotiation with buyers of NTFPs and establishment of linkages ○ Starting of marketing of selected produce from identified Districts with bulk buyers 	<ul style="list-style-type: none"> ○ District specific database of infrastructure development and market linkage ○ Infrastructure created (as per the interim report recommendations) ○ Learnings of market linkage initiatives ○ Status of skill and Capacity building of SHG members ○ Number of trainings conducted ○ Marketing process followed and learnings ○ List of private players ○ Experiences of linkage with private players
Task 5: Process Document	<ul style="list-style-type: none"> ○ Documentation of task wise effort 	<ul style="list-style-type: none"> ○ Process document and Final report submitted

2. NTFP and Local Economy Study

2.1. Purpose of the study

The purpose of the study was to get first hand information on the following areas

- Village, enablers and market visit
- Ascertaining total number of functional and matured SHGs involved in NTFP trading
- Mapping of the NTFP and related activities undertaken by VLIs
- Identifying seasonality of various NTFPs
- Assessing existing level of skills at SHG for collection, primary processing, value added product making, quality control, storage, packing, and marketing etc. and identifying better practices
- Assessing availability and requirement of funds at SHG level
- Need assessment for different activities like aggregation, infrastructure, processing, market information and marketing etc.
- Understanding market (town and state) dynamics for major NTFPs and existing market pattern / selling systems
- Identification of private players for different NTFPs at cluster level and state level
- Understanding mandate of service providers located at district and state level like line departments, traders, private players, technical & training institutions, technology provider, resource agencies, experts and exploring areas of convergence and collaboration

2.2. Methodology of the study

The study was basically exploratory in nature and in-depth discussions were carried out at various stakeholder levels to meet the objectives meaningfully.

2.2.1. Key Stakeholders

<p><i>Village</i></p> <ol style="list-style-type: none"> 1. Villagers 2. NTFP Collectors 3. Petty Traders of NTFP 	<p><i>Agencies</i></p> <ol style="list-style-type: none"> 1. Market – JHACOMFED, JHASCOLAMF 2. Line Departments – Forest, Horticulture, Rural Development etc.
<p><i>haat</i></p> <ol style="list-style-type: none"> 1. haat owner 2. NTFP buyers at haat 	<p><i>Facilitators</i></p> <ol style="list-style-type: none"> 1. District Coordinator and Bock Coordinator, JSLPS 2. ICFG Staff
<p><i>Town Market</i></p> <ol style="list-style-type: none"> 1. Traders and bulk buyers 2. Private service providers 3. NTFP Processors 	<p><i>Service Providers</i></p> <ol style="list-style-type: none"> 1. Technology Providers, Transporters

2.2.2. Survey tools

S. N.	Target group	Data collection tools	Method
1.	Villagers	Semi structured questionnaire	Focus group discussion
2.	NTFP Collector	Semi structured Questionnaire	Interview
3.	Traders	Questionnaire	Interview
4.	haat	Questionnaire	Profiling
5.	Line Departments, Resource Agencies	Checklist	Interview

2.3. Coverage under the study

Following coverage was accomplished during the study

- Profile of 48 villages created
- Interaction with 96 NTFP Collector was done and profile was generated
- Interaction with 25 village level petty traders was carried out
- Profile of 6 haats was generated and interaction was carried out with 12 haat buyers
- Interaction with 20 town and regional traders across the major markets of Chakradharpur, Ranchi, Chaibasa, Sonua, Bandgaon, Goelkera, Tata, Bisra was done
- Discussion with officers of JHACOMPED, JHASCOLAMPF, Forest Department, Horticulture Department, TRIFED, TRI, Tribal Welfare Department, BAU (Forestry), RU, IINGR, Office of the Block Development Officer, Goelkera was done
- Discussion with BDS Providers including Technology providers, Transporters was done to under the modalities of service provision

2.3.1. Village visit plan

Date	Block	Villages Covered
18.11.09	Goelkera	Buru Sarbil
19.11.09	Goelkera	Buruhundur, Sarbil
23.11.09	Goelkera	Chirungbeda
24.11.09	Goelkera	Kurkutia, Arahasa
25.11.09	Goelkera	Regalbeda, Kentora
26.11.09	Goelkera	BuruKebra, Kebra
05.12.09	Goelkera	Ulidihi, Paraisol, Tarkotkocha
06.12.09	Goelkera	Jambirakudur, Khuntpai, Baikochha
08.12.09	Bandgaon	Karla
13.12.09	Bandgaon	Kareda, Tumblihada
14.12.09	Bandgaon	Paraya, Kandajui, Kandeyong
15.12.09	Bandgaon	Kundurugutu, Hesadih, Tuihasa, Chakia
16.12.09	Bandgaon	Pingu, Lowahatu

17.12.09	Bandgaon	Champaba, Karu
17.12.09	Goelkera	Tamsai, Rudbai, Losodikir
18.12.09	Bandgaon	Dumburu
20.12.09	Bandgaon	Kochha, Dudukundi, Ziraye
21.12.09	Bandgaon	Aridih, Chirkubera, Akir
22.12.09	Goelkera	Amjharan, Katamba, Kainsuan
24.12.09	Goelkera	Godaduba, Bara
28.12.09	Bandgaon	Kontari, Kokorbo, Roro
Total		24 villages-Goelkera & 24 villages -Bandgaon, Total: 48 villages

2.4. Limitation of study (issues and challenges)

- Most of the villages in 24 selected villages of Bandhgaon are not motorable and some villages in Goelkera are also cut off from main road. Lack of road facilities to the villages meant increased travel time to complete the survey.
- MCC detained MART's District Coordinator and ICFG staff (karyakarta) from 12.30pm to 4.30 pm in forest area on 8th December 2009. However, because of good behavior and sharing the purpose of preparing marketing strategy for NTFP & benefits which can accrue to the poorest along with the presence of ICFG karyakarta of Bandgaon bock they were released unharmed. This posed a challenge in continuing the frequent field visits in the dense forest area.
- Infrequent strikes (bandhs) called both by MCC and political parties resulted in cancellation of field programmes. Since these strikes are called at a very notice they affected the survey plan which had to be rescheduled twice leading to delays.
- The Train blast incidence on 19th November 2009 in between Goelkera & Manoharpur created risky environment and all the stakeholders advised to postpone the survey work until area regains composure.
- The village study was conducted during unstable political environment in the state. The state assembly election in the state and the movement restrictions put in effect by CRPF further delayed the survey work.
- Campaigning by political parties and increased activity by MCC in the forest also led to more cautious approach to the study.

3. Profile of the study area

3.1. West Singhbhum district

West Singhbhum district came into existence when the old Singhbhum district was bifurcated in 1990. West Singhbhum has 15 blocks and two administrative sub-divisions. The district is full of hills alternating with valleys, steep mountains, and deep forests on the mountain slopes. The district contains one of the best sal forests in India and the famous Saranda (seven hundred hills) forest area.

However, in spite of its rich natural resources the district is one of the most backward districts of Jharkhand because of abject poverty, low literacy, very poor infrastructure, ignorance and exploitation of the poor. The district is also cursed by Naxalism and terrorist activities with the poor tribal population often bearing the brunt of the same.



Population	2,080,265
Gross enrollment ratio (elementary level: Class I to VIII)	66.6
Density of population (Persons/sq km)	210
Men	1,052,711
Women	1,027,554
Total rural population	1,729,598
Total urban population	350,667
% of Scheduled castes	4.89%
% of Scheduled tribes	53.42%
Sex-ratio (females/1000 males)	976
% Below poverty line	45.7
Literacy rate(2001)	50.7
% Literate males	66.23
% Literate females	34.81
Birth Rate	28.3
Death Rate	NA
Infant mortality rate (per 1000)	67
Maternal mortality rate (per 1000)	NA
% of girls marrying below 18 years of age	28.5
% of children getting complete immunization	23.6
Estimated % coverage of safe drinking water (habitations)	84.15
% villages not connected to pucca roads	74.37
Composite Index	40.40
Ranking (out of 569 districts of India) on the basis of composite index	471

Key Findings

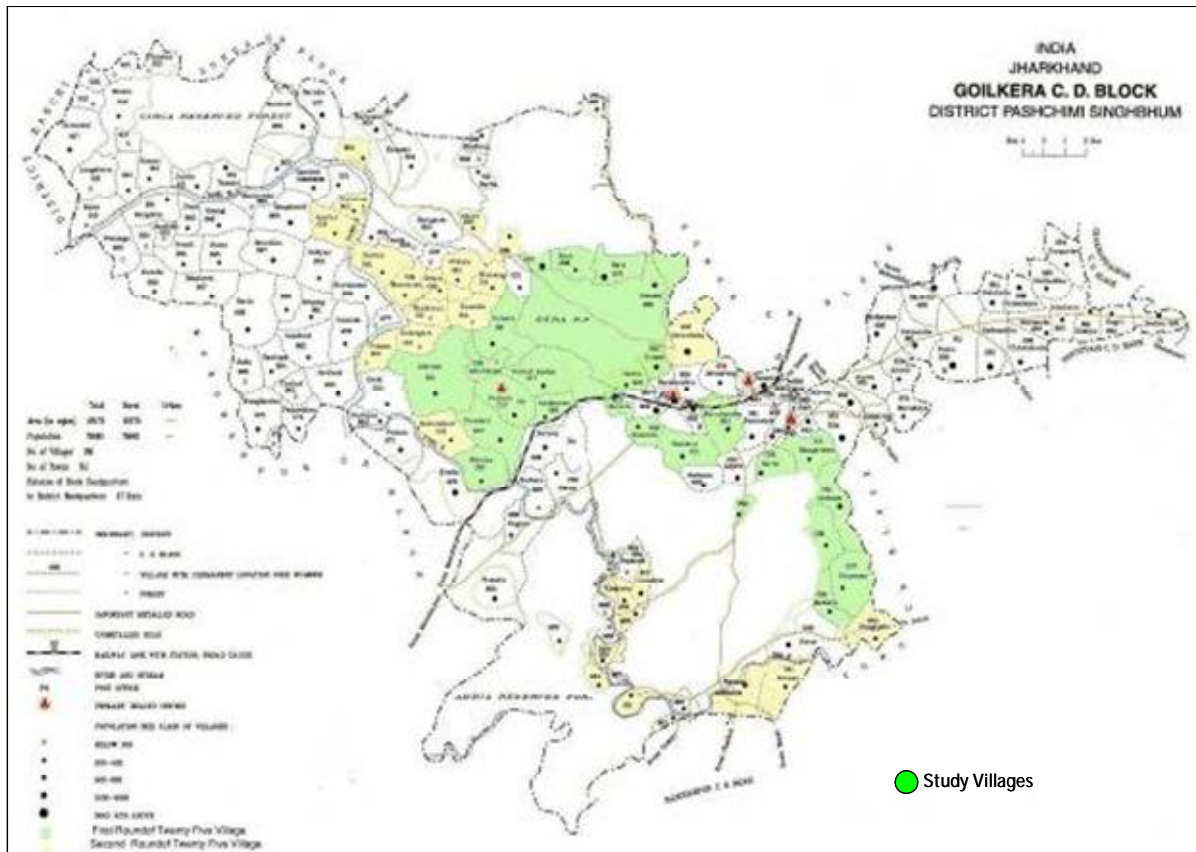
1. The study villages come under the Forest Range of Songra & Kunderugutu. The Forest Division is Podahat. Most of the villages are within dense forest area of the block and are affected by Naxalites.
2. Generally 2 categories of NTFP have emerged from among the study villages
 - a. Available and collected
 - b. Available and sparsely collected
3. Mahua flower, Mahua seed, tamarind, char seed are among the major NTFPs collected by the community. There is a sparse incidence of collection of sal and siali leaves. The above table clearly reflects the same.
4. Sal leaf is available on large scale in both the blocks, but People do not collect as Sal leaf has rarely market in these areas. However, Sal leaf Cup and Plate is growing demand and has the potential of bringing additional income to people by large scale production of Sal leaf Cups and Plates. These can be successfully sold to Ranchi & Tata market.
5. Primary collectors sell both Char seed and Chironji and get both cash and rice.
6. Bandgaon haat (Wednesday) is the major haat. Chakia haat on Saturday, Nakti haat on Tuesday, Karaikela haat on Friday are the other Weekly haats accessed by Bandgaon community. Murhu and Khunti haats, on the way to Ranchi, are important haats as they are close to Upper Bazar (the wholesale trading market of NTFPs), Ranchi.
7. 8 to 10 traders of Murhu block (14 km from Bandgaon block HQ) come to Bandgaon market on Wednesday & purchase major volume of NTFPs of Bandgaon. They completely dominate the trading scene.
8. Weight cheating by Bania/ Bicholia is a common phenomenon. Traders sitting road side offer higher rates than the market price alluring the primary collector. They eventually cheat in both weight and payment (counting of money). The primary collector is aware of the matter but is unable to counter it
9. Bania / Bicholia sit on important lifting points and junctions on roadside prior to market on weekly haat days & purchase more than 60% of the NTFPs from the primary collectors of nature (simple, ignorant about market price, not serious during weight & measurement, unable to calculate money, educationally illiterate, kind hearted etc.)
10. NTFP collectors are not interested to sell small amount of produce at highest price offering markets. They want selling of small volume of produce nearby their door steps or village. This leads to sustained cheating by Bicholia.
11. Many people of Bandgaon depend on Chakradharpur for expelling oilseeds (Dori , Kusum , and Karanj). While the predominant way of expelling the oilseeds is in the village wherein the traditional method of expelling is employed to get oil.
12. Dori selling trend has increased & oil consumption trend has decreased due to availability of well packed and low price oil (both mustard and refine oil) in local Bandgaon market.
13. Siali ropes are produced by Birhor community of Kunderugutu village of Bandhgaon block. They sell the ropes in Bandgaon haat and in other local haat as well at Rs. 15/- to Rs.16/- per piece. They also produce plastic ropes looking at the decreasing production trend of Siali trees.
14. Lac produced in the Bandgaon block outflows towards Khunti (11kms from Bandgaon block HQ) via Murhu traders. Presence of lac processing industries at Khunti, about 25 kms from Bandgaon block HQ encourages forest dwellers for lac cultivation. But cutting of tree branches during lac collection has badly affected regeneration of tree branches.
15. 2 Manual Sal leaf Plate and cup making machines were supplied to the villages namely Kunderugutu and Chakia of Bandgaon Block.

3.2.2. Infrastructure Profile

Facilities	Number of villages		Distance traveled to avail services			
	Own	Connected	<= 5km	6 - <= 10 km	10 - <= 20 km	> 20 km
Bank	0	24	3	10	11	0
Post Office	1	23	6	13	5	0
Road	1	23	0	0	0	23
Transport	0	24	1	2	16	5
Mobile	0	24	24	0	0	0
Skill Training Institutes	0	24	0	0	0	24
Cold Storage	0	24	0	0	0	24
Electricity	1	23				
Total number of villages surveyed = 24						

1. While for 5 villages nearest electrified village is 6-10 kms away, for 18 villages it is 10-20 kms away.
2. Tribals of Bandgaon block are mostly dependent on Bank of India, Bandgaon, Bank of India, Tebo & Apna Bank, Bandgaon.
3. Most of the people of area surveyed largely dependent on Hesadih post office.
4. Electricity is operational in Hesadih village out of 24 Village surveyed.
5. Solar light is an alternative source of light in some of the villages.
6. Most of the people dependent on oil mills of Chakradharpur for processing of seeds of Mahua seed, Kusum & Karanj into oil.
7. No Railway train communication facility is available within Bandgaon block area. People access Railway train from Chakradharpur at a distance of more than 55 km from Bandgaon block HQ. Road ways is the only communication channel to block area.
8. There are 2 Police stations in the area one at Bandgaon and the other at Tebo. A CRPF camp is stationed at Hesadih village of Bandgaon block.

3.3. Goelkera



Key Findings

- Villages surveyed in Goelkera come under forest ranges Goelkera, Kera, Bera & Anandpur. They are under Forest Divisions of Kolhan (maximum) and Podahat (minimum). Most of the villages have 3 or more hamlets (tola). Villages in the dense Forest area are relatively more affected by Naxalism.
- One of major findings revolves around the existing barter system of chironji (fruit of char seed). It was learnt that char collectors get 16 *batis* (bowl) of rice in exchange of 1 *bati* of chironji. However, traders purchasing Chironji categorically point out that 12 kg of rice is given in lieu of 700 gms of Chironji, which stands at 17 times
- Lack of any standard measuring mechanism actually makes it difficult to ascertain the exact barter equation.
- Siali leaf is collected for household level consumption, particularly during the festive season. However, because of developed market in Jaraikela and Bisra many have of late started selling it.
- Women are predominant player in value chain since they are involved in the stage from collection to storage.
- Women carry head load of mahua (5-10 kg) and other NTFPs to the haat and sell it at a price determined by the trader. They buy household item at the haat from the money thus earned.
- It is the men who actually sell the bulk of the NTFPs collected, often transporting 20-25 kg of the produce on cycle.
- Majorities of community dry mahua flower on the ground. The rudimentary drying deteriorates the quality of the produce because of 3 factors, lot of foreign materials including dirt gets packed in the gunny bags
- Lac Kusum and tasar are also being cultivated by few in the villages
- Village when seen as a source of major NTFP lacks marketing infrastructure to help villagers fetch remunerative prices
- Dori Selling trend has increased & dori oil consumption trend has decreased due to availability of well packed oil & low price mustard oil & refine oil in local Goelkera market (Friday)
- Apart from the traditional oilseed expelling at the village level, Bisra & CKP are the two markets accessed by Goelkera community for oil seed processing (mainly mahua seed).
- Char guthli selling practice is not found in Goelkera community. Community processes the seed to get Chironji. 95% of Chironji is predominantly bartered with rice and 5% with salt.
- Siali leaves have a market in Bisra and Jaraikela. However, Occasionally few poor women sell both sal & siali leaves in retail in ranges within 1 kg up to 3 kg in Markets like Chaibasa on Tuesday haat & at Chakradharpur on Wednesday haat. No trading scope is available presently at Chaibasa, Chakradharpur or nearby weekly haats for Sal & Siali leaves.
- Sal leaf & cup making processing machines are available largely at Betonati area of Mayurbhanj district. It is also available at Bisra, Jaraikela, Rourkela, Tonia & CKP on a small scale. Recently, 2 machines are installed at Goelkera haat by private parties.
- Overall the market route towards the east comprises of Sonua, Chakradharpur , Chaibasa, Tata & Kolkata. Similarly markets in the North lead to Khunti & Ranchi and market in the South lead to Bisra, Jaraikela & Rourkela. Markets in the West direction are rarely accessible.
- A char processing machine is available at Digilota village of Sonua block nearby Chakradharpur. It was set up by one trader from Chakradharpur. The unit gives employment to 50 women who work on daily wage basis in the unit. The unit operates over 11 months. Possibility of linkage of Char Guthli is open for both Bandgaon & Goelkera Community. Char Guthli from Jharkhand, Bihar, Orissa, Chhattisgarh, Madhya Pradesh etc. states come to this processing unit.

- BDO & LEO of Goelkera block & Ranger, Goelkera block shared that, 12 Sal leaf Plate & Cup machines are available at Goelkera BDO office. Block office wants to establish a block level production cum marketing centre at central level. SHGs shall come to block & work on Plate & Cup making & pay the electricity charges of unit.
- Karanj seed is not collected in the village
- Hill broom is not available in the area. Elephant and forest fire has lead to considerable decrease in the plant population. Moreover the collection practices include cutting the trees, which has been reported by the community.
- There is negligible incidence of tribal collecting sal seed in the Goelkera & Bandgaon. Though there are plenty Sal trees but due to less market price i.e. Rs. 10/- to Rs.15/- per tina (of about 11 kg weight) at block level market they refrain from collection. Moreover, since the collection time coincides with the agricultural season people chose to devote their time in agriculture.

3.3.2. Infrastructure Profile

Facilities	Number of villages		Distance traveled to avail services			
	Own	Connected	<= 5km	6 - <= 10 km	10 - <= 20 km	> 20 km
Bank	0	24	7	5	12	0
Post Office	0	24	7	5	12	0
Road	8	16	24	0	0	0
Transport	1	23	7	5	12	0
Mobile	10	14	24	0	0	0
Skill Training Institutes	0	24	0	0	0	24
Cold Storage	0	24	0	0	0	24
Electricity	10	14				
Total number of villages surveyed = 24						

1. None of the village has a bank, post office, skill training institute and cold storage facility. Inhabitants have to travel far off to avail the services (see the above table).
2. While for 16 villages nearest electrified village is <= 5 kms away, for 8 villages it is 6-10 kms away.
3. There exists 1 Police station at Goelkera block nearby the weekly haat and BDO office.
4. Railway station availability nearby Goelkera market. Railway & roadway are the communication channels to this block.
5. 8 villages are connected with concrete road and a big truck (10 ton capacity) can enter the village.

4. Seasonality of NTFP collection and trading

Name of the NTFP	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Tamarind		C	C									
		PT	PT	T								
Mahua Flower			C	C								
			PT	PT	T	T						
Mahua seed						C	C					
						PT	PT	T	T			
Sal Leaf	C	C			C	C	C	C	C	C	C	C
	T	T			T	T	T	T	T	T	T	T
Siali Leaf						C	C	C	C	C	C	C
						T	T	T	T	T	T	T
Char Seed				C	C							
				PT	PT	T	T					
Kusum Lac						C	C			C	C	C
						PT	PT			T	T	T

C Collection season
PT Peak Trading season
T Trading season

The above table shows the seasonality analysis in terms of the local harvest and trading of the produce. The present situation reflects that all the major NTFPs are available for around 2-3 months except for sal leaf, siali leaf and kusum lac and bulk (peak) trading seldom goes beyond 3-4 months. It is a fact that the individual selling mechanism of small surplus restricts the access to remunerative markets which requires tradable quantity (normally a truck load). Together with this poor marketing infrastructure wherein lack of both availability and access to storage facilities compels them to sell off their produce to the first market contact that is generally the *haat or the petty trader*. Generally their produce hits the market during the peak (glut) season whereby in a competitive market situation getting a better price becomes increasingly difficult. There are possibilities of increasing trading period at the community level to gain from the increase in price during the lean season.

Many more challenges get associated with the primary producers which prevents them from getting better price for their produce. It is in this context that introduction of aggregation and local value addition measures can help producers to get better prices. Similarly either by supporting primary collector to have access to infrastructure or by creating need marketing infrastructure producers can be supported to fulfill gap and gain access to remunerative markets. Overall in these circumstances Collecting Marketing (wherein a combination of aggregation and local value addition practices of no-change-in-form nature) holds key to increase price and support primary producers become market player. Collective Marketing strategy can be successfully introduced for all the potential produce *viz.* Mahua Flower, Tamarind, Mahua seed and Siali leaf. Detailed Business Plan for initiating collective marketing has been prepared later in the report.

As far as value addition initiative is concerned there exists a very competitive market which was comprehended. It was found that many town level traders even after being in the raw produce trading business for more than 25 years did not start processing based value addition units. It is a challenging proposition for the well established traders because of the

dynamics of a new product and risks and challenges associated with the enterprise. The very basic issue that it requires a control over raw produce makes the proposition at the community level more difficult. Moreover, introducing value addition (change in form) initiative at the community level would mean increased break even period and a high gestation period of return above investment.

While value addition of Mahua seed, Sal leaf has been proposed in certain villages/clusters of Bandgaon and Goelkera, there is limited and unexplored scope for Mahua Flower (Centre for Technology Development, New Delhi claims to have developed a technology for processing the flower but has not been tested commercially and Central Institute for Subtropical Horticulture, Lucknow claims to have developed technology which will make it a wine but is yet to commercialize it).

5. Market Profile

5.1. Village level Shops

While shops are available in 15 villages of Goelkera, only 6 villages in Bandgaon have shops. However, majority of these shops are petty shops, which stock limited products and in limited quantity. Petty shops besides dealing in money also practice barter system where they exchange grocery items for seasonal crop and NTFPs (mainly mahua flower and dori). Both, men and women, run majorities of the shops.

Number of shops	No. of Villages	
	Bandgaon	Goelkera
1	3	8
2	2	4
3	1	3

5.2. Haat level

haats play an important role in the rural economy and are the nerve centres of the economic, social and cultural life of tribal. The haats reflect the demand pattern of the local area. NTFP Collectors depend on the haats not only for selling of the produce, but also for procurement of items needed in their daily life. It is the first market contact for villagers and is the easiest means of selling local products and exchanging rural surplus. Villagers in all the 48 villages visit both commodity as well as animal haats. The major haats are Chakia, Kundurugutu, Karaikela, Nakti on the Bandgaon-Chakradharpur Route; Murhu, Khunti in Bandgaon - Ranchi Route. Haats neighboring to Goelkera are Kadamdiha, Gitilpi and Tonia in Sonua-Goelkera Route. Following are the major haats of the area.

Block / Area	Weekly haat Name	Weekly haat Day
Bandgaon	Bandgaon	Wednesday
	Chakia	Saturday
	Kundurugutu	Wednesday
Goelkera	Goelkera	Friday
	Gitilpi/ Kadamdiha	Friday
	Deruan	Wednesday
Sonua	Sonua	Thursday
	Tonia	Saturday
CKP	CKP	Wednesday
Chaibasa	Chaibasa	Tuesday
Manoharpur	Manoharpur	Sunday

Bandgaon haat

The Weekly main haat sits on each Wednesday and starts at 6 a.m. in summer and at 7 a.m. onwards in winter and closes at 4 p.m. The haat cater services to more than 350 tribal villages of Bandgaon and Murhu block. The haat gets around 30,000-40,000 visitors per day. Bandhgaon being mostly covered with dense forest, NTFPs plays a special role in weekly haat. Usually, tribal brings 1 to 2 bags of NTFPs per person to the haat and sell to road side trader sitting on the way to haat and also to buyers at haat. NTFP collectors purchase day to day HH needs for a week. NTFP traders of Murhu, Bandgaon dominates the other NTFP buyers' presence in the market. Other traders' agents come from Chakradharpur and Khunti. Vegetable traders come from Hatia and Ranchi. Major NTFPs traded in the haat include Mahua, Dori, Chironji, Char Guthli, Karanj, Lac (Kusum, Ber, Palas), Tamarind. NTFPs e.g. kusum seed, sal seed, Harida, Baheda, Dhuna etc. are in small scale. More than 2,500 sellers (small & big) come to this haat. More than 50 trekkers called Sawari vehicles comes to haat location on the Wednesday haat day. More than 30 Pick up Vans (20 Q capacity) come to this haat. More than 10, 000 bicycles come to haat location which, are parked largely on road sides & open spaces and in the 6 cycle stands. There are more than 250 women selling handia. NTFPs purchased in this market go towards Ranchi, Khunti & Chakradharpur traders. Apart from Wednesday the haat also takes place on Saturday.

Goelkera haat

The Weekly haat runs on each Friday & Tuesday nearby Goelkera Market. The haat is controlled by APMC (Agricultural Production Marketing Committee), Chaibasa. While the main haat sits on each Friday since morning 6 am to 3 pm during summer, in winter it operates from 7 am to 3 pm. Peak haat time ranges 10 am to 12 am. The haat caters to more than 200 tribal villages (including forest villages). Traders from Sonua, trader agents from Chakradharpur, Manoharpur come to Goelkera haat on each Friday during peak NTFP season. Because of forest dense, NTFP trading plays a special role at Goelkera haat. More than 10 NTFP traders come on each Friday haat. NTFPs include mainly Mahua, Dori, Karanj, Chironji, Tamarind on large scale. Other NTFPs includes Lac (Kusum, ber, palas), Dhuna, Kusum seed, Sal seed, Harida, Baheda etc. are traded in small scale. More than 20, 000 visitors come to the haat as it is the biggest tribal haat of Goelkera area. Buyers purchase vegetables, food items, grains, poultry, fish, meat, utensils, readymade garments, NTFPs & other day to day essentials. NTFP traders of Goelkera & Sonua dominate other traders in the market. Poor NTFP collectors of Goelkera depend largely on Goelkera haat and bring 1-2 bags of NTFPs to haat. More than 1000 seller (small & big) come to this haat. More than 150 women sell Handia. NTFPs collected in this haat goes predominantly move towards Sonua, Chakradharpur, Chaibasa, Ranchi and Bisra markets.

Chakradharpur haat

Chakradharpur haat takes place on Wednesday & Sunday. It is located at the centre of the town nearby Burra bazar of Chakradharpur around 1 km from the Chakradharpur Railway station. Chakradharpur is at 25 kms distance from Dist HQ Chaibasa. Wednesday haat starts from 7 am in winter and from 6 am during other months and usually ends at 6 pm. The daily market of Chakradharpur town covers the main road of Chaibasa to Ranchi. The entire town is dominated by Railway employees, people from Marwari & Muslim community. Around 40,000-50,000 visitors come on the haat day. The agents of Chakradharpur traders sit on main road side and nearby post office road. 13 to 16 NTFP buyers sit on roadside, while 10-15 nearby traders belong to the regular business houses. The top traders of NTFP in Chakradharpur town do simultaneous business at their own permanent counters, either directly or through their agents sitting on roadside. Truck loads of NTFP moves the same night or the next morning towards Ranchi, Kanpur, Bihar, West Bengal and other states of country. The haat caters to people of Chakradharpur municipality, Chakradharpur block, Khuntpani MART, Noida

block, Tonto block, Bandgaon block, Sonua & Goelkera block. Transport facility is always available in Chakradharpur market by road, railway & transports.

Chaibasa haat

Chaibasa haat takes place on Tuesday nearby Chaibasa bus stand and is controlled by Agriculture Production Marketing Committee, Chaibasa. Haat starts at 6am in all season except in winter wherein it starts at 7am. It usually closes by 5.30 pm. The market being situated at dist HQ remains busy throughout the entire day. The haat caters to most of the blocks of the district and to other neighbouring districts like Saraikela Kharsuan & East Singhbhum. The visitors come from Chaibasa municipality, blocks like Khuntpani, Goelkera, Sonua, Chakradharpur, Bandgaon, Tonto, Jhikpani etc. of West Singhbhum district. Traders from Tata, Ranchi & Orissa comes to this haat. Infrastructures like market complexes, Sitting Place, Transport, drinking water facilities are available in Chaibasa haat. Total no. of Visitors in Chaibasa Tuesday haat ranges between 60,000 to 80,000. 10-15 NTFP traders of Chaibasa remains extremely busy throughout the haat day. 10 to 12 agents of NTFP traders sit on the way to haat to purchase NTFPs from the collectors. NTFPs collected on haat day moves to other markets like Ranchi, Bihar, CG, Kanpur, Delhi, West Bengal, AP either at haat day night or in next day early morning in truck load (4/ 6/ 10 wheeler truck load). The product movement direction (market channel) depends upon type of produce available and scale of the produce.

5.3. Town level Markets

JAMSHEDPUR (TATA) MARKET

Sakchi mandi in Jamshedpur is famous for vegetables & products like Pine Apple, Custard Apple and Jackfruit etc. Bishnupur mandi was a whole-selling market for fruits & vegetable due to a functional cold storage. Nearly 50 vegetable traders and 20 commission agents control major share of vegetable market at Sakchi. 5-6 fruit traders are now available at Sakchi mandi. However, after Government notification both the Mandis (Sakchi and Bishnupur) are being shifted (due to inadequate space and parking problem) at Parsudih. Sufficient space for go-downs & parking is available. The Mandi has capacity to control 100 trucks at any time. The Jharkhand Agriculture Production Marketing Committee office is within the campus. A SBI counter is already running in campus. However, many traders maintain go-downs at Parsudih mandi & previous mandi also due to good turn over at Sakchi mandi.

Due to consumption demand of more than 15 lakh population of Jamshedpur area & due to high affordability capacity of Jamshedpur customer, there was a need of formation of a big mandi at Jamshedpur to meet the daily need of consumers. Trucks come to mandi & on the spot nearly 80% produce is immediately transferred to the previously waiting local whole- sellers in 10 q capacity van. However, whole-sellers from nearly 150 kms also come to Jamshedpur mandi either for purchasing or selling at Mandi.

Cold Storage Facility

Cold Storage Name & Address	Tata Nagar Cold storage Pvt. Ltd, Bishnupur, Jamshedpur, Ph: 2423998
Information on cold storage	Nearly 1000 Quintal capacity Cold storage. Used for storing of apple, mahua, tamarind, paneer, potato, onion etc. Charges different for different product e.g. Grape-7 kg packet charge: Rs.20/- for a month. The cold storage is located in central market roadside place of Bishnupur near Union Bank of India.

BISRA MARKET

Bisra Market is one of the leading markets of Sundargarh district in Orissa which acts as a terminal and strategic market point for some of the adjoining states including Jharkhand. The Bisra market is famous for buying Non Timber Forest Produces in bulk. Around 10 to 15 traders access the nearby market for mainly purchasing the Siali Leaf, Mahua seeds & Mahua flower. The loose siali leaves are being procured from nearby weekly market and also from the adjoining states like Jharkhand (particularly from Goelkera block) and get channelized to the various markets of Andhra Pradesh and Karnataka. There are two oil expelling units functioning in market to process mainly the Mahua seeds into edible oil. The tribal people take the oil and leave the oilcake with the trader. The traders sell the oil cake to solvent industries in Raipur and Kolkata market. The mahua flower traders procure the produce from the nearby weekly market and subsequently sold the same at a higher price to nearby wine *bhattis* after storing the same in the cold storage at Rourkela.

RANCHI MARKET

Mahua, Dori, Tamarind and Sal leaf are major NTFPs in the Ranchi market. Siali is not available in the markets but there exists a market demand for the same. Many traders enquired of supply possibilities of siali plates since they plan to set up plate making units.

Mahua Flower

1. Mahua is purchased from different parts of Jharkhand and also from Orissa (Kantabanji, Khariar Road), UP (Allahabad, Fatehpur, Sultanpur) Chattisgarh (Raipur, Jagdalpur, Kankri, Patthalgaon) etc.
2. Ranchi market trades a huge quantity of Mahua flower. It is estimated that 2 Truck loads (15- 20) ton is traded by every trader in a month & around 50 trucks per month in Upper Bazaar. Trader usually stores mahua in cold storage. The general movement is from trader point to direct cold storage. Mahua comes to traders premises if the quality needs improvement.
3. The traders cater to the local market *bhattis* in Ranchi and other parts of Jharkhand along with the state of Bihar.
4. Trading agent takes 3 - 5 % commission
5. Peak Trading season for Mahua: April- June, Lean season - Rainy season.
6. There are three type of quality traded (1) Phad sukha (2) Medium (3) Chalani (15-20 ton per trader in a month & 50 trucks per month in upper bazaar). Packing should be standard pack of 45 or 50 kg.

Mahua Seed (Dori)

- Ø Dori is purchased from Orissa - Kantabanji, Khariar Road, Bhubaneswar, UP- Allahabad, Fatehpur, Sultanpur, Chattisgarh- Raipur, Jagdalpur, Kankri, Patthalgaon, & Entire Jharkhand
- Ø There exist huge requirements which trader were unable to quantify the demand in the market. All the produce is sent to cold storage and trading happens from the cold storage point. The produce is by and large sold to Local mill situated in Ranchi and others
- Ø Trading agent took 3 - 5 % commission
- Ø Peak -June-July, Lean-Winter season
- Ø Value addition has been done by collector
- Ø Sorting, grading, drying, standard packing (45-50 kg), should be done by collector. In June - July 2009 price of Dori ranged from Rs. 13 -16 per kg.

6. Capacity Building Needs

During the course of the study interactions with various stakeholders including primary ones led to an increased understanding of their current situation and what areas need to be built up for effecting business interventions. Discussion with Village Level Institutions (VLI) viz. SHG and Mahila Samiti brought out the various need gaps which needs to be fulfilled. Following section captures the observations.

Key Points

- Almost all the SHGs have saving linkage and have credit linkages
- Many groups have started inter loaning, mainly for consumption, size of the internal loan is very small
- Majority of the groups have been promoted by different agencies with different notions and objectives
- Many SHGs met and interacted are quite old, ranging from 3-10 years
- Many of the SHGs have got orientation and trainings at local level only
- Most of the productive loan across groups were relied upon external credit
- Many SHGs availed SGSY loan, but productive investment is lacking
- Many SHGs are silent on repayment of external loans
- Capacity of the SHGs need to be built so that they can reflect upon groups origin and growth, fund position and credit situation, linkages and networking and efforts towards productive utilization of credit.
- SHG leaders need to be oriented on playing real leadership role

7.2 Capacity Building Inputs at SHG Level

Theme	Themes
<i>Module 1: Business Sensitization</i> (2 days)	Why business is important for SHG members
	Type of business and dynamics of trading as a business
	Principles of Business
	Business dynamics across major sectors
	Marketing of NTFP/Off Farm produce/product (as a result of NTFP processing) and current marketing systems
	Group roles and responsibility
	Leadership in a group
	Group business management systems
<i>Module 2: Collective Marketing</i> (2 days)	Collective marketing - pre-requisites
	Group level roles and responsibility for managing the activities
	Establishing linkage with market
	Visit to market to understand the market dynamic, identify traders and negotiations
	Follow up for market linkage
<i>Module 3: Advanced Business Training</i> (for Leaders)	Role of leader in collective trading
	Procurement, storing and hoarding
	Market linkage, negotiation with traders etc.

<i>(2 days)</i>	Revolving fund management and record keeping
	Legal aspects on trading
	Infrastructure development
<i>Module 4: Marketing (1 day)</i>	Concept of Marketing
	Tribal Marketing-The Reality Check (Audio-Visual)
	Examples of Tribal markets & Video Clips on Marketing at Haats (Audio-Visual)
	NTFP traders Version (Audio-Visual)
	NTFP Collectors Version (Audio-Visual)
	5W & 1 H of Marketing (Presentation)
	5Ps of Marketing (Presentation)

A combination of training, exposure should be brought in to build the capacities effectively. Some of the specific sub – modules are as follows:

- On Collectivization of Mahua flower, Mahua seed, Sal leaf, Siali Leaf, Tamarind
- Skill training on using the sewing machine as well as the pressing machine towards setting up Sal leaf plate & cup making unit
- On Operation & maintenance of Sal leaf plate & cup making unit
- On operation & maintenance of Oil Expeller & Weighing Scale (Manual and/or Electronic)
- Marketing Solution of Sal leaf Plate & Cup
- Step by Step Collectivization Process
- Marketing Information system updating on daily basis & Process of Market Information System
- Progressive Drying Solutions
- Negotiation skills with traders & processors

7. Profile of major NTFPs

7.1. About NTFPs

Non-timber forest products (NTFP) are popularly known as goods of biological origin as well as services, derived from forestland excluding wood in all forms. Though debate still continues about the definition of the term, the utility of NTFP can not be underestimated to the forest inhabitants in particular and the populace in general. The definition of NTFPs or MFP varies from state to state.

In Jharkhand there is no legal definition of Minor Forest Produce, however Part III Chapter XV of Bihar Forest Rules defines bamboo, sabai grass, Kendu leaves etc. as Minor Forest Produce.

MFP has not been defined in Orissa Forest Act of 1972 and Orissa Forest Produce (control of trade) Act of 1981. The recent policy of the government that identified 85 NTFP, for the first time has made distinction between MFP and NTFP, though not specifically defined. The NTFP are divided into two categories namely, MFP and other NTFP. Forest produces like tamarind, honey, hill brooms, Siali leaves, Myrobolans and tree borne oilseed (TBOs) like Neem, Karanj, babul, Kusum etc. which come to 69 (After de-nationalization of sal seeds) items are termed as MFP and have been kept under control of GPs. The other NTFP consist of two further sub-categories, nationalized produces and lease bar produces.

After the enactment of PESA, the govt. of MP defined the term minor forest produces as "MFP as the forest produce which can be harvested on a non-destructive basis, i.e. the harvesting of produce which leads to destruction of trees, plants and vegetation will not be classified as minor forest produce". After the formation of Chhattisgarh the same definition has been followed by the state.

NTFP include all the products obtainable from forest other than timber. NTFP have been classified into fibres and flosses, grasses, cane and fodder, essential oils, tannins and dyes, gums and resins, drugs and medicines, edible products, oil seeds, leaves, animal, mineral and miscellaneous products.

The importance of the produces can be imagined from the above-mentioned categories, more so in case of the tribal community and forest dwellers of Jharkhand who have always been living in harmony with the nature. For them every aspect of life and livelihood is dependent on NTFP – be it the food they eat in the form of leaves, fruits, fibres and tubers, oil derived from the seeds or the fodder for their animals, or the houses they live in or the medicines they use to cure themselves or the clothes and ornaments they wear. In most of the forested areas of Jharkhand, these forest produces have been supporting tribal for more than 6-8 months a year both in terms of subsistence and cash income.

7.2. Value Chain Analysis of major NTFPs

7.2.1. Mahua Flower (*Madhuca indica*)

(a) Background

Mahua Flower is one of the most important produce providing livelihoods to forest dwellers. Given the minimum-selling price of Rs. 2/kg for Mahua Flower, the villagers (primary collectors) no doubt get a better deal because almost all villages collecting Mahua Flower reported of getting Rs. 4-7/kg of Mahua Flower. But the marketing channel clearly indicates of the increase in price (only through change of hands) and the subsequent profits made by the traders and alcohol *bhatis*. Moreover, lack of know how on plucking techniques (with the fact that to collect more, even immature flowers are plucked) eat into the revenue which otherwise would have accrued to them. Drying under the sun and lack of scientific measures to store Mahua Flower also eats into the revenue. Of late some Women SHGs have taken collective trading initiative on Mahua Flower and just by avoiding a few traders in the marketing channel and selling to a town trader have given them reasonable profits.

(b) Key Findings

- Collection area both in the village and in the forest
- Lack of proper drying procedure
- Unaware of proper storage dynamics
- Lack of quality control measures
- Accrual of less price
- Collectors sell in local measure and are cheated in weighing by trader
- Individual selling to local trader
- Produce has a capped value chain wherein Liquor making units are lone users of the produce
- Traders prefer full dried (*phad sukha*) quality of *mahua* which generally trades at Re. 1-2/- extra price than the *chalu* variety

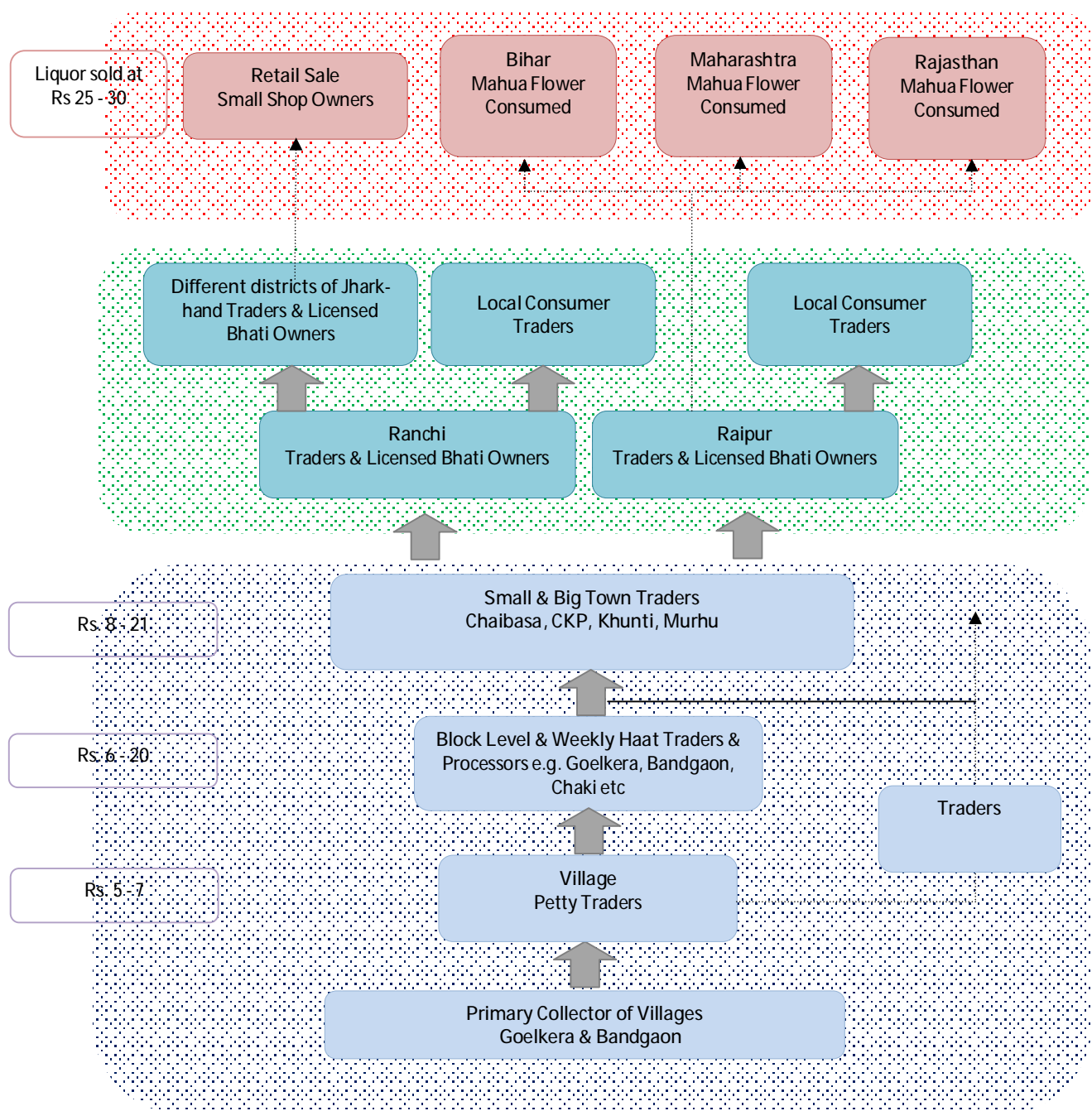
(c) Production Villages

Mahua Flowers are found in plenty in the state of Jharkhand. It is found in plenty in study villages of both the blocks namely Goelkera and Bandgaon. It is also collected in the states of Madhya Pradesh, Chhattisgarh, and Orissa etc.

(d) Major Usage and products made from the produce

Mahua flowers are predominantly used for making alcohol. It would not be an exaggeration that it has a sole utility. A few years back it was used to make cattle feed but it could not be commercialized. In addition Centre of Technology, New Delhi claims to have developed technology which for making jams and other products from flower but it is still to be commercially tested.

(e) Movement of Mahua Flower



(f) Stakeholders and their roles and functions

f.1. Producer

- Villagers collect mahua flower for around 25-30 days during March - April.
- Apart from drying mahua flower, villagers do not undertake any local level value addition. It takes around 2-3 days for mahua flower to get ready for selling.
- There is very less awareness regarding prices prevalent in major markets. Moreover, villagers don't have any idea as to where the produces go from the immediate seller apart from the fact that it goes to local *bhati* for making liquor

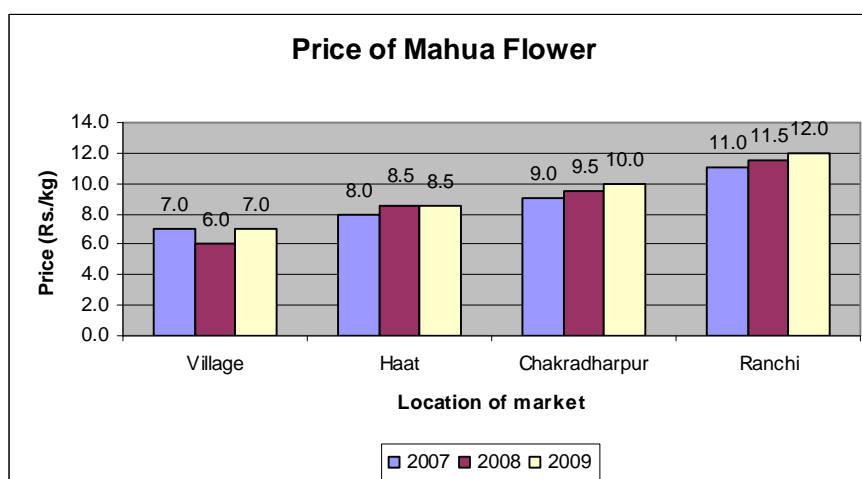
f.2. Market

- Primary collectors of the study villages, predominantly, sell the produce both in the haats and to the traders who come to the village (very less incidence).
- The haat block trader uses a 407-make truck (based on the amount collected he goes for a big vehicle too) to transport mahua flower from the mahajan's place and from his own agents. A single truck of this make carries 35 quintals of mahua. Transportation cost varies with the distance and for a 50 km the trader pays trip around Rs.1200/-.
- Block level trader fully dries the purchased mahua to ensure minimum wastage due to rotting during the storing period. He loses about 10% of Mahua in terms of weight in the process of value addition and sells around 32.5 quintals of Mahua from the initial 35 quintals that he purchased from the mahajan or from his agents.
- Traders also store mahua in their godown. Storage period is mainly between months of May to December. The stock is sold during December when rate is the highest (Rs. 12-13 per kg in certain markets). They export mahua to various parts of Jharkhand, Orissa and Chhattisgarh traders via a truck depending upon the amount to be sent.

f.3. Alcohol brewing unit (bhati)

Alcohol brewing units (*bhatis*) are the local terminal markets cum end users of Mahua Flowers where liquor is made from the same. These bhatis get registered with the Excise department by the paying the requisite license fees and procure Mahua Flowers from varied sources ranging from primary collectors to traders as per their requirement. Since Mahua Flowers have no other established use except for making of alcohol, understanding was developed on the value addition in terms of price of the finished product.

(g) Price Trend



(h) Existing Practices, Gaps and Constraints across the value chain

Stage	Existing Practices	Gaps and Constraints
Pre Collection	<ul style="list-style-type: none"> • Waiting for natural fall of mahua flower • Planning morning time & human resource involvement plan for collection period • Making space ready for storage inside room & 	<ul style="list-style-type: none"> • Fire under the tree is unsustainable collection practice • Not Cleaning the place of natural fall of mahua flower on ground e.g. by applying cow dunk

	<ul style="list-style-type: none"> open space in yard for drying Firing below field trees for cleaning 	etc.
Collection	<ul style="list-style-type: none"> Collecting flowers one by one from ground Generally entire family involved in collection excluding male adult and cooking member Generally they collect it from 5 am -11am and return to home by 1 pm Flower is generally available and collected over a period of 20 days They collect it in the tokri and bring it to home on head load 	<ul style="list-style-type: none"> Lack of awareness on best collection practices and time saving techniques Mahua collected from ground contains soil, mud, sand, stone and is not a good quality Not using a better quality of collection process e. g. Collection by saree arrangement below tree to collect mahua flower in saree & not allowing it to fall on ground
Post Collection	<ul style="list-style-type: none"> Drying mahua flower of forest in yard & of village below tree Different types of drying: on the floor, road side, and on floor smeared with cow dung etc. Duration of drying is usually 2-3 days Thrashing heap of flower to sift the bhoonsa They pack the dried mahua in gunny bags and store it in their homes 	<ul style="list-style-type: none"> Lack of awareness on best drying practices Lack of drying infrastructure Lack of storage facility Lack of knowledge on post collection practices e.g. preservation practices, Space arrangement practices to arrange the boras in sizable manner.
Processing	<ul style="list-style-type: none"> Desi Liquor making, Sodga making For self consumption 	<ul style="list-style-type: none"> No alternate usage known to villagers Less use of Bhoonsa i.e. waste of mahua for animal fodder purpose Mahua flower not dried properly & contains moisture portion making the quality of mahua not best resulting in less market price
Marketing	<ul style="list-style-type: none"> Individual selling Selling more than 50% of produce to road side traders who sit on the way to bazaar (haat) Head load (women) & Cycle mode (men) transportation for selling Facing weighing loss during measurement & Selling to trader 	<ul style="list-style-type: none"> Lack of market information i.e. product vs. market vs. price information Pathetic basic infrastructure e.g. poor road etc. in the village Lack of marketing infrastructure e.g. weighing scales, proper mode of transport Lack of negotiation power and skills with market players e.g. traders & processors Lack of numeracy and literacy Lack of exposure to markets

(i) Range of intervention across value chain

The abovementioned findings and analysis lead to a range of interventions which needs to be implemented to develop Mahua flower as a product providing income to the target community in a sustainable manner. Collective marketing of mahua flower can lead to fetching of incremental price as shown in the business plan in the next section. Some of the specific interventions are listed below

- Drying Platform to be created
- Building awareness on quality control measures
- Weighing system introduced
- Standard packing as per market demand introduced
- Collective marketing introduced

7.2.2. Mahua Seed (*Madhuca indica*)

(a) Background

Mahua seed is the seed of the mahua flower *Madhuca indica* and is widely collected in study villages of both the blocks. The seed is generally crushed, steam boiled and expelled to get oil. While the oil is used by the tribal for cooking and external application, oilcake thus produced is being sold to traders, solvent plants wherein the cake is deoxidized and is used in feed industry. In addition the seeds are also sold to local trader in cash crunch situation it is a small surplus.

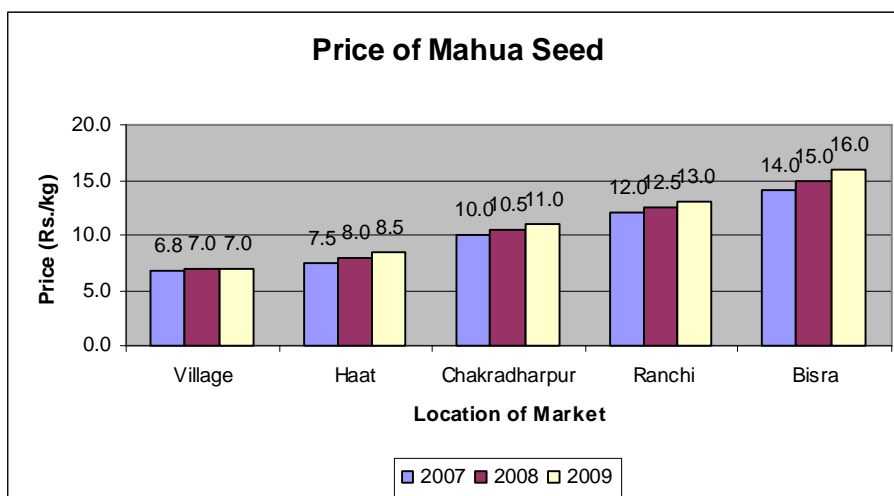
(b) Key Findings

- Mahua seed is available in plenty in the study villages of both the blocks of Goelkera and Bandgaon
- Almost all tribal need mahua oil and hence engage in expelling of the seeds
- Demand for oilcake is high at traders and solvent plant level and market linkages can be developed with them
- It caters to both the consumption and commercial aspects (oil is consumed and oilcake is traded)
- Good production happens every alternate year
- Collection area in forest far off in many villages, it is a time taking affair
- Lack of proper drying procedure
- Unaware of storage dynamics
- Selling in local measure in vogue and cheating in weighing by trader
- Individual selling to local trader
- Collectors generally expel seeds for oil and leave the oil cake with the expeller as service charge
- Manual oil expellers can be set up under a micro-project in some select villages

(c) Production clusters

The seed is profusely available in the Jharkhand, particularly in study villages of the 2 blocks. Apart from these production clusters are located in the states of Madhya Pradesh, Chhattisgarh and Jharkhand etc.

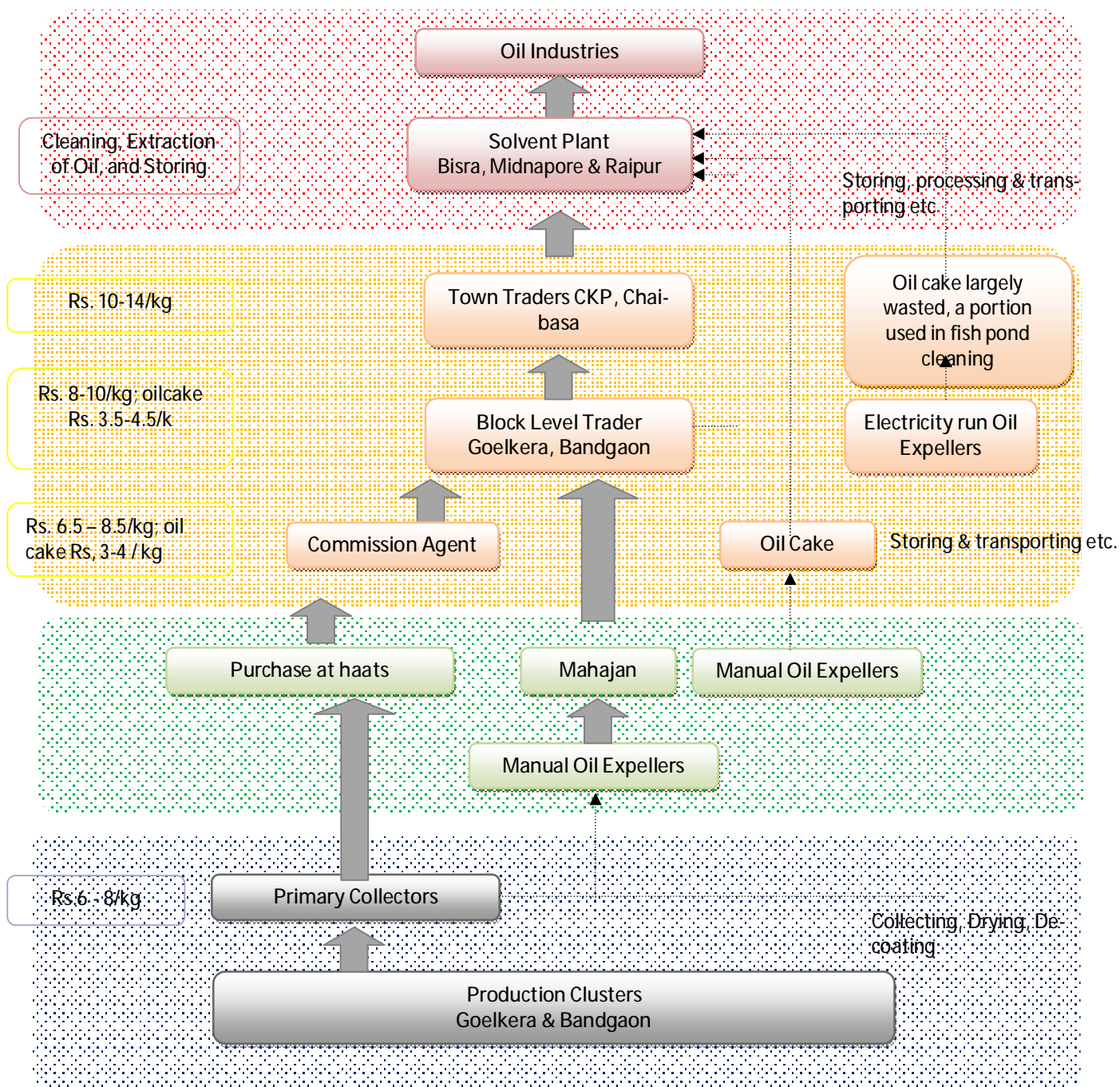
(d) Price Trend



(e) Major Usage and products made from the produce

Mahua seed is being crushed and expelled to obtain oil which is both consumed by tribal and applied externally. Oil of Mahua seed is the main stay of tribal and almost all expel oil from the mahua seed. The oil cake finds a ready demand in the solvent plants which again extract oil from the oil cakes and make deoxidized cakes (DOC). The extracted oil is used in Vanaspati oil and the DOC is used as a fish feed.

(f) Movement of Mahua Seed



(g) Stakeholders and their roles and functions

g.1. Producer

- Villagers collect mahua seeds (locally known as dori) for around 15-20 days during June till July. Villagers de-coat the collected mahua seed to get the de-coated seed.
- Many households who collect mahua flower, collect mahua seeds during the season. Oil is extracted from these de-coated seeds which is used both for edible and external application purposes.
- Apart from extracting oil, villagers also sell mahua seed either in the haats or to the traders who come to the village.
- Normally, during the season mahua seeds fetch a price of Rs. 7-8 per kg but there exists a price variance from village to village depending upon the no. of traders in haats or in the village buying seeds at a given point of time.
- At the village level there is very less awareness regarding the prices prevailing in other markets. In addition collectors have no idea about the forward flow of the seeds from the immediate trader's place.

g.2. Market

- Depending upon the prices offered by the big traders the block level traders offer the prices in the haats or in the village. Of course for dori, trading is done in major haats
- Trader exports the mahua to the trader located in regional market in a truck depending upon the amount to be sent. Receiving trader pays extra for the transportation
- Majority of seeds are purchased largely by the solvents plants in Bisra. There are around 4-5 such solvents plants. These plants also buy oilcakes (left as a result of the local level value addition of extraction of oil at the village level) from the small trader who also deals with the oilcakes.

(h) Existing Practices, Gaps and Constraints across the value chain

Stage	Existing Practices	Gaps and Constraints
Pre Collection	<ul style="list-style-type: none"> • Waiting for ripening stage of mahua fruit & natural fall from tree. • Making ready the family members to collect (4 years to old age) 	Mud, Soil, small stone & impurities mixed with dori after extraction of dori(mahua seed) from Mahua fruit and during drying
Collection	<ul style="list-style-type: none"> • Hand pick of fruit from ground & Collecting in a tokri/ bamboo jhudi 	Mahua seed (dori) extracted from mahua fruit usually not kept on clean surfaces & impurities get mixed with dori making the quality worst. <ul style="list-style-type: none"> •
Post Collection	<ul style="list-style-type: none"> • Removal of first coating of mahua fruit by hand wash & obtaining coated mahua seed 	<ul style="list-style-type: none"> • Storage mechanism poor, Little space inside house to keep dori for a long time & enforcing for distress selling • Open storing of dori in yard in mud allowing the quality of un de-coated dori unusable after long storage due to attack of insects.

Processing	<ul style="list-style-type: none"> • Soaking in water in mud pot for 3 to 4 days to facilitate de-coating • Breaking outer cover of mahua seed by applying pressure in ground or by stone hit • Drying for 2 to 3 days till removal of moisture 	<ul style="list-style-type: none"> • Sun Drying for less time with moisture content • Moisture not completely removed resulting in poor quality of dori, which makes the market price less • No gradation of good & bad quality
Marketing	<ul style="list-style-type: none"> • Packing without standard measurement practices • Not measuring weight of Dori filled bora/packets • Not knowing rate of dori before selling • Selling to road side trader agents at distress price facing weight chit 	<ul style="list-style-type: none"> • Individual selling resulting in less market price of dori • Lack of marketing knowledge & information & application

(i) Range of Interventions across value chain

The abovementioned findings and analysis have led to a range of interventions which needs to be implemented to develop Mahua seed as a product providing income to the target community in a sustainable manner. Collective marketing of mahua seeds can lead to fetching of incremental price as shown in the business plan in the next section. Some of the specific interventions are listed below

- Ø Planned collection mechanism in less time
- Ø Creating Drying Platform
- Ø Storage facility to be made available
- Ø Introducing weighing system
- Ø Introducing standard packing as per market demand introduced
- Ø Introducing aggregation of the produce at the community level
- Ø Marketing tie up traders at town level
- Ø Setting up Micro projects: Low cost manual oil expellers in certain clusters/villages
- Ø Introducing market information system board

7.2.3. Tamarind (*Tamarindus indicus*)

(a) Background

India is one of the major producers of tamarind fruits with cultivation throughout the country. Madhya Pradesh, Andhra Pradesh, Uttar Pradesh, Karnataka, Tamil Nadu and Orissa are the major producers of tamarind in the country. Tamarind fruits are used in Indian culinary since ages. While most of the tamarind fruits are consumed in domestic market, a part of the quantity is exported and the balance is processed and converted into concentrate form. Because of high acidity of around 90 percent, tamarind has longer shelf life. Apart from large and growing domestic market, there are good prospects of exporting tamarind by-products to countries like the USA, UK and some of the African and Middle East countries.

Jharkhand is a major producer of tamarind, most of which are traded through routes namely Andhra Pradesh (Vizianagaram, Vishakapatnam), Tamilnadu and other South Indian states. However, almost all the produce from the state is exported outside without any value addition which naturally fetches less remuneration to the producers than they could have otherwise got through value addition.

(b) Key Findings

- Tamarind is a secondary source of economy for the tribal people of Bandgaon and Goelkera.
- Tamarind, being perishable and seasonal in nature, the tribal faces difficulty in storing, preserving and ultimately sells out the produce at lower price.
- Distress sale often takes place due to lack of market information.
- The product has multiple usages, so there is huge industrial demand.

(c) Major Usage and products made from the produce:

The pulp has a very unique sweet-sour-spicy flavor that is extensively used for flavoring. The fruits may be eaten fresh, but are prepared as flavoring agent for beverages. Tamarinds are also commonly used to make candies, preservation and for flavoring purpose in deserts and dishes. Tamarind is mainly used in preparing pickles, and juice and it has a greater acceptance in South India as a part of their daily meal and which incidentally is also the largest consumer of tamarind in India. Besides, in some places tamarind seed powder is used to produce starch, cattle feed, used in fabric paint, gum for plywood industries etc.

(d) Value-addition in Tamarind:

Tamarind fresh and dried

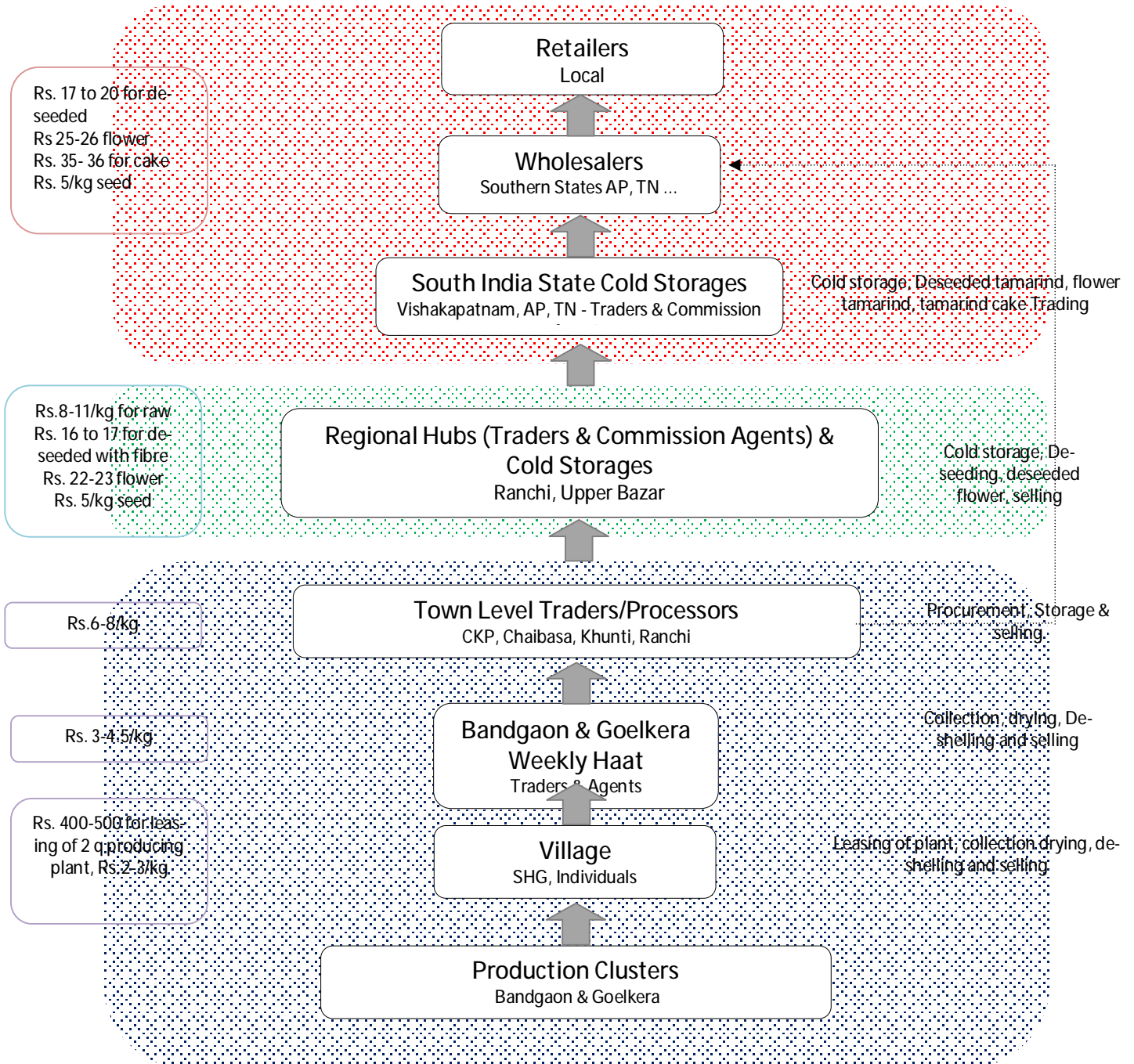
The outer cover of the tamarind is removed and then it is sold directly in the market or dried to enhance its self life before placing it in the market.

Seedless tamarind

By using simple tools like pins and knife the tamarind is deseeded at household level and subsequently sent to the market. The process substantially increases the self life of the product and its utility is enhanced by removing the seeds that

are of less use to the customer. However these seeds can also fetch a good price if crushed/ powdered and sold to the starch and cattle feed industries.

(e) Movement of Tamarind



(f) Stakeholder in the value chain

a. Collectors

- Collection generally starts in the month of January last week to March first week. Tribal collect raw tamarind from their own trees or from the forest. The male members of the collector family climb up the tree, and either shake the branches or beat them using a long stick. The fruits thus falling on the ground are collected by women and children of the family.
- If tamarind fruits are dried on the tree, de-shelling (removing the shell from pulp) is done immediately on ground by beating with a small stick. If tamarind fruit are not dried, 1 day sundry is given and then de-shelling is done.
- Mainly three types of functions are performed at the village level for selling tamarind to the traders. These are, harvesting, sun drying and de-shelling of the collected tamarind.
- Villagers sell directly to the village market or to the village trader. Selling price of tamarind depends on the selling pattern. Generally three types of selling pattern have been observed.
- People sell tamarind on weight basis. Generally the produce is sold directly in the village market/haat. The traders also come directly to the village and collect tamarind from each household @ Rs 2-3/ per kg. Although the price is not fixed all the time, it mostly depends on the production of the crop. In this process, harvesting and de-shelling is done by the collector.
- Second process is leasing the entire tree to the village level trader, which also happens to be the most frequently practiced pattern of sale. After seeing the crop, the trader decides the price of the crop. A full grown tree produces around 2 quintals of crop. It was found that villagers prefer to sell the entire tree to the trader to get a lump sum amount at a time. For the following reasons, they sell the fruits while in the plant.

1. Many community members are Christians and they invest a lot during Christmas. For the need of money during Dec., they auction plant for some money.
2. Harvesting of fruits is very physically strenuous as considered by community.
3. Lack of knowledge on market dynamics.
4. Price fluctuation: In 2003 nation wide price of tamarind drastically was reduced to Rs.1/- to Rs. 2/- due to heavy production.

In this process a tree having 1.5 to 2 quintals of fruit is sold at @ Rs 400 to 500/-. The effective price per Kg of tamarind becomes Rs 2/- to 3/-. In this process the entire cost of harvesting, de-shelling and packing is borne by the trader.

(j) Existing Practices, Gaps and Constraints across the value chain

Stage	Existing Practices	Gaps and Constraints
Pre Collection	<ul style="list-style-type: none"> • Verifying ripening stage of tamarind fruit during fall in kutchia stage • Waiting for ripening of tamarind & its natural fall from tree • Climbing on tree & shaking branches by hand pressure & by long stick to allow fall of tamarind from tree • Leasing of Tamarind tree @ Rs. 500/- to Rs. 1500/- per tree 	<ul style="list-style-type: none"> • Tamarind Trees gets leased just before the collection by the tree owner due to cash requirement & lack of information on market price of tamarind • Advance received by tree owner to sell the yield of tamarind tree to the Credit supporting party. The reason is due to immediate cash need and also due to ignorance on price of tamarind at different markets

		<ul style="list-style-type: none"> Lack of initiative by the villagers to sell tamarind in a collective manner to get better prices
Collection	<ul style="list-style-type: none"> Collecting ripe tamarind in bora/ tokri after removal of mixed leaves & branches by 1 labour cost in a day for small tree & 2 labour cost in a day for big tree. 	<ul style="list-style-type: none"> Tamarind fruit collected from ground allows direct de coating of outermost lawyer and brings spots on the tamarind flower, which deteriorates the quality. Better practices not followed by the collectors to collect tamarind fruit in good condition.
Post Collection	Collecting in bora, tokri & storing in tokri, bora in places containing impurities in maximum places	<ul style="list-style-type: none"> Storage mechanism poor. Open storage on muddy ground for a long days allowing insect attack, resulting in bad quality of tamarind, leading to rate market price
Processing	<ul style="list-style-type: none"> Outermost lawyer removal by stick apply Production of de-coated tamarind 	<ul style="list-style-type: none"> De-coating followed by de-fibreing & de-seeding & obtaining flower tamarind No gradation of good & bad quality Usually not storing tamarind de coated fruit in clean place De-seeding practice is not followed during selling
Marketing	<ul style="list-style-type: none"> Distress selling to road side petty traders @ Re.1-3/- per kg 	<ul style="list-style-type: none"> Market price of tamarind at different markets is not known to tamarind collectors

(g) Range of Interventions

- Sensitization to stop leasing of plants, which is less remunerative
- Orientation on best practices in tandem with market requirements to be introduced.
- Construction/arrangement of storage facility or arrangement of available storage facilities.
- Sensitization of community on quality aspect like drying, sorting, proper de-shelling
- Weighing system introduced
- Collective marketing introduced

7.2.4. Char Seed (*Buchanania lanzan*)

(a) Background

Char the fruit is greatly valued for its kernel and is widely used as a flavoring agent in sweets, milk products and other edible items. The taste is somewhat a mix of pista and almond. Char is greatly valued by Muslim community who use it as an item in *halwa* and *kheer*, which they prepare during their festivals. The price of char fruit depends upon the percentage of seeds having the kernel. Large and intact kernels fetch better price than broken or small ones. Once, the kernel is extracted, it has to be immediately marketed as it can't be stored for more than a month. Hence, the traders collect only the char seeds from the collectors.

(b) Key Findings

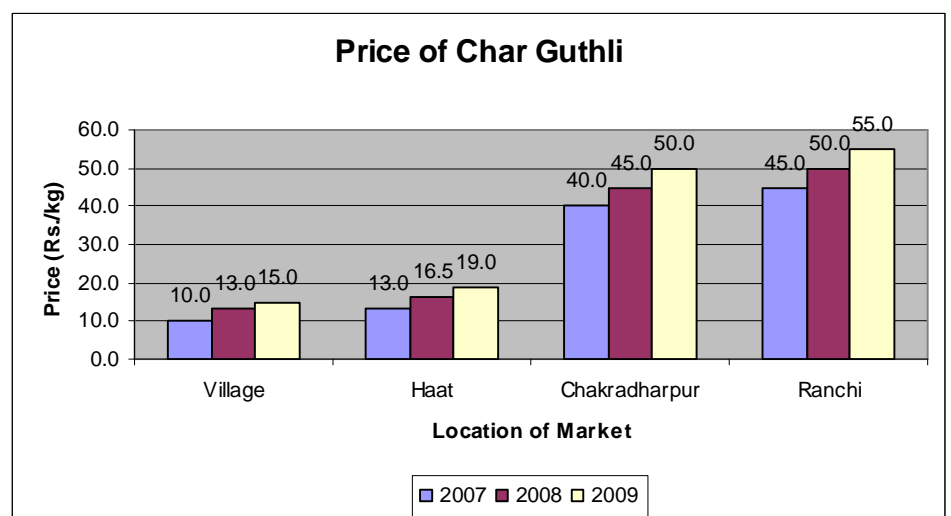
The harvesting of Char is done during April-May. Lack of awareness and knowledge on the increased price is matured fruit is collected leads to rampant collection. During the production season villagers usually collect char on a daily basis. For collection of char seeds, collectors clean the ground and then shake the branches. The ripe fruits fall on the ground. Fruits that do not fall off the tree by shaking are plucked by using sticks or climbing the tree. In many cases, collectors tend to chop small branches laden with char seeds which, leads to a stunted growth of the tree in the long run. Diminishing char trees area big concern and is taking dangerous proportions. It is in this context that right knowledge needs to be imparted at the village level to keep this means of livelihoods sustainable.

(c) Processing and Storage

Most of the collectors are not involved in any kind of processing except for washing and drying. The collected fruit is washed in water and dried in the sun for 5-7 days. After drying Char is either stored in gunny bags or sometimes stored in heaps in the open. It was learnt that properly dried Char fruit could be stored for one year. But damage of produce by rats is a common concern in villages.

(d) Quality assessment and Grading

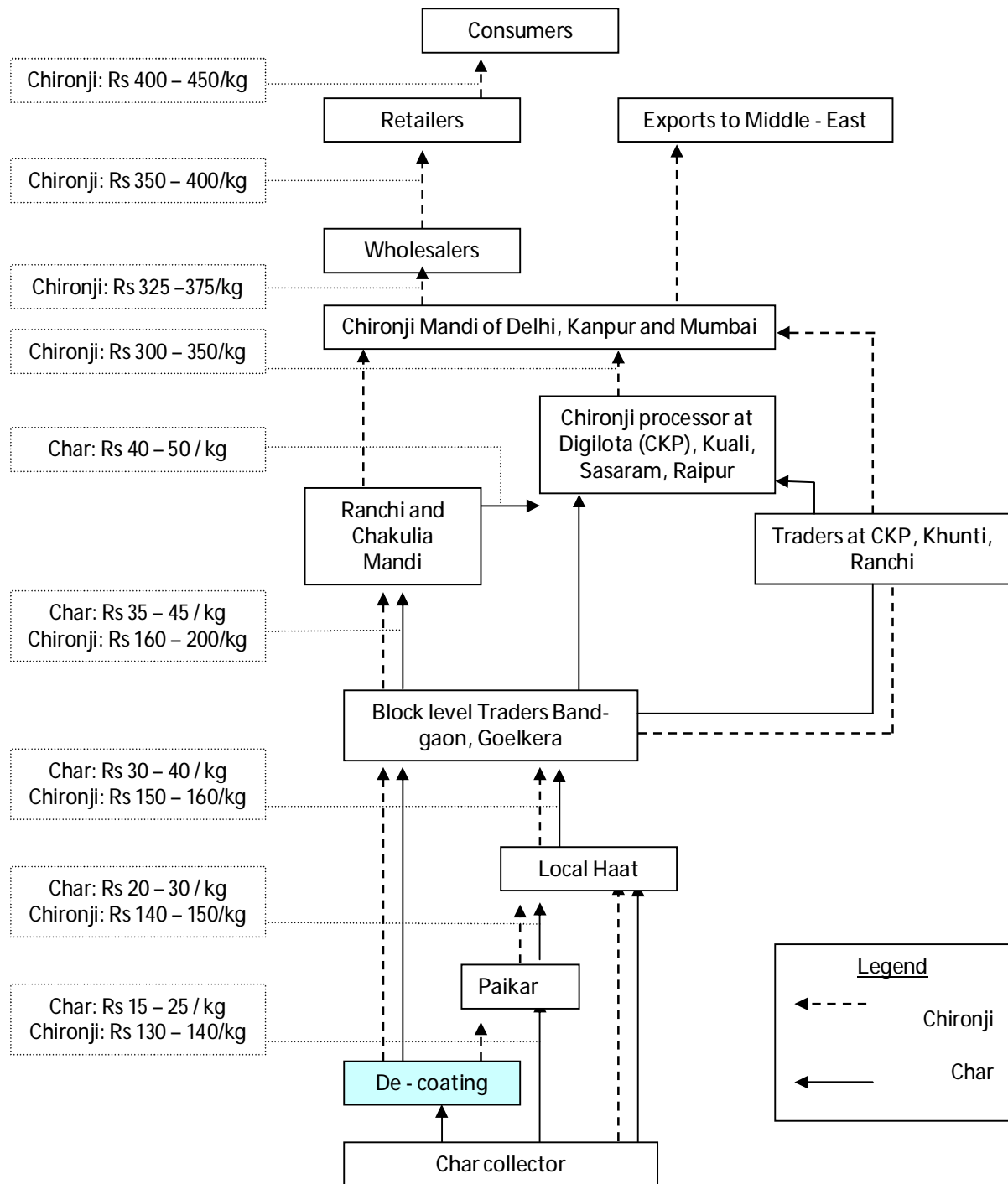
The traders at local level, while procuring, determine the quality of the product by a traditional method. The fruit is immersed in water, fruits which dip to the bottom are classified as of desirable quality with good kernel and those that float are rejected or classified as low quality which are procured accordingly at a lower price. Thus, its price is determined on percentage basis. If 60 out of 100 fruits dip to bottom produce is classified as 60%.



(e) Marketing Channel MART, Noida

The trading of Char is similar to other NTFPs except that grading is done for price determination by all traders. Price variation also exists between fresh fruit and dried fruit and the latter fetches better price. While in cash transaction, collectors fetch Rs 15-20/kg on the basis of quality of the fruit. Villagers sometimes also adopt wrong methods to increase the percentage of Char while selling. They soak Char in water, two to three days before they plan to sell, and dry it. Thus water content increases the weight of Char and larger numbers of fruits tend to sink.

(f) Movement of Char Seed and Chironji



(h) Existing Practices, Gaps and Constraints across the value chain

Stage	Existing Practices	Gaps and Constraints
Pre Collection	<ul style="list-style-type: none"> Waiting for a favorable climate 	No proper plan to collect the char guthli from tree without harming tree branches i.e. lack of pre collection time precautions for better & sustainable pre-collection practices
Collection	<ul style="list-style-type: none"> Collecting char fruit from branches of tree 	<ul style="list-style-type: none"> Collection of Char guthli with harm to char tree branches & tree No better practice of collection is followed.
Post Collection	<ul style="list-style-type: none"> Eating the fruit portion or by directly removing the outer coverage portion of fruit by hand washing & obtaining char guthli Drying of char guthli 	<ul style="list-style-type: none"> Impurities gets added with char guthli after extraction of char seed from char fruit by coming in contact with dust particles, mud etc.
Processing	<ul style="list-style-type: none"> Manual de-coating of first lawyer of char guthli by stone treatment or by grinding in a stone sila Processing of char guthli in char guthli processing machine 	<ul style="list-style-type: none"> Better quality of Chironji is not extracted from char guthli due to application of stone on char guthli Processing machine information is not available to Char collector
Marketing	<ul style="list-style-type: none"> Exchanging Chironji with rice (90%) and salt(10%) at local trader on haat days before Hat location on road sides at less price 	<ul style="list-style-type: none"> No market value of char guthli at Goelkera Lack of marketing price information

(h) Range of Interventions across value chain

- Awareness of plucking techniques
- De-coating machines at cluster and subsequent market linkage
- Awareness on trader tactics during purchase of char
- Collective action at local level
- Panchayat level MSP fixation to be ensured
- Liaison with local as well as town traders to get better prices for char
- Linkage to central market of MP which is hub of Char

(i) Challenges

- There exists very little knowledge on the value of processed char at community level
 - Char de-coating technology secretive and even though providers are willing to provide technology, existing purchasers are acting as a hindering blocks
 - Trader lobby is very strong
 - Money crunch reason for immediate disposal
 - Little knowledge of business dynamics at community level
- § Trader identification and streamlining selling process

7.2.5. Sal Leaf (*Shorea robusta*)

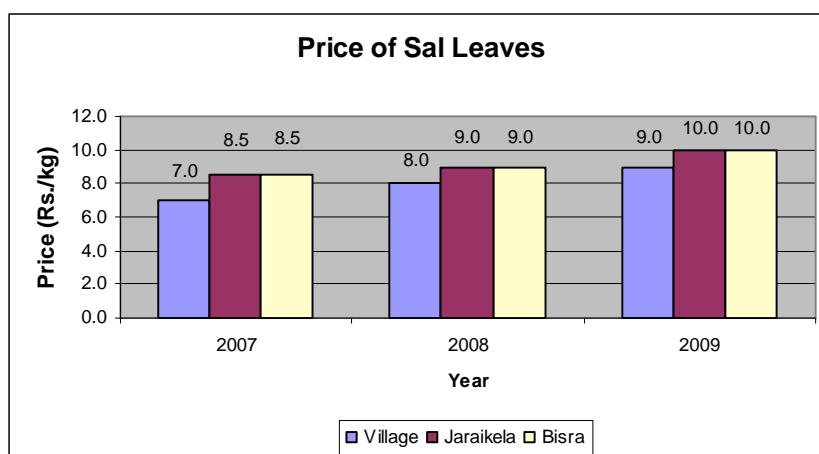
(a) Background

- Sal leaf collection is usually not possible within 15 Mar to 15 April
- Sal leaf collection season ranges from May to February. In march & April month, dried leaves fall down & new leaves generate
- Sal leaf collectors shared that though Sal leaf is largely available in forest areas and can give income for 10 months yet, they do not collect for the purpose of marketing as raw sal leaf traders are not available in local markets of Bandgaon and Goelkera. Recently, 2 Sal leaf Plate & cup making units started nearby Goelkera market. However, due to less price of raw Sal leaf in local market & lack of availability of profitable trading opportunity at Goelkera & Bandgaon block are or nearby area tribal carry an impression that Sal leaf has no market. In real practice, there is negligible incidence of sal leaf being collected in the area. After Installation of Sal leaf Plates & Cup Machines, Sal leaf collectors are interested to install machines at village level so that, they can the profit of both Sal leaf collection & Processing to Plate & Cup. There is a huge demand of Machine stitched sal leaf Cups & Plates at Ranchi Upper Bazar & TATA Sakchi Market (Rasi lane).

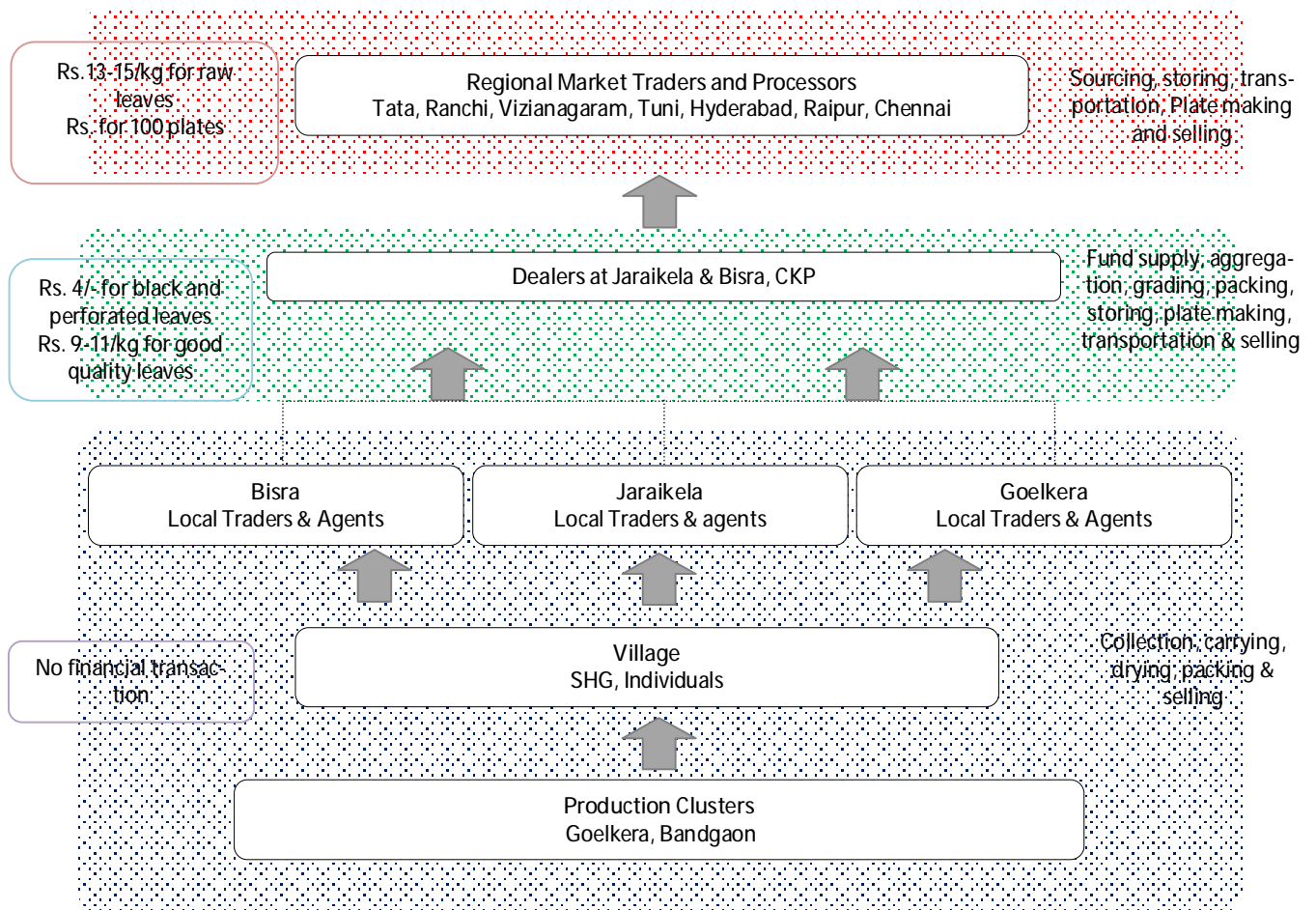
(b) Existing Practices, Gaps and Constraints across the value chain

Stage	Existing Practices	Gaps and Constraints
Pre Collection	<ul style="list-style-type: none"> • Walking over 2 to 5 kms to forest area to collect sal leaves in early morning time 	Have to walk 2-10 km into dense forest for collecting sal leaves.
Collection	<ul style="list-style-type: none"> • Hand plucking & packing on spot by long rope / rope available in forest area 	Lack of collection with better practice
Post Collection	<ul style="list-style-type: none"> • Storing in available space inside house & stitching 5 to 7 leaves in bamboo stick 	Lack of storage place
Processing	<ul style="list-style-type: none"> • Drying front & back sides of stitched sal leaf & cup 	No production of leaf plates and cups due to lack of information on equipment suppliers & electricity problem
Marketing	<ul style="list-style-type: none"> • Selling at local market like Tonia (Goelkera), Chakradharpur, Jaraikela at distress price @ Rs.7/-, Rs.8/-, Rs.9/- per bundle of 100 stitched leaves 	<ul style="list-style-type: none"> • No gradation of good & bad quality sal leaf products • No price at local market

(c) Price Trend



(d) Movement of Sal Leaf



7.2.6. Lac

Lac is a natural resin of insect origin and is commercially important as a versatile raw material, useful for variety of purposes. It is the secretion of *Laccifer lacca*, a certain species of insects, encouraged to grow on specific 'host' trees and is collected as encrustations on the twigs. The lac acts as a protective covering for the insect. End product of lac cultivation is Stick lac and it is obtained as a result of scraping of lac encrustation of the soots of host tree. The refined form of lac is called shellac. Lac is available in market in the form of seedlac for commercialization. Lac is found primarily on three types of trees

- Palash
- Kusum
- Ber

The Kusum lac is more valuable, but less extensively cultivated due to less occurrence of Kusum tree. While Ber lac comes after Kusum lac; the lowest in quality and value is the palash lac. Due to the presence of large number of palash tree, considerable quantity of lac is produced in the district of Palamau. The principle crop of the palash lac is obtained in the month of April and May and is known as the Baisakhi crop. Some of the lac is then left on the trees until October and November which becomes fit to be gathered and sold as brood lac (lac seed). This is the Kartiki or Katki crop.

Main commercial varieties of lac are

- Lemon No. I
- Lemon No. II
- Standard I
- Golden Kusumi
- Golden Baisakhi
- Manbhum Fine
- Fine Baisakhi etc.

Lac is a resinous incrustation found on the twigs of certain trees (Palash, Kusum & Ber), which is produced round the bodies of the colonies of the lac insect. The latter subsists on the sap that it sucks up by means of a proboscis from the succulent tissues of the tree. When the young insects escape from the dead body of the female, they crawl about in search of fresh sappy twigs. This is known as swarming and at this time the twig of trees infected with the lac insect will often be seen to assume a reddish colour, owing to the countless number of tiny insects that are moving all over them. Those that become fixed drop their legs and at once proceed in the process of digestion to transform the sap sucked by the proboscis and to exude from their bodies the resinous matter with which they become ultimately incrustated. At this stage when it becomes evident that the swarming is beginning, the twigs of an old tree with the insects on them are cut off and tied on a fresh tree which it is proposed to bring under cultivation, at the base of the new source which grown as the result of previous pollarding. After a time the insect crawls up the branches of the fresh tree, and, piercing the bark at some place where it is sufficiently soft, fixes itself down and commences to exude lac. The greater and the better part of the lac are exuded by the female after mating. The quality of the lac depends upon the brightness of the colour, the thickness of the incrustation, and the comparative freedom from parasites. The primary collector lops off the tree on which lac has formed with an axe and then separates the lac from the twigs with a sickle.

Yield

A Kusum host generally gives a higher yield than other hosts but is slow to recover and throw out new branches after pruning.

Comparative Yield of different host trees

S.N.	Host Tree	Estimated Average Yield per Tree (in kg)		
		Small	Medium	Large
1	Kusum	8 – 10	10 - 30	30 – 60
2	Ber	0.5 – 2	2 - 4	4 – 8
3	Palash	0.5 – 1	1 - 4	4 – 10

Collection Process

The different crops are known after the names of the Hindu months in which the collection commences. The two crops from hosts other than Kusum are known as Baisakhi and Kartki (also called Rangeeni) after the months Baisakhi (April-May) and Katki (October-November) respectively. The crops from Kusum hosts are known as Jothua or Jethwi and Aghani after the months Jeth (May-June) and Aghani (November-December). The Aghani crop is usually referred to as Kusmi.

Collection Period

S. No.	Name of Crop	Time of Infection	Time of Harvesting
1	Non Kusum Crops		
A	Baisakhi	Oct. -Nov.	April – July
B	Katki (Rangeeni)	June - July	Oct. - Nov.
2	Kusum Crops		
A	Jethwi	Jan. - Feb.	June – July
B	Aghani (Kusumi)	June - July	Nov. - Feb.

The Baisakhi crop is the biggest and the most important commercial crop. The harvesting of this crop extends over a period of three months. A part of the crop is harvested in April and May, and a part is left on the trees for natural infection of Kartki crop and the rest is harvested. Kartki crop is generally cut in October – November both for sale and brood for Baisakhi crop. This crop is generally smaller than the Baisakhi crop from the same hosts. While Baisakhi crop generally results from artificial infection of hosts with Kartki brood, Kartki crop is usually from natural infection of Baisakhi lac left on trees. In case of Kusum host, the winter crop Aghani is the bigger of the two crops. It matures in January – February but the cutting of the crop begins in November – December and continues till February. The Jethwi crop is comparatively a small crop. It is usually cut in June – July and is largely used as brood for Aghani crop.

Cultivation

The cultivation of lac is carried on by

- Introducing the lac insects to the lac hosts, this process is called infection or inoculation.
- Harvesting the crop by cutting the branches on which lac encrustations have been formed.

Infection or Inoculation

The process is carried out in two ways, viz., artificial infection and natural infection.

Artificial Infection

A few sticks of brood lac, i.e. lac from which larvae are about to emerge are placed on a host tree, which has previously been pruned in time so as to put forth good new shoots. The larvae on emergence crawl about and settle down on succulent shoots. Pruning in the correct way and at the correct time is of great importance from the point of view of the quantity of lac obtained from a host. The extent of pruning required by a host depends on its condition

Natural Infection

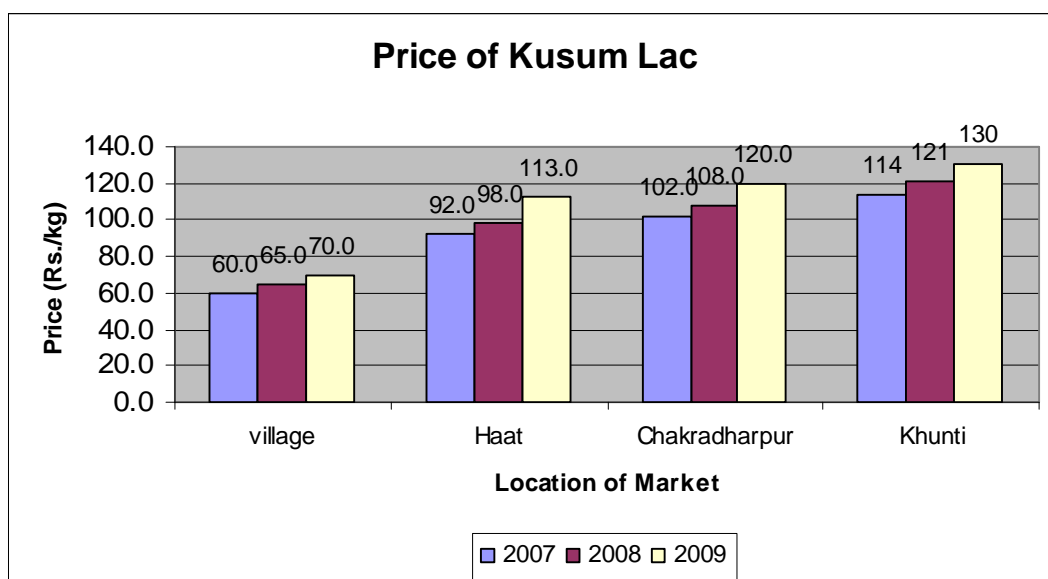
All or part of the lac secreted on a tree is left there and the larvae after swarming out settle down on the new shoots. The larvae may sometimes be carried by wind from one host tree to another or they may crawl on the interlacing branches.

Natural infection, inspite of its simplicity, is inferior to artificial infection because it tends to favour the multiplication of parasite enemies and yields brood lac of poor quality on account of its having larger amount of Phunki lac from the previous crop.

Production and Demand Pattern

The production of lac in Jharkhand forms 31% of the total National production of lac . For normal crop total production of Baisakhi lac, on an average, forms 40 – 50% of the total lac production. For Kartki crop the total production, on an average, is 25 – 30% of the total lac produced. According to a market study carried out by Suman Kumar and Dhruva Basu of SPJIMR, Mumbai, to explore the market potential for lac, the total market potential of lac is around 6408.91 Tonnes / Year. Out of this 2085 tonnes / year potential is that of Balrampur market and around 4323.91 tonnes / year is the requirement of the industry sector in India.

Price Trend

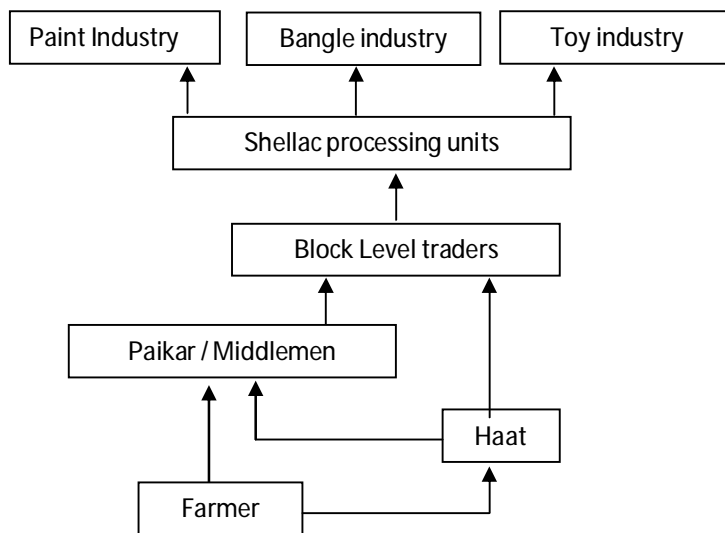


Processing

The processing at primary collector level includes collection of lac from the host trees in the form of sticks (pieces cut from branches and twigs of trees) and scrapping. Generally scrapping of lac is taken up soon after the twigs are cut though sometimes they are stored and the scrapping is done later on at leisure.

The processing done at the trader level includes spreading the scrapped lac in thin layers under shade for drying. It is occasionally raked more frequently in the beginning- to allow uniform aeration. If scrapped lac is exposed to direct action of the sun's rays, the edges of the grain are likely to melt and form into compact "blocks" from which the extraction of dye becomes very difficult. The drying of scrapped lac is sometimes undertaken at the primary collector level also. After the lac is dry it is often winnowed to remove large pieces of sticks, stones, wood and other foreign matter.

Product movement of Lac:



8. Enabling Environment

8.1. JHAMCOFED

Jharkhand State Minor Forest Produce Co-operative Development and Marketing Federation Ltd. (JHAMCOFED) is an apex Co-operative institution and will undertake procurement, processing, value addition, marketing and development of minor forest produce. A sum of Rupees 50.00 Lakhs as share capital for JHAMCOFED has been proposed for the year 2009-10.

It has been understood that convergence between JSLPS and JHAMCOFED is possible both at the apex and implementation level. Discussion revealed that there are various provisions which can be leveraged from the apex body. It needs will of an implementing agency (NGO) to mobilize tribal community and work towards a meaningful convergence. MD, JHAMCOFED also shared the possibility of providing working capital to the SHGs or other recognized VLLs through an appropriate channel. The discussions further cemented the larger impact of the proposed convergence and collaboration. In addition, once the relationship of the apex body and the community strengthens funds can be made available for creating need based infrastructure e.g. drying platforms, storage structure etc.

8.2. JHASCOLAMPF

Jharkhand State Co-operative Lac Marketing & Procurement Federation Ltd. (JHASCOLAMPF) is an apex Co-operative institution of the state are doing procurement, processing, value addition and marketing of lac. A sum of Rupees 50.00 Lakhs as share capital for JHASCOLAMPF has been proposed for the year 2009-10.

Discussions with the officers revealed that convergence with the apex body can be done. JSLPS and the apex body can work in collaboration wherein a similar arrangement can be

8.3. TRIFED

Discussions were carried out with Mr. Shailendra Kumar Raju, Assistant Manager, TRIFED, Jharkhand. The following information was available from him. There are 5 schemes implemented by TRIFED namely

- Rock Bee Honey
- Scientific Collection of Mahua (*still to be initiated in the state of Jharkhand*)
- Scientific Cultivation of Lac
- Handicrafts
- Dona Pattal

Honey (Rock Bee): Around 25 beneficiaries in East Singhbhum were selected under the scheme. The entire scheme was routed through NGOs. 5 groups of 5 individual beneficiaries were formed for effective implementation. Of the major activities training programme for the selected beneficiaries was conducted. Post training, kits (Dress, bucket, knife, and cap etc.) were provided to each group.

Scientific Collection of Lac: This scheme has been in operation in the states of Jharkhand, Bihar and West Bengal. Around 1200 beneficiaries were selected across the 3 states.

It is being implemented by NGOs. The major steps as followed in the process of implementation

1. Mobilization and Organisation
2. Database / Proposal
3. MCO done
4. Visit of IINRG (training done)
5. ToT of leaders done
6. Provide Brood Lac (10kg/beneficiary)
7. Pesticide
8. Sprayer, Nylon sheet etc.
9. Marketing is not a focus area

Dona Pattal machine: It is being implemented in Khunti district through an NGO. The focus is on SHGs who are the beneficiaries. The dona pattal pressing machines have been bought from IIT, Kharagpur (app cost: Rs. 14,500), while the stitching machines (paddle) have been bought from USHA at around Rs. 3800. TRIFED provides Rs.18,000 towards working capital and Rs. 15,000 for constructing shed. It had a target of 50 SHGs during the financial year 2008-09.

It was quite clear that because of lack of awareness of the mandate and schemes not many NGOs have been able to work with TRIFED. It however seems a very promising endeavour where the JSLPS and TRIFED work out modalities of working in collaboration at the state level and take benefit of the schemes and provisions of TRIFED. It was also clear that either reputed NGOs or any recognized VLI can become the implementing agency.

8.4. Ranger (Goelkera and Songra)

Forest Ranger, Songra shared that, 2 Manual Sal leaf Plate and cup making machines were supplied to the villages namely Kundurugutu and Chakia of Bandgaon Block.

8.5. Loan and Subsidy to NCDC Aided Self Supporting Co-operative Societies

This scheme aims at providing financial support for the livelihood promotion and self employment generation in Poultry, Agri-horticulture and other Sectors to the under Privileged class through Self Supporting Co-operative Societies under N.C.D.C. Schemes. For this, a sum of Rupees 200.00 Lakhs is proposed for the year 2009-10 under N.C.D.C. Scheme to Self Supporting Co-operative Societies as Loan and Subsidy.

8.6. BAU – Forestry

Discussions were carried out Dr. S. Quli and Dr. V. Shivaji of the Forestry Faculty of BAU on the possibilities of utilizing faculties of resource persons in the Forestry College in developing simple Training Modules both for Training of Trainers and Community. A lot of issues were discussed wherein the need for making community aware on the re-generation issues, creating awareness regarding the commercial value of the major NTFPs, identifying and training appropriate cadre drawn from among the community got cemented among other aspects. In order to make use of their faculties, official letter to Dean of the College and Vice Chancellor will have to be issued from the JSLPS. Other modalities towards having a long term association were also discussed.

8.7. Block Development Officer, Goelkera

BDO & LEO of Goelkera block shared that 12 Sal leaf Plate & Cup machines are available at Goelkera BDO office. The office of the Block Development Officer plans to start a unit so that the desired objective of providing livelihood to tribal is met.

Block office wants to establish a block level production cum marketing centre. It also has space for storing the finished products. The main bottleneck is of marketing the products. They plan that SHGs will come to block & work on Plate & Cup making & pay the electricity charges of unit. MART shared that SHGs are unaware of setting Sal leaf & Plate making units through SGSY scheme. It was also shared that 2 SHGs from Godaduba village are already involved in collection of Sal leaf viz. Jay Maa Pauri SHG, and Maa Durga SHG. Electricity facility is available in the village and there is a good possibility of convergence.

The discussion brought out that the Sal leaf Plate & Cup Machine may be transferred to the SHGs where electricity is available and space is available for stocking the products.

8.8. National Horticulture Mission

Interactions were carried out with Dr. Ravi Shankar, SMS (Horticulture), National Horticulture Mission, Jharkhand, Ranchi, Kanke Road, C/O: Krishi Bhaban. Dr. Shankar shared that the current plan and schemes of National Horticulture Mission in West Singhbhum district. The information is information depicted in the table below

Scheme	Unit cost (Rs. in lacs)	NHM subsidy limit (Rs. in lacs)	Remarks
Pack House	2.5	0.625	Back Ended Subsidy Scheme- bank Linkage
Cold Storage	200	50	Back Ended Subsidy Scheme- bank Linkage
Gramin Bazar/ Apni Mandi	15	3.75	Back Ended Subsidy Scheme- bank Linkage
Refrigerator van	24	6	Back Ended Subsidy Scheme- bank Linkage

9. Livelihood Promotion Strategy

9.1. Collective Marketing Strategy

9.1.1. Introduction

The major sectors of NTFP, Agriculture, Horticulture, Off Farm and Non Farm constitute the livelihoods profile of rural India and districts where JSLPS is working are not an aberration to the same. In the district of West Singhbhum tribal are predominantly dependent on NTFPs as a source of income and more importantly as a coping mechanism. It is also a fact that activities undertaken by primary collectors are not able to provide adequate income to them. This is particularly true for the resource poor who have low level of endowments and have limited accessibility to markets. Many among them have accepted this as destiny's choice and have either adopted or are gearing up to take alternative livelihoods opportunities.

It is clear that villagers or community in the forest fringe villages have started these activities because they possess the traditional skill base, have access to the resource base, have access to finance albeit from the moneylenders etc. In addition government policies have also become primary collector or producer friendly with the passage of time paving the path for villagers to take up more economic activities. There is sufficient literature to support that despite all these developments, socio-economic condition of villagers have not improved in tandem with the investment made to achieve the same.

Profile of an activity encompassing the past and present situation helps in understanding the core issues which are responsible for the non-remunerative nature of the activity and issues affecting the growth of the activity stem both from the input as well as the output side. Given the current situation of an activity a common issue was of lack of marketing support, which renders the primary producers helpless in this competitive world and is further compounded by their vulnerability to exploitation due to various factors such as small scale of operation, lack of capital, unavailability of facilities (storage), lack of information on marketing etc.

9.1.2. The current status

The study reveals that the selling mechanism of almost all the products is predominantly individual oriented, which has helped traders (small as well as big) to gain in a big way. It is not that primary producers are not getting competitive prices at the local level – the issue is of getting best prices. A closer look the value chain of any of produce any of these traders profile reveals that they operate on similar margin as a primary producer and he gains simply because of his scale of operation. A rupee margin per kg is around Rs. 1500 (say) for the primary collector but becomes 15,000 for the small trader who purchases from 10 such primary collector and further becomes Rs. 1,50,000 for the big trader to whom such 10 small trader sell. Hence, the equation magnifies with the increase in the trade volume and though the margin sharing is equitable the absolute amount is what holds key at the trader level for they get the critical mass to deal in essential inputs required by primary collectors.

It is a fact that the trader lobby enjoys tremendous networking and is surviving on the fact that majorities of producers sell their product when they are in dire needs of funds, which helps them dictate terms to the producer. In addition lack

of competition and information at the primary producer / collector level provides them with another tool to get the produce at a relatively lesser price (commonly known as distress sales).

It is not that farmers or collectors have not tried their hand in adopting alternative means to get better prices but chronic dependence on trader and collapse of the means after a period of time leads them to remain in the vicious circle. Moreover, sporadic cases where farmers or collectors joined hands got their fingers burnt both on account of internal and external reasons. External reasons emanate from the traders side but faulty leadership, misappropriation of funds add to the internal problem areas which not only shatter the confidence levels of community but also make them wary to undertake any other means of selling their produce.

It is worthwhile to note that majority of the forest produce are sold in the raw form and are traded in the same form (without any value addition except for certain trivial functions) by the succeeding 2 levels of traders. Quite understandably these functions even though the primary collector is aware of can not be undertaken since need of money forces them to sell the produce.

9.1.3. Alternate Marketing Strategy

It is with this backdrop that proper collective action at the primary producer and collector level holds promise of ensuring better prices by reducing dependence (hence exploitation) and ensures development of a system, which would sustain the initiative. Apart from establishing a market linkage developing a sustainable system, which would provide continuous benefits to the producers, is the real challenge. A one-time linkage creates more problems than benefits at the community level and, if not panacea, a healthy collective marketing system, given the current scenario, offers maximum benefits. Many best practices across the subcontinent suggest a process intervention is required to develop a win-win system.

One of the salient characteristics of NTFP sector is its seasonality and it is for the community to judiciously utilize facilities to carve maximum benefits from it. The NTFP calendar here is restricted to 2-3 major NTFPs which is non remunerative in nature. It is facilitator who will have to play the role of a positive catalyst to share, convince and demonstrate the impact of an intervention meant for increasing their income. Collective action is not merely a group of like minded persons having a common interest; it is the manifestation of the collective interest of the people whose success would be crucial in spreading the message.

Under JSLPS, collective action at the community level can be initiated in majority of produce/products, initially on a pilot basis. There has been one off instance at the community level wherein the groups had aggregated produce and sold at higher prices, it could not be sustained because of lack of handholding by the facilitating agency and dedicated leadership at the community level. It would be also be important to look into developing VSS Associate of resource persons from among the community who can provide support in developing remunerative market linkages.

Once such a system develops, it would not remain restricted to one activity and a host of other activities would get into the system. Easier said than done! This required lot of efforts and immaculate understanding at the facilitators' level to effectively plan and see that cycle of operation gets completed.

The primary collector sells his minimum marketed surplus to the local trader for getting immediate cash. This in fact is the root of all exploitations ranging from price-cutting, faulty weighing etc. In the present context to check his sporadic

individual selling and to accrue better prices, collective action is imperative and the only way out to extend reach to remunerative markets, which require minimum scale of volume. Without collective action plight of primary collector would increase since the pressure on forest and competition is bound to increase.

9.1.4. Challenges

- 1) Awareness generation among farmers and collectors about the benefits of collective action
- 2) Leadership creation to carry marketing function
- 3) Transparent system in place
- 4) Immediate financial transaction with the farmers
- 5) Market information
- 6) Market linkage
- 7) Handling competition and market fluctuation
- 8) Ability to handle pressure of traders who otherwise will be at loss

Collective marketing approach can be initiated on a pilot basis in selected villages. A well defined operational plan to undertake collective marketing is shared below.

To give boost to this initiative MART will workout a plan to provide critical market information to primary stakeholders on a regular basis for all markets that directly or indirectly cater the needs of the project area.

9.1.5. Step by Step plan for initiating Collective Marketing

Step	Activities
1 A	Selection of villages, estimating resource availability
B	Selection of villages for intervention
C	Scale assessment at village level
D	Understanding market dynamics
2	Sharing the concept with NGO
3 A	Sharing and orientation of the concept and fund flow to SHGs
4	Village level awareness meeting with the SHGs, NGO Staff
5 A	Identification of potential/interested SHG
B	Selection of leaders from selected groups
C	Proper training to SHG members and leaders
D	Exposure/training on technical aspects (value addition, storage, record keeping)
E	Obtaining license from GP for trading, wherever applicable
6 A	Finalizing procurement modalities
B	Fixation of minimum rate for buying within groups and from outside
C	Exposure of SHG Leaders for quality control
D	Ensuring procurement of committed quantity by the participating groups
7 A	Preparation of business plans and submission to JSLPS for disbursal
B	Disbursement of funds
8	Developing plan for construction of drying platform and other equipments*
9 A	Market watch and community leaders' negotiation with traders and other market players

B	Liaison and bargaining with traders by the SHGs
C	Listing of collection of produce and record keeping
D	Finalizing selling modalities
E	Making arrangements for gunny bags, packaging, transportation and hamali (if required)
F	Selling price fixation including mode of payment
G	Finalizing date of lifting of produce, developing lifting mechanism
10	Account keeping including miscellaneous expenses - transparency meeting
11	Selling to traders, organized players (corporate, social entrepreneurs etc.)
12	Receiving and disbursement of payment to SHG
13	Disbursement of payment to SHG member, calculation of profit
14	Ensuring timely repayment of loan
15	Planning for other produce

9.2. Business Plan for Collective Marketing of NTFPs

9.2.1. Business Plan for Collective Marketing of Mahua Flower

- Study Villages where Collective Marketing of Mahua Flower can be initiated:

Collective Marketing intervention can be initiated in the villages of Godaduba, Sarbil, Buruhundur, Rengalbeda, Kentora, Jambirakudur, Khuntpai, Baikochha, Amjharan, Bara, Tamsai in Goelkera and Kundurugutu, Chakia, Kareda, Dudukundi, Chirkubera, Akir, Aridih, Dumburu, Hesadih, Kandeyong, Paraya in Bandgaon.

- Raw Material:

Mahua flower is available in plenty in the aforesaid villages and SHG apart from their own collection can purchase from villagers to generate a tradable scale.

- Skill Development needs (skill and business knowledge):

SHGs need to be oriented on the best practices of mahua flower collection. Along with this they need to be capacitated on the business and enterprise related issues to be able to manage the business.

- Linkages with service providers (by government and private)

Linkages with service providers on various areas would be required. Following table captures the interventions areas and possible BDS providers providing support to the SHGs.

Intervention Areas	Support Agencies/Schemes
Mobilization	Ø NGO (ICFG)
Aggregation	Ø SHG / Mahila Samiti
Infrastructure	Ø JSLPS Ø District Collector Ø DRDA Ø Private Players (Khadan Owners)
Capacity Building (Business and Enterprise Skill development, Skill Development)	Ø BAU (Forestry) Ø MART Ø Traders
Marketing Support	Ø JHACOMFED Ø Developing linkage with Town level Trader at Regional Hubs within Jharkhand (Goelkera, Chakradharpur, Bandgaon, Ranchi)

While various qualities of mahua flower are being traded, traders generally want to purchase fully dried flower which helps them in storing the produce without doing any value addition at their level. The *chalu* variety of produce which is semi dried quality is also in demand since it allows traders to cater to the demand of client particularly local alcohol

bhatis and traders located in other towns and beyond the state. While traders generally lift the produce from the villages wherever a truck load is available, they can send the vehicle, packing material (gunny bags) and *hamali* to lift the produce from the villages. Negotiation with the traders should be done pre-lifting and usually payment is settled in 2 installments i.e. one payment when the produce reaches traders point and second after 7-10 days. These conditions vary from trader to trader and should be negotiated before finalizing linkages.

- Working economics of Mahua Flower trading

Assumptions

1. SHG collects the flower
2. Own collection of the group will be around 40 quintals and is expected to procure another 60 quintals from the nearby villages
3. The total amount available for trading is 100 quintals
4. Mahua flower will be stored for a month of 1 month and rent is calculated @ Rs. 200 per month
5. Average procurement price is Rs. 900 per quintal
6. Transportation cost calculated @ Rs. 3000
7. Average selling price is Rs. 1200/quintal @ town (Ranchi) market
8. 10% loss due to drying
9. Interest is charged 12% per annum

Variable Cost analysis (For 100 quintals mahua flower for a period of 30 days)

S. N.	Particulars	Quantity	Unit cost in Rs./quantity	Amount in Rs.
1.	Procurement of mahua flower	100 q	900	90000
2.	Transportation cost			3000
3.	Rent for storage (3 months)			200
4.	Interest @ 12% for 1 month (Rs.93200)			932
Total				94132

Selling and Profit analysis

S. N.	Particulars	Quantity (in q)	Unit cost in Rs./q	Amount in Rs.
1.	Total Sales	90	1200	108000
2.	Total expenditure			94132
3.	Profit			13868
4.	Rol			14.7%

- Operational Arrangement

Ø Each SHG/Mahila Samiti aggregates produce

Ø One SHG takes the responsibility of marketing or a Marketing Cadre (to be created) to facilitate marketing
MART, Noida

- Ø Initially intense handholding would be required at SHG level to create a robust supply chain following which SHG can directly sell to big traders located at the town level
- Ø Over a period of time say 2-3 years later, from these SHGs, one group can be capacitated on marketing dynamics. SHGs can then market their produce through this marketing group
 - Risks factors and mitigating measures
 - Cohesive group formation and leadership creation is a prerequisite towards starting the intervention and has a critical bearing towards the success of the intervention. Without ensuring the same collective marketing interventions might not bring envisaged impact.
 - Scale of operation is critical in the intervention. Interventions might not be able to generate the impact if flowering of Mahua Flowers suffer in a particular season.
 - It's a fact that under the existing selling system villagers sell the produce individually which, revolves around traders. Introduction of an alternative system would take its time to stabilize. Capacity Building of farmers by arranging skill and business training, exposure to best practices etc. is essential to bring long term sustainability of the intervention.
 - Timely accrual of working capital (say as revolving fund) and timely release of funds towards infrastructure linked to the activity are critical to the success of the intervention. A system of release of funds is currently via VSS to SHG, alternatively bank linkages will have to be created to complement the existing system. Delay in the ensuring the same would hamper the impact from the intervention.
 - Interventions might fall short of expectations without the able support of DC and BC, JSLPS to discuss and crease out project level issues along with field level support from NGO throughout the intervention period.
 - Market fluctuations might get beyond anybody's control. Due to internal and external shocks interventions might be unable to show the due impact. In addition, existing market players have clout and would like to upset the collective action initiative.
 - Policy changes have the potential to render the intervention performing below expectation

9.2.2. Business Plan for Collective Marketing of Mahua Seed

- Villages where collective marketing can be started:

Collective Marketing intervention can be initiated in the villages of Godaduba, Sarbil, Buruhundur, Rengalbeda, Kentora, Jambirakudur, Khuntpai, Baikochha, Amjharan, Bara, Tamsai in Goelkera and Kundurugutu, Chakia, Kareda, Dudukundi, Chirkubera, Akir, Aridih, Dumburu, Hesadih, Kandeyong, Paraya in Bandgaon.

- Raw Material:

The abovementioned villages have ample quantity of mahua seeds and hence seed procurement can be done by SHGs.

- Skill Development needs (skill and business knowledge):

SHGs need to be oriented on the best practices of de-coating seeds. SHGs' skill in running the oil expelling unit needs to be built both in terms of technical and managerial. Along with this they need to be capacitated on the business and enterprise related issues to be able to manage the business.

- Linkages with service providers (by government and private)

A range of functions will have to be performed by the managing entity (SHG) and it would have to be supported to run the enterprise.

Intervention Areas	Support Agencies/Schemes
Mobilization	Ø NGO
Aggregation	Ø SHG / Mahila Samiti
Infrastructure	Ø JSLPS Ø Khadan Owners
Processing / Value Addition	Ø Panigrahi Engineering Works, Udala
Capacity Building (Processing)	Ø Panigrahi Engineering Works, Udala
Marketing Support	Ø Developing linkage with Town level Trader at Regional Hubs within Jharkhand (Bisra, Ranchi, Chakradharpur etc.)

- Economics of Collective Marketing of Mahua Seed (For 50 quintals mahua seeds for a period of 30 days)

Projection of Working economics of Mahua seed trading

Assumptions
1. SHG would collect 50 quintals
2. Group members contribute around 10 quintals procure another 40 quintals from own and near by villages
3. The total amount available for trading is 50 quintals
4. Average procurement price is Rs. 700 per quintal

5. Mahua seeds will be stored at the rent of Rs. 200 per month in the village
6. After 3 months of storage mahua seed can be sold to the block or haat traders at Rs. 1000 per quintal
7. Miscellaneous is charged Rs.1000
8. Transportation cost is charged Rs. 2000
9. Interest is charged Rs.12% per annum
10. Wastage is charged 2%

Variable Cost analysis

S. N.	Particulars	Quantity	Unit cost in Rs./quantity	Amount in Rs.
1.	Procurement of mahua seed	50 q	700	35000
2.	Transportation cost			2000
4.	Storage	1 month	200	200
5.	Miscellaneous			1000
5.	Interest @ 12% for 1 month (Rs.38200)			382
Total				38582

Selling and Profit analysis

S. N.	Particulars	Quantity (in q)	Unit cost in Rs./q	Amount in Rs.
1.	Total Sales	49	1000	49000
2.	Total expenditure			38582
3.	Profit			10418
4.	Rol			27%

- Operational Arrangement

- Ø SHGs aggregate the produce and sell it collectively to higher order traders
- Ø Over a period of time say 2-3 year a marketing group or Marketing Cadre can be created to provide handholding support to SHGs in marketing of the produce

- Risk factors and mitigating measures

- Production failure: In case of decreased production desired results may not happen. Such enterprise risks need to be countered by sensitizing SHGs who would then identify with the situation.
- Price fluctuation: Market response is critical, which is beyond control. Any untoward price fluctuation resulting from glut or other challenges has the potential to derail the intervention. Such risks are inevitable and one of the ways to overcome this is to have network with a no. of traders and remain abreast of the market information and trend.
- Inter and intra group conflict: Conflict between SHG members may not result in desired results. In addition inter SHG conflict which may arise from financial dealing can put brakes to the intervention. It is always good to sensitize SHGs on the importance of sustenance of business which is only possible when there exists good business rapport among them

9.2.3. Business Plan for Collective Marketing of Tamarind

- Villages where collective marketing can be started:

Buruhundur, Sarbil, Rengalbeda, Khuntpai, Bara, Tamsai in Goelkera and Kundurugutu, Chakia, Kareda, Dudukundi, Chirkubera, Dumburu, Hesadih, Kandeyong in Bandgaon

- Raw Material:

The abovementioned villages have ample quantity of tamarind and hence procurement of the produce can be done by SHGs.

- Technology

No such technology is required for tamarind deseeding, it can be done manually. Machine for deseeding is available at Jeypore, Koraput. For proper functioning of the machine, tamarind should be properly dried and of equal size. If quality is not maintained, tamarind will be smashed in machine. So initially it is suggested for deseeding should be done manually.

- Skill Development needs (skill and business knowledge):

It is a fact that the skill development of target community, facilitating agencies (NGO) is important to run a business around Tamarind, At community level while building technical skill particularly better collection, drying, storage practices and market dynamics would be critical building their skills on starting and managing business would also be equally important. It is also critical to build capacity of NGO as major facilitating and implementation support agencies on mobilizing target community, creating an enabling environment and providing need based support to start and sustain community led enterprise around tamarind.

- Linkages with service providers (by government and private)

- JSLPS, DRDA, BRGF for infrastructure

Economics of Collective Marketing of Raw Tamarind:

Assumptions:

- i. The groups will procure tamarind from own group members, own village and surrounding villages.
- ii. The volume for trade is 100 quintals.
- iii. SHGs will procure dried tamarind from the community.
- iv. The procurement price of tamarind is calculated at Rs.450 per quintal.
- v. The group will store the tamarind at their own cost.
- vi. Average selling price of tamarind is calculated at Rs.700 per quintal.
- vii. Standard packing is 50 kg including weight of gunny bag (Weight of gunny bag is 650gm and weight of tamarind is 49.35 Kg). The gunny bag charge is calculated at Rs.10 per bag.
- viii. Transportation cost from collection point to storing place is calculated lump sump Rs.1500.00.

- ix. Labor cost towards weighing, grading, packing, loading and unloading is calculated at Rs.8 per quintal.
- x. Miscellaneous expenses is calculated (weight loss, transit loss etc) at 2%
- xi. Interest is calculated 12% per annum for a period of 1 month

Variable Cost Analysis

S.N.	Particulars	Units(q)	Cost/Unit	Total Cost(Rs.)
1	Procurement of Tamarind	100 quintal	450/quintal	45000
2	Gunny bag (Packaging) – 50 kg a bag	200	10	2000
3	Transportation cost (Lumpsum)			1500
4	Loading and unloading cost	100 quintal	Rs. 8/quintal	800
5	Interest@12% per annum (49,300)			493
6	Total expenditure			49793

Sale, Profit and RoI Analysis:

S.N.	Particulars	Units (q)	Cost/Unit	Total Cost(Rs.)
1	Sale	98	700	68600
2	Expenditure			49793
3	Profit			18807
4	RoI			37.7%

Risk factors and mitigating measures:

Major Risk Factors	Possible Risk Mitigating Mechanism
Fluctuation in market price	Systematic market information and access to multiple traders might reduce the risk
Rain increases the moisture content of the product thereby reducing the price of the produce	Tamarind should properly dried and stored
System should run for at least 2 production cycles to learn from the experience and set up a realistic system of intervention	Strategic support and follow up mechanism needs to be ensured for at least 2 cycles
Lack of capacity at SHG level and internal conflict have the potential to derail the project	Regular conduct of CB programme through a CB calendar may reduce the risk
Lack of economies of scale and untimely release of funds may result in less than desired results	Community mobilization and fulfilling timely credit needs would be important.
Group conflict has the potential to render the interventions ineffective	Mature SHGs demonstrating strong social mobilization needs to be prioritized for undertaking intervention. Simultaneously continuous efforts to bring clarity on interventions need to be carried out.

Operational Arrangement:

- For collective marketing of tamarind 2 SHGs can take the responsibility for procuring tamarind from own village and nearby villages.
- For deseeding of tamarind, SHG can deseed the tamarind manually at SHG level
- Initial Handholding support from BC, JSLPS and NGO is very essential to market the SHG product successfully like organizing capacity building programme, giving technical input in value addition and facilitating marketing linkage.

9.2.4. Business Plan for Collective Marketing of Lac

Reasons for selecting Activity:

- Practiced by families since generations.
- Mostly labour intensive activity with very little other input costs.
- Product is in high demand and Balarampur, Ramgarh and Ranchi are potential market places.
- Elementary value addition increases profits.
- Lac is a product which always sells and has demand throughout the year.
- The study area has the potential of producing large quantities of lac and can be transformed into a seed producing zone.
- Indian Institute of Natural Resins and Gums at Namkom Ranchi is providing continuous technical support to Lac cultivators.
- JHASCOLAMPF an apex body responsible for procurement and marketing of lac is active in the state.
- Other crops like Arhar, Semiya Lata etc are also being developed as host plants for Lac cultivation.

Input dynamics

Sl	Particulars	Unit	Unit cost (Rs/unit)	Total cost (Rs)
1	Seed lac @ Rs 300 per kg	Kg	300	3000
2	Labour charge of pruning, seeding and harvesting 50 trees (200 man-days)	Man-days	80	16000
3	Medicine (Babistine)			1000
4	Transport to Markets (Balarampur)			2000
	Total			22000

Output and Profit Analysis:

The yield rate (assumed per season) and market rate (assumed) and according projections of income are displayed in the table below.

S. N.	Host Tree	Season	Units	Avg. Yield (kg/tree)	Total yield (kg)	Rate (Rs/kg)	Income (Rs)
1.	Kusum	Aghani	10	50	500	100	50000

2.	Kusum	Jethwa	10	40	400	100	40000
3.	Ber	Baisakhi	20	10	200	70	14000
4.	Ber	Kartki	20	7	140	70	9800
5.	Palash	Baisaki	20	5	100	70	7000
6.	Palash	Kartki	20	4	80	70	5600
Total							126400

The profitability of Lac cultivation is as follows

Particulars	Amount (Rs)
Income from 50 trees	126400
Expenses incurred	22000
Net profits in 1 year	104400

Challenges and risks

- Lac cultivation requires patience and intensive hard work.
- Timing of seeding and harvesting is very important and a lot of activity needs completion within short time.
- Productivity drastically falls in adverse weather conditions.
- Marketing is done through middlemen who offer less prices.
- Production of Lac has been on the decline in Jharkhand since the last few years.
- There is dearth of seed lac during season and sometimes lac is procured from Chhattisgarh at very high rates.

Areas of Intervention

S. N.	Particulars	Areas of Intervention
1	Capacity Building	Training needs to be provided on technical issues by <ul style="list-style-type: none"> • Technical issues by Indian Institute of Natural Resins and Gums • JHASCOLAMPF • Other Resource NGOs • Training on marketing by MART, Private Players
2	Technological in-puts	<ul style="list-style-type: none"> • Major value addition by primary producer: proper de-shelling, sorting and grading • Specialized Lac de-shelling machines are available at low cost for the same • Creation of seed producing zones with technical help of IINRG
3	Marketing	<ul style="list-style-type: none"> • Market related standard packing, sorting, grading etc needs to be done to suit requirements of higher order markets. • Linkages with big traders in larger markets in Balarampur, Ranchi, Murhu, Khunti etc for lifting of produce at better prices. • Market linkages with JHASCOLAMPF through LAMPS or forming Lac Growers Society (NGO can take lead in forming such societies) • Promotion of collective marketing for achieving sufficient scale to access higher order markets, as well as reducing transport and opportunity costs.
4	Institution building	<ul style="list-style-type: none"> • Creation of cultivator level institutions to facilitate marketing (clubs, cooperatives, producer companies etc.) • Creation of a cadre of local persons who can spear head the initiative.

9.3. Strategy for starting Micro Projects for processing based IGA

The study villages in the 2 blocks are very backward and commercially not so vibrant. However, a number of initiatives can be started to encourage value addition and processing activities. However, these enterprise options being very new to the areas would require a very strong handholding and facilitating strategy part from other challenges as described below

1. Group dynamics and leaderships
 - a. Social mobilization and group dynamics
 - b. Lack of access to formal credit
 - c. No strong secondary institution available to initiate the process
2. Business and marketing challenges
 - a. Lack of marketing avenues in the immediate area
 - b. Lack of information and access to better sources of raw material.
 - c. Lack of skill up-gradation and adoption of technology.
 - d. Lack of business and enterprising knowledge.
3. Business management
 - a. Lack knowledge in maintaining records and accounts.
 - b. No clear profit sharing mechanism.

Initiating Micro Projects

Each value addition initiative can be conceptualized as a micro project which should address above challenges and follow the steps below

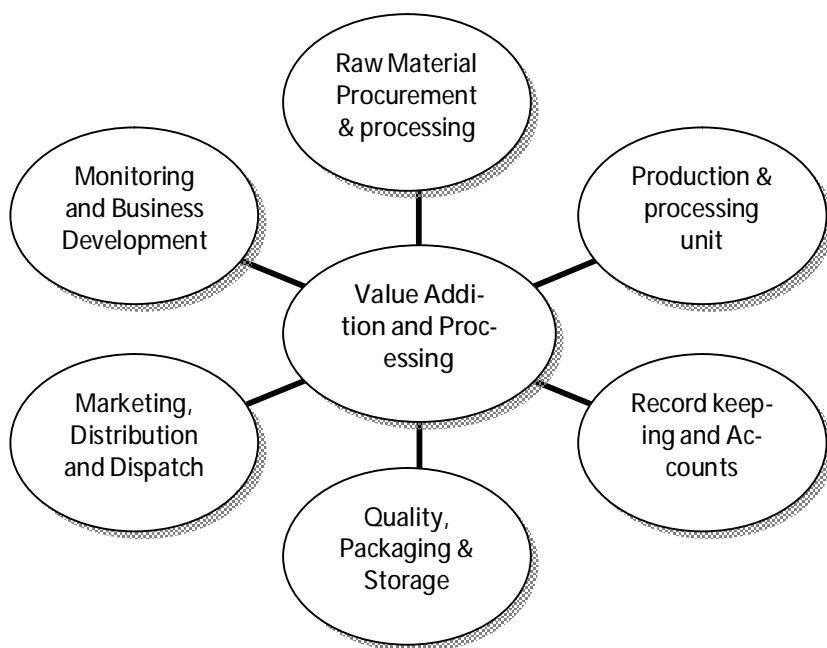
Step	Activities
Phase I – Preparedness at the community level (3 months)	
Cluster selection	<ul style="list-style-type: none"> • Select the right cluster for initiating any value addition activity. • Identify Target village and the community
Social Mobilization and institution building	<ul style="list-style-type: none"> • Sensitization of primary collectors on potential sector, particularly the product and its impact on their livelihood need. • Identify the groups to start the unit. Initially only a limited number of groups should be encouraged to start the activity. Based on the results the unit should add more members • Participatory discussion to arrive at consensus on roles and responsibilities of members and leaders • If needed a secondary institution to be formed
Preparation of business plan	<ul style="list-style-type: none"> • A proper business plan for setting up the units to be prepared in consultation with the community
Capacity building	<ul style="list-style-type: none"> • Leadership training for management of the center – functions and responsibility • Business and marketing skill training to members • Technical training on value addition related activities

Phase II - Launching of the unit (6 months)	
Backward linkages	<ul style="list-style-type: none"> • Procurement of machine and equipment Installation of business unit • Bulk raw material procurement to lower cost of inputs and low transaction costs • Ensured quality of inputs • Common infrastructure development and fixed assets • Systematized training management • Linkage for finance
Production	<ul style="list-style-type: none"> • Smooth Implementation of best practices • Division of labor, specialization and continuous skill improvement • Value addition and quality control in production. • Larger volumes, higher productivity, low costs • Better record keeping and financial management • MIS development and multidimensional intervention opportunity
Marketing	<ul style="list-style-type: none"> • Identification of suitable and multiple markets • Bargaining, Marketing of produce and better price • Simple post production value additions ensuring better price • Rotation of funds and profit sharing • System building, collaborations and employment
Legal aspects	<ul style="list-style-type: none"> • Registration of the unit • Comply to legal implications for excise, sales and VAT
Phase III – Up-scaling (9 months)	
Monitoring and evaluation	<ul style="list-style-type: none"> • A regular follow up and monitoring should be taken up by the project • Each micro project should be evaluated from time to time; internal every quarter and externally once in a year
Strengthening Institution	<ul style="list-style-type: none"> • Creation of secondary institution to upscale and sustain the initiative • Set up the functional set up • CB inputs to secondary institutions • Introduce new products • Diversifies activities to increase income • Provide handholding support to ensure above

Strategic points

The following are strategic points that should be considered for setting up the micro project.

- Mature SHGs should be sensitized on the process
- Prospective SHGs should also be linked with the concept from the beginning
- Focus on collaboration with local and distant markets
- Linkages with organized buyers
- Building awareness regarding the dynamics of the economic activity
- Involving local youth in supporting the unit for marketing of the product
- Initial handholding at the SHG level is necessary for scripting success
- Arranging basic, advanced and refresher training at regular intervals for up-gradation of skills and being contemporary in market
- Developing linkages with Business Development Services (BDS) providers
- Secondary institutions should be promoted after SHGs are able to progress satisfactorily



Facilitation of support through resource agencies

As most of the value additional initiatives would be technical and market oriented in nature project may hire services of resource agencies which would strengthen the process and produce desired impact. The following matrix suggests a road for hiring resource agencies for various purposes

Support areas	Services required
Facilitating micro projects	<ul style="list-style-type: none"> • Social mobilization and group building • Training on business and marketing skills • Backward and forward linkage • Legal compliances • Monitoring and evaluation • Formation of producer company or federations
Technical skill building	<ul style="list-style-type: none"> • Training on product manufacturing • Use of technology and machines • Packaging and labeling
Marketing	<ul style="list-style-type: none"> • Establish market linkage • Create and promote brand • Developing marketing strategies • Handholding implementing marketing strategy

9.3.1. Business Plan: Low cost hand expeller and trading of oilcakes

- Villages where business can be started: Low cost hand expeller can be installed in the certain villages / clusters of the blocks. A tentative list of villages are annexed which will be finalized in discussion with JSLPS and ICFG (NGO).
- Raw Material: Mahua seeds are available in plenty in the villages identified in the Profile of NTFP section and raw material can be sourced from the near by villages of the Divisions by the SHG managing the unit.
- Technology: Low cost manual expeller can be bought from Panigrahi Engineering Works, located in the district of Mayurbhanj. The machine costs Rs. 5200.
- Skill Development needs (skill and business knowledge): SHG members can learn the skill to operate the machine by the machine provider. However, business management and marketing skills will have to be inculcated in the SHGs through appropriate capacity building measure which include orienting them on business and enterprise dynamics and exposing them to such units in the district or near by districts. MART has installed such machines in Western Orissa and KBK region where SHG can see the functional aspects of it.
- Apart from the seed trading many traders at the town level have electric operated oil expellers where in they expel the oil (which is generally taken back by the primary collector) and trade the oilcakes (which the collectors leave it with the expelling unit) to the solvent plants. Some units charge a service while some do not but all of them retain the oil cakes. Low cost manual oil expellers are also in operation at the village level wherein through a specific procedure expels oil from the crushed and steamed seeds.
- Economics of the unit: Assumptions
 - Low cost manual oil expeller is installed
 - Cost of the machine (with wooden frame) is Rs. 5200
 - Total transportation & installation cost Rs. 1000
 - Unit owner can put a service charge of Re. 0.25 p per kg and retain the oil cake for further sales
 - Calculation is based on the assumption that 35 quintals (407 make truck) oilcakes would be sold in the season
 - Unit will get 1.2 kg of oil and 2.8 kg of oil cake from 4 kg of seed i.e. the unit will have to expel 50q of seeds to get 35 q of oil cakes
 - Unit expels 1.5 quintals of seed per day and hence to expel 5p quintals of seeds would require around 34 days. It is assumed that depending on the production of mahua seeds the unit may function for 45-50 days (season)
 - The machine can run through out the day depending on the quantity of seeds available at the unit
 - Cake will be sold to town level trader or solvent plant @ Rs. 3 per kg
 - 2 labour to run the machine would be required, paid salary @ Rs. 1500 for the season

Income and Expenditure analysis

Expenditure	Machine with Wooden Frame
Cost of machine	5200
Transport and installation	1000
Maintenance during the season	500
Labour cost	3000
Sub Total	9700

Revenue	Amount in Rs.
Revenue from service charge on expelling 50 q of seeds	1250
Sales of cake	10500
Total	11750
Profits	2500
ROI (machine with wooden frame)	23.5%

- Operational Arrangement
 - One SHG sets up a low cost hand expeller and earns from both charging service fees for expelling seed and selling oil cakes
 - SHG runs the unit by employing 2 labour (alternatively 2 SHG members can take the training and run the machine). These labour are paid on a season basis.

- Risk factors and mitigating measures
 - Production failure: In case of decreased production desired results may not happen. Such enterprise risks need to be countered by sensitizing SHGs who would then identify with the situation.
 - Price fluctuation: Market response is critical, which is beyond control. Any untoward price fluctuation resulting from glut or other challenges has the potential to derail the intervention. Such risks are inevitable and one of the ways to overcome this is to have network with a no. of traders and remain abreast of the market information and trend.
 - Inter and intra group conflict: Conflict between SHG members may not result in desired results. In addition inter SHG conflict which may arise from financial dealing can put brakes to the intervention. It is always good to sensitize SHGs on the importance of sustenance of business which is only possible when there is good business rapport among them.

9.3.2. Business Plan Sal Leaf Plate and Cup making

- **Background:** This business plan is for manufacturing Sal leaf plates from stitched sal leaves in West Singhbhum District of Jharkhand. It is assumed that the installed unit is having electricity connectivity.
- **Scale:** The scale of this plan is one unit with one cup plate making machine run by one SHG. Accordingly, the plan can also be suitable for more SHGs who can form a cluster to market the finished products.
- **Reasons for selection of Activity:**
 - Abundance of raw material in the area in the form of Sal forests.
 - Machines available locally at Karanjia and Betnoti
 - Huge demand of Sal leaf plates and cups all around throughout the year
 - Eco friendly and hygienic product with no problems in disposal.

- **Raw material and machinery:**

Leaf plate making machines are available on large scale at Betnoti, Mayurbhanj, Karanjia (Radha Govinda Store, Main road) market, Rajrangpur and Baripada in Orissa. While cost of Leaf plate making machine with 1 die is Rs. 5500/- it is Rs. 12,500/- for machine with 6- die complete set.

- **Process:**

The leaf cup machine is a simple pedal operated machine, manually operated with minimum power consumption. It requires 300 watts of electric power. It can also work without power by kerosene oil blow lamp. The leaves are washed and dried to retain their pliability and kept in a polythene bag to avoid drying before use. The leaves are placed on the lower die platter, the pedal is pressed down and released after a few seconds. All the operation like folding, trimming, pressing into shape and drying are done in a single operation by pressing the pedal lever. The leaf cup, subjected to heating to 150 degree C for 10 seconds also gets sterilized.

- **Assumptions:**

- A bundle of 100 stitched leaves (kathi stitched) costs Rs. 10 when incurred from local sources.
- Cost of pasting plastic is Rs 80/kg and 1 kg of plastic can paste 8000 stitched leaves i.e. 4000 plates.
- Cost of packing plastic is Rs 40/kg and 1 kg of plastic can pack 5000 plates.
- Electricity and water charges for manufacturing 50 plates is assumed to be Re. 1/-
- Labour charges for manufacturing 5000 plates is Rs 150/-
- Cost of transporting and marketing in local haats and markets is Rs 50 for 5000 plates.
- Miscellaneous costs like stationery, wastage etc has been assumed to be Rs 30 for 5000 plates.
- Production capacity per hour per machine is 500 plates per hour and the machine is functional for 5 hours everyday.
- The unit is functional for 20 days a month producing 50,000 plates per month.
- Selling price of packed bundles of 100 plates is Rs 60 each.
- Depreciation of fixed costs and machinery is 10% per annum.

The fixed costs for establishing the unit is as follows:

Inputs	Unit	Unit Cost (Rs)	Total cost (Rs)
Leaf plate making machine	Machine	5500	5500
Set of 6 dies			7000
Service Equipments			500
Electrification			300
Water storage drums (2)	Storage drum	350	700
Misc Expenses			500
Total- fixed cost			14500

Input analysis:

Working Capital requirement for production of 50 leaf plates are as follows:

Inputs/ 50 leaf plates	Cost (Rs)
Sal leaf (stitched) - 100 pieces	10
Plastic sheets used for pasting two leaves by heating@ Rs. 80/- per kg	1.0
Packer plastics (Outside packing/ coverage)	0.40
Electricity & water charges	1.00
Service charge (operating cost/ 100 nos.)	1.50
Admin & marketing costs	0.50
Misc. expenses	0.30
Total-Input production cost	14.00

Output and profit analysis for 1 machine unit:

The following table showcases the entire output and profit analysis of the unit.

Particulars	Amount (Rs)
Manufacturing Cost of 50 plates	14
Selling price of 50 plates in local haat	30
Gross profit per 50 plates	16
Gross profit per 50,000 plates (1 month's production)	16,000
Gross annual profit from the unit	1,92,000
Depreciation of machinery and fixed costs per annum	1450
Net profit per annum	1,90,550

- Break Even Period = Fixed costs / (Income per month – recurring costs per month)
 $14500 / (30000 - 14000) = 0.9$ months i.e. within the first month itself, the entire investment will be recovered from the activity.
 Break even point for number of plates: Fixed costs / (Sale price per plate – recurring costs per plate) $14500 / (0.60 - 0.28) = 45313$ i.e. after selling at least 45313 plates the activity will recover all costs.

- **Marketing:** The plates are largely demanded by hawkers, fast food restaurants, star-hotels, mass feeding and for prasad in religious institutions. The main markets for sal leaf plate and cups are in town markets of Ranchi and Jamshedpur and national markets of Kolkata, Chennai, AP, etc.
- **Risks**
 - The profits are based on regular production and errant electric supply may hamper productivity.
 - The unit requires proper management of activity with clear cut roles and responsibilities of SHG members.
 - Cheap substitutes like plastic, paper, thermocol, plates have come up which are providing stiff competition.

Keys Steps for intervention

Pre-Production and Production:

- Sensitize community on profitability of Sal leaf plates.
- Technical training to improve quality and efficiency.
- Introduction of Siali leaf plate making which fetches higher rates.

Product Management

- Sensitize community on roles and responsibilities in SHG for conducting activity.
- Appropriate market led storing and packing techniques needs to be ensured

Marketing

- Prepare community through SHGs and CIGs to take up collective marketing.
- Prepare cadres for marketing community product
- Integrate market aspect in the micro plan to empower community on market.
- Establish a community owned, controlled and managed market information system and network.

Institution

- Build SHGs, CIGs and producer groups to take up value addition and marketing
- Prepare appropriate CB plans for these institutions.

9.4. Strategy of 'Promoting Business and Marketing Cadre'

Background

For almost all the villages across the subcontinent, traders are the major selling points for villagers. These traders earn profits from price differential existing in the different markets in the short run and earn windfall profits by hoarding the stock and selling the produce in the long run. Based on the capacity of trader the time span can run into years wherein he waits for a relatively higher price e.g. tamarind stocks of last 3-4 years (purchased at around Rs. 450-500 per quintal) were sold now since price has shot to around Rs. 4000 per quintal thanks to failed crop in the major tamarind producing belts. At the trader level their experience, networking and access to produce and market information (just a phone call away!) are the biggest assets which keep them going.

Petty trader apart from the town traders are the critical selling points for the villagers. It is gathered that the entire village economy (be it minor forest produce or agri and allied products) is controlled by few such traders. It is mostly these petty traders who in their pursuit of making greater profits resort to tactics which lead to less price accrual at the primary producer or collector level. In addition it is predominantly due to their tactics that producers or collector have also resorted to tactics (adulterating the produce etc.) to compensate the price loss. These petty traders while selling to higher order trader resort to same tactics that ultimately deteriorates the produce quality. In conclusion desire to get more money not only ruins the quality of product but also develops a system which is based on mistrust and exploitation.

The number of petty traders increases during post harvesting season and operate either as commission agents of big traders or directly collect and sell the produce to the big traders. The biggest losers in the process are the producers and the collectors who have to give in to the whims and fancies of the traders. One of the major tactics these traders employ is of giving advances to the prospective producers and collectors there by forcing them to get into tied sales.

Robust Marketing Mechanism at the Village / Cluster Level

It is in this context a business promotion and marketing cadre needs to be groomed wherein he/she would be responsible for optimizing the prices at the primary producer or collector level and become a local resource person on marketing. This cadre can operate on a commission basis or on a mutually agreed system developed in consultation with CBOs and village community. Since collective action at the primary stakeholder level is imminent, investment towards creating a trader layer at the community level promises of a better endowed system.

Challenges /Risks and mitigating mechanism

It may be that after some time this cadre with all good intentions might start functioning as a mainstream trader and become exploitative by nature. It is obvious that this trader will be selling to the big traders and there exist a possibility of his replacing the bigger trader in the village.

Hence, it needs to be clearly defined that who could be part of this cadre and they should be appointed in a participatory way at the village level. Moreover, in wake of collective action by the CBOs (SHGs, Mahila Samiti etc.) most enterprising members (subject to his/her interest) followed by educated and unemployed youth (again subject to the inter-

est) should be preferred. A win-win operational mechanism has to be built in to minimize the above-mentioned possibility.

This cadre can gradually become the business counselor for the entire village and cluster. She/He can be capacitated to assist the SHG and farmers to develop business plans and help them in linkage with market and service providers. Moreover experience of SHGs who have successfully dealt with big trader needs to be understood by the community before developing an operational plan.

Step by step plan to promote Marketing Cadre

1. Identification of educated, unemployed youth, SHG leaders etc. interested in taking up trading activity at the village level. The selection should be done in a participatory manner with the involvement of villagers
2. Greater understanding of the local economy and dynamics of market via
 - a. Exposure to local markets particularly haats to understand the market mechanism
 - b. Orientation on business and marketing
3. Interaction with bulk buyers operating in distant markets
4. Interaction with institutional buyers to forge appropriate linkages
5. Capacity building on issues related to
 - a. Networking with producers of the village, SHGs and NTFP collectors
 - b. Finalizing terms and conditions for the dealing with villagers
 - c. Market identification
 - d. Negotiation with right buyers and business terms and condition
 - e. Market linkage
 - f. Accessing market information
 - g. Logistic management related to procurement and marketing
 - h. Profit and loss, breakeven analysis, economy of scale etc.

Don't whine, have 'nutritious' wine, say CISH scientists

Lucknow, February 28, 2009: The cliché has been turned on its head by science - its new wine in new bottles at the Central Institute for Subtropical Horticulture (CISH)-Lucknow, which has developed wines from guava, mango, bael, amla and mahua.

The hic and the high apart, the new wines will be "more of a health drink since they are laced with all the nutrition found in the fruits," said CISH microbiologist Dr. Neelima Garg. So, you can as good as say goodbye to those cough syrups as these drink, Garg said, can do wonders in cough and cold, with zero side-effect. "Anyone can consume our drinks, irrespective of age and sex," she added.

Scientists here claimed this is the first time in the country that wine is being prepared with nutritional content of the fruits intact. "Take the case of mahua. At present, there's no technology to extract wine from mahua, but people tend to confuse mahua wine with mahua liquor, which fails to restore the rich sugar content of these flowers. But our special fermentation technique promises you sweet, tasty and nutritious wine," Garg said.

Explaining the fermentation technique, the scientists said after extracting the juice from fruits, some chemicals are added to destroy the unwanted microbes, after which some fungus are added into it. This, they added, is the most important stage of the process as it has to be performed in aseptic conditions to take care of the hygiene factor. The lone sore point is the time factor: against the usual two months to process normal wine, scientists said extracting this nutritious wine will take about six months. "The older the wine gets, the more nutritious it becomes as the antioxidants derived from the fruits are stabilized in the drinks," Garg said. "Our drinks gets their anti-ageing properties from the antioxidants, which are derived from the fruits."

CISH scientists said they have also mixed some additives to the new wine so that the drinks become more transparent and give a sweet smell. As for the production cost, a 200-ml bottle comes to about Rs 30, they said, adding that the percentage of alcohol in these drinks is about 9 per cent. The next step for CISH scientists is to get their fermentation technology patented. "We will apply for the patent soon," Garg said. "After that, we will hand over the technology to the industries for commercial production."

Source: Asit Srivastava, <http://cities.expressindia.com/fullstory.php?newsid=171752>

Market Players (Traders, Processors) Interacted

Sl	Name of Trader Interacted	Address	Product Deal with
1	Ikram Hussain	Bangla Tand, Chakradharpur	All NTFPs
2	Gafur Khan	Bangla Tand, Chakradharpur	All NTFPs
3	Binod Sahu	Purana Ranchi Road, Chakradharpur	All NTFPs
4	Nitai Das	Thana Road, Chakradharpur	Lac, Mahua, Dori
5	Deepak Kumar	New Colony, Chaibasa	All NTFPs
6	Madan Munde (VT)	Kandajui, Bandgaon	Mahua
7	Shyam Narayan Prasad Gupta	Goelkera Market, Main Road	All NTFPs
8	Krishna Oil Mill (Processor)	Purana Ranchi Road, Chakradharpur	Oil Seeds
9	Kamal Oil Mill (Processor)	Purana Ranchi Road, Chakradharpur	Oil Seeds
10	Mr. Agrawal (Processor)	Digilota, Chakradharpur	Char Guthli
11	Bidyut Nayak	Godaduba, Goelkera	All NTFPs
12	Ram Purty	Kundurugutu, Bandgaon	All NTFPs
13	Bhutura Jowan Hans	Dudukundi, Bandgaon	All NTFPs
14	Ashok Agrawal	Goelkera haat, Goelkera	All NTFPs
15	Abhishek Trader	Upper Bazar, Ranchi	Mahua, tamarind
16	Basudev Choudhury	Murhu market, Khunti	All NTFPs
17	Bablu Sah	Bisra, Rourkela, Orissa	Siali leaf, Sal Leaf
18	Mustaq Ali	Jaraikele, Rourkela, Orissa	Siali & Sal Leaf
19	Kasi sah Oil Mill	Bisra, Sundargarh, Orissa	Oil Seeds
20	Mr. Sahu	Shop No 17, Rasi Lane, Sakchi mandi, Tata	Sal Leaf Plate & Cup
21	Santosh Jaiswal c/o: Jay Plastic	North Market, Upper Bazar, Ranchi	Sal Leaf Plate & Cup
22	Shyam Oil Mill	Bisra, Orissa	Oil Seeds
23	Md. Altaf	Bangla Tand, Chakradharpur	All NTFPs
24	Kajal Paramanik	Ranchi Road, Chakradharpur	All NTFPs
25	Debanand Sahu	Bhagat Singh Chowk, Chakradharpur	Sal Leaf Plate & Cup

MART has developed a Directory of Traders and Processors for the states of AP, Orissa which will be used for developing effective market linkages.

INSTITUTION INTERACTED FOR CONVERGENCE

Sl	Person Interacted & Institution	Govt. / Private	Convergence Area
1	LEO, Goelkera Block	Govt. BDO office.	Sal Leaf Plate machine (10-12 nos.)
	LEO, Goelkera Block	Govt. BDO office	SGSY with sal leaf plate & Cup Making
2	TRIFED, Ranchi	Govt.	Schemes

Product wise potential villages

Parameters for selection of villages

1. Availability of tradable quantity of 3-4 NTFPs
2. Road side or link village
3. Presence of progressive Village Level Institutions (VLI) e.g. SHGs, Mahila Samiti

BANDGAON BLOCK

Name of the Produce	Potential Villages for intervention
Mahua & Dori	Kundurugutu, Chakia, Kareda, Dudukundi, Chirkubera, Akir, Aridih, Dumburu, Hesadih, Kandeyong, Paraya
Tamarind	Kundurugutu, Chakia, Kareda, Dudukundi, Chirkubera, Dumburu, Hesadih, kandeyong
Kusum Lac	Kontari, Kundurugutu, Chakia, Kareda, Kochha, Chirkubera, Akir, Aridih, Dumburu, Kokorbo
Sal Leaf	Hesadih
Siali Leaf	Kundurugutu, Chakia, Kareda
Karanj	Kochha, Dumburu, Paraya, Chakia, Kundurugutu, Kokorbo
Siali Rope	Kundurugutu

GOELKERA BLOCK

Name of the Produce	Potential Villages for intervention
Mahua & Dori	Godaduba, Sarbil, Buruhundur, Rengalbeda, Kentora, Jambirakudur, Khuntpai, Baikochha, Amjharan, Bara, Tamsai
Tamarind	Buruhundur, Sarbil, Rengalbeda, Khuntpai, Bara, Tamsai
Kusum Lac	Sarbil, Godaduba, Khuntpai
Sal Leaf	Godaduba, Sarbil, Buruhundur, Chirungbeda, Rengalbeda, Kentora, Jambirakudur, Bara, Tamsai
Siali Leaf Cluster	Godaduba, Rengalbeda, Khuntpai, Bara, Tamsai
Karanj	Godaduba, Jambirakudur

Drying Alternatives

(1) Drying Platform

Estimate of constructing 40 ft x 40 ft Black Stone (Kadappa/Raipur Stone) Drying Platform

- Stone Name: Kadappa
- Rate per Sq ft = Rs.22/-
- Available Size of stone slab = 2 ft x 2 ft
- Cost per 1 slab of above size = 2 ft x 2 ft = 4 sq ft x Rs.22 = Rs.88/-

Size of the platform	Cost
40 ft x 40 ft	35,200
50 ft x 50 ft	55,000
60 ft x 60 ft	70,400

Transport Cost

- 6 Wheeler Truck Transport Charges
 - Load of 1 truck load of 1600 sq ft requirement Stone (2 ft x 2 ft size) = 1600 x 4.5 kg = 7 ton which requires a 6 wheeler truck to transport it from Ranchi to village
 - Rs. 1200/- (Rental per day) + Diesel (3 km/litre average)
 - Loading Charge = Rs.1000/-
 - Unloading Charge = Rs.2000/-
- Goelkera
 - Rs. 1200/- + Diesel cost of ~ 380 kms to and fro transport
 - Diesel requirement for 380 kms = Approx. 130 litre diesel x Rs 35/- = Rs 4550/-
 - Total Cost: Rs.1200/- (Rental) + Rs. 4550/- (Diesel cost) + Rs. 3000 = Rs.8750/-
- Bandgaon
 - Rs. 1200/- + Diesel cost of ~ 200 km to and fro transport
 - Diesel requirement for 200 kms = Approx. 70 litre diesel x Rs 38/- = Rs. 2450/-
 - Total Cost: Rs.1200/- (Rental) + Rs. 2450/- (Diesel cost) + Rs. 3000 = Rs.6650/-

Source and Supplier: GEETA AGENCY, Prop: Pintu Kedia, Cell: 9234436775, Old Chakradharpur Road, Chakradharpur

(2) Black Polythene

Cost of black polythene

1. 20x20 ft = Rs. 180
2. 20x40 ft = Rs. 360
3. 40x40 ft = Rs. 720

Source: GOPAL ENTERPRISES (Mr. Gopal Jhunjhunwala), Near Sai Guest House , Chakradharpur

Weighing Scales

Manual Weighing Scales

Description	Unit Price (Rs.)	No. of units at each identified village	Total Cost
Scale	1250	1	1250
Support Chain	400	1	400
Lever Plate	960	1	960
Support Stand of weighing machine	3120	1	3120
20 kg weight	750	2	1500
10 kg weight	400	1	400
5 kg weight	220	1	220
2 kg weight	105	1	105
1 kg weight	53	1	53
500 gms weight	28	1	28
200 gms weight	15	1	15
100 gms weight	12	1	12
50 gms weight	9	1	9
Total	7322		8072

Electronic Weighing Scales

Description	Unit Price* (Rs.)
60 Kg Capacity: (JK Electronics)	7280
60 kg Capacity (Blue Star/ Alex Electronics)	6240
60 kg Capacity (Silver Matric Works)	8840
1 quintal to 1.5 quintal (Silver Matric Works)	12480
100 kg Capacity: Satyam company	7500
120 Kg Capacity: Satyam Company	8500

* Price inclusive of 4% VAT

Transportation cost from Ranchi to Villages would be extra.

Requirement of Vehicle for more than 20 Quintal Load i.e. more than 15 weighing machine with weights is a Truck

Cost of transportation of 4 wheeler truck for carrying 50 machine

- Rs. 1200/- per day rental
- Rs.100/- for Driver plus helper's food
- Diesel Requirement 130 litre of cost approx. Rs.4550/-
- Loading Charge Rs.1000/-
- Unloading Charge Rs.1000/-

Sources:

1. Chamunda Scale Industries (Govt. Approved Dealer in Weight & Measure), Mr. Shankar Prasad Sahu, Mob:98355-32577, East Market Road, Upper Bazar, Ranchi, 834001
2. Ajmera Hardwares, East Market Road, Upper Bazar, Ranchi Ph: 0651-2202572

Coin Box Operated Pay Phone

Discussions with Mr. Krishna P Gupta, Pan shop Owner, Near Anjali Hotel, Kantatoli Chowk, Ranchi

- He has a public Coin box purchased in 2008 at Rs. 2500 (GB-VISIONCARE made), he got a Rs. 200 talk time free on purchase
- Instrument approved by DOT
- There many agencies who stock and supply these boxes, Shiny Market near Sujata Cinema Hall is one such market hub which is host to many such agencies
- Warranty period of the set: 1 year
- Post Sales Service facility: Within one 1 day any instrument fault will be attended by the agency
- Resale value of the instrument is Rs. 1000 but new sets can be purchased at Rs. 1500 (along with free talk time)
- He got a connection from TATA INDICOM
- He had to furnish his identity proof to get the connection
- Each local call rate is Re.1 / 1 minute
- Each STD call rate is Re.1 / 20 seconds i.e. Rs. 3 per minute
- Every month he recharges with a coupon of Rs. 850 with a validity of 1 month and gets Rse.0.50 p per local call and Rs. 0.60 p per STD call
- The Rs. 850 coupon comes with a talk time of Rs. 1300 (one Coin=Re.1)
- The balance talk time gets carried forward to the next month with the succeeding recharge
- He charges the TATA INDICOM modem by electricity
- With full charge, it gives 4-5 hours of active backup, hence he has to recharge it twice a day
- In case of fault in connection, repairs are generally carried within 1 day

Details of Coin Box Operated Pay Phone

DESCRIPTION	TATA INDICOM	BSNL	AIRTEL	RELIANCE
Price of the Instrument	Rs. 2200	Rs. 2500	Rs. 3500/- with free talk time of Rs.2000/-	Rs.3500/-
Manufactured by	Visioncare	NA	Soneytex, Micro max	NA
Marketed by	TATA INDICOM	BSNL	BHARTI AIRTEL	RELIANCE
Warranty/Guarantee	Y	Y	Y	Y
Free Talk time	No Free talk time	No Free talk time	Rs. 1500/- AIRTEL to AIRTEL; Rs.500/- AIRTEL to Others	No Free talk time
Tariff Plan	Rs. 337; Rs. 448 talk time valid for	NA	Rs. 400; Rs. 350 talk time , valid for 1 year	NA
	Rs. 550, Rs. 768 talk time valid for	NA	Rs. 350, Rs. 350 talk time, valid for 5 months	NA
	Rs. 1000, Rs. 1670 talk time valid for	NA	Rs. 999-1200 talk time, valid for 2 months	NA
Pulse Rate Local	60 sec	60 sec	60 sec	60 sec
Pulse Rate STD	20 sec	16	16 sec	28 sec
Owner	NA	NA	33 paisa / Re. 1	NA
Source of Information and Contact address of the Distributor	Saluja Telecom, CKP, Priya Khushi Complex Main Road, Chakradharpur M: 9234760151	-	Ashok Agarawal Airtel Point Main Road, Chakradharpur M: 9934072146	Reliance Point Near Sai Guest House, Chakradharpur

Proposed Work Plan: January– February 2010 (2 months)

S.N.	Activity	January 2010	February 2010
1	One day Stakeholder meeting at Chaibasa, 21 st Jan, 2010 (indicative)		
2	One day Stakeholder meeting at Ranchi, 22 nd Jan 2010 (indicative)		
3	Name of the villages, potential NTF produce and Village Level Institutions (SHG, Mahila Samiti) finalised for intervention in consultation with State Team, JSLPS		
4	Identify 20-25 Marketing Cadre in 20 villages		
5	Developing Capacity Building Plan (Finalising Training themes, content of capacity building programmes, contact identified resource agencies / persons for training from both government and private sector and finalize modalities for their involvement)		
6	Preparing Training Module for Training of Trainers (NGO staff & Cadre)		
7	Conduct 1 Training of Trainers at Ranchi (20-25 batch size)		
8	Preparing Infrastructure plan for identified 5 villages in each blocks i.e. a total of 10 villages across 2 blocks		
9	Negotiation with Market players for first market linkage of NTF produce (Indicative: Tamarind)		
10	Planning for market linkage of Tamarind at the Village Level Institution Level (SHG, Tamarind Producers, Forest Protection Committee) covering 2-3 villages		
11	<ul style="list-style-type: none"> • Making proposals for fund release <ul style="list-style-type: none"> a. Collective Marketing <ul style="list-style-type: none"> i. Working capital b. MIS Board c. Coin Box Phone d. Weighing Scales e. Micro Projects <ul style="list-style-type: none"> i. Fixed Cost ii. Working Capital 		
12	Bi-monthly Progress report submitted		