

Livelihood Opportunities in Patha Region



Under the Guidance of

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Project Objectives

Study of **Local Economy**

Identification of **Potential Livelihood Opportunities**

Analysis of **Vegetable Sub-sector** for livelihood of small-landholders

Implementation Strategies for ABSSS

Methodology

Understanding the Region

Community understanding through field visits to villages, project sites, rural markets, social events, socio-economic activity-hubs , Understanding Local economy & resources, literature review

Potential Livelihood Possibilities & Sub-Sector Analysis

Agriculture, Non-timber Forest Produce (NTFP), SHG assets building, Vegetable sub-sector, Arts& Culture, Sericulture etc.

Potential Interventions

Expert Interviews – Agricultural scientists, KVK, DRI, UPFC etc., Qualitative and Quantitative potential assessment , discussions with NGO

Market & Community Feedback

Feasibility & acceptance analysis

Formulating Organisational & Institutional Base and Implementation Strategies

Understanding the Region

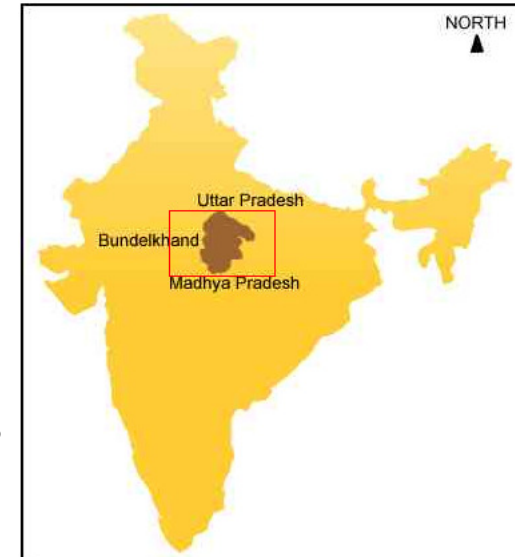
- **Bundelkhand**

- 7 districts of Southern U.P and 6 districts of Northern M.P.
- Area: 70,000 sq. km.
- Population: 15.5 million
- Divided into 3 regions: Plain, Uplands and Hilly region

- **Geo-Politics**

- Lies on fringes of UP and MP - **Policy Differences and Neglect**
- Inhibition of growth owing to **dacoits and political corruption**
- Govt. and Block Officers don't remain in area beyond 2 months

- Among the **Most Backward Regions** in the country



COMPOSITE INDEX OF DEVELOPMENT (BASED ON 36 IMPORTANT INDICATORS)

सर्वाधिक विकसित जिले MOST DEVELOPED DISTRICTS		
नाम NAME		मान/मूल्य VALUE
1. गौतमबुद्ध नगर	GAUTAM BUDDHA NAGAR	413.15
2. गाजियाबाद	GHAZIABAD	167.46
3. मेरठ	MEERUT	139.66
4. कानपुर नगर	KANPUR NAGAR	135.94
5. लखनऊ	LUCKNOW	131.93

सर्वाधिक पिछड़े जिले MOST BACKWARD DISTRICTS		
नाम NAME		मान/मूल्य VALUE
1. चित्रकूट	CHITRAKOOT	72.67
2. श्रावस्ती	SHRAWASTI	72.74
3. कौशाम्बी	KAUSHAMBI	73.12
4. मिर्जापुर	MIRZAPUR	73.17
5. संतकबीरनगर	SANT KABIR NAGAR	73.40

Source: UP Planning Atlas

Bundelkhand: Grim Realities

- **No Industrialization**
 - **Only 2 large manufacturing units** in the entire region
 - **No significant small or cottage industry**
- **Electric Supply:** Only 25% reach in UP Bundelkhand villages
- **Lowest Per Capita Income:** One of the lowest in the country
- **Education:** Secondary schools in less than 5% of the villages
- **Health:** Primary Health centres: 1 in about 50 villages

	Inhabited villages	Villages with					
		Primary School	Secondary School	PHC	Bus service	Pucca roads	Households with electricity (%)
Jhansi	750	464	40	15	146	435	43.3
Lalitpur	697	569	14	13	201	300	20.3
Jalaun	937	822	77	22	139	514	26.3
Hamirpur	521	464	24	17	120	353	17.2
Mahoba	421	358	11	8	54	197	15.8
Banda	682	590	35	14	112	374	15.2
Chitrakoot	545	430	38	17	57	211	16.9
UP Bundelkhand	4553	3697	239	106	829	2384	

Community and Life

Patha Region

- **Kol** tribal community
- **Categorized under SC in U.P. and ST in M.P.**
- **Not getting the ST status** deprives the *Kols* in UP Bundelkhand of the government benefits under STP
- Make up **33% of population** and occupy **1/4th land** of Manikpur block

History of

Oppression and Exploitation

- **Bonded** labourers for centuries
- Many **freed 10-15 years back** only
- Most made to work on as **slaves on their own lands**
- Made indebted to fake loans taken in their names



Sources of Livelihood

- Subsistence **Agriculture**
- **Woodcutting**
- **Dependence on forests:** Collection and selling of minor forest products like *amla*, *mahua*, *tendu patta* etc.
- Children used to be *charwahas*

Concern Areas

- Little **skill** development
- Lack of exposure & entrepreneurship
- Several communities like **Basorhs, Sahariyas** still in inhumane conditions
- **Spendthrift tendency** in many



Main Sectors of the Economy

AGRICULTURE

- About **84.6%** of the **population** in Chitrakoot district was directly involved in **agriculture** (2001 Census)
- **51.3%** of the **total land area** in Chitrakoot is **under agriculture**, another **3.2%** is **cultivable wasteland**
- **Vegetable subsector** has not been **explored** much in the region

FORESTS

- **16.4%** of the total land area (Chitrakoot district) is under forests
- **Tribal community** is forest-dependent
- **Most tribal farmers** deal in trade of forest products as a support occupation: Mostly **women** involved in collection and selling

OTHER POTENTIAL AREAS

- **Emergence of SHGs** in project areas of NABARD, SDTT. SHGs need capacity building.
- Need for **upliftment of communities** like Basorhs

Agriculture in Region: *Crucial yet Inefficient*

- **Environmental Constraints:**

- Scarcity of water
- Under-developed **irrigation** systems
- **Low soil fertility**
- Uneven terrain

- **Unhealthy Trends:**

- Deforestation
- **Annapratha**

- Largely **primitive practices** with little scientific application

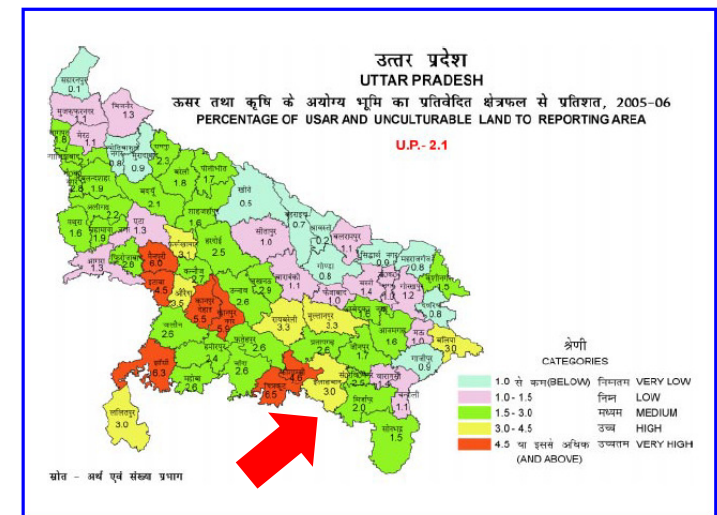
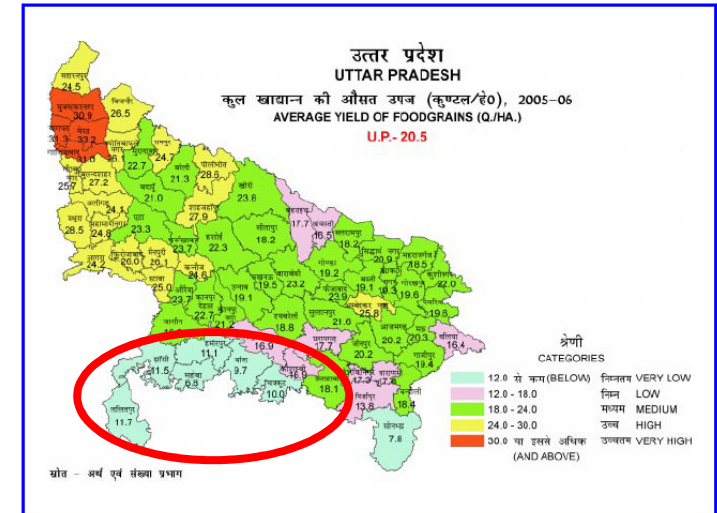
- **Low Crop Diversification**

- Tendency to grow only for **food security**

- **Low Returns:**

- Lack of proper market
- Undeveloped agro-processing industry
- Insufficient farm-power to boost productivity

Chitrakoot, Banda & Hamirpur are three of the Agriculturally Most Distressed Districts in India



Source: Report of the Expert Panel on Agricultural Indebtedness - Radhakrishna Report, Min. of Finance, GoI; Planning Atlas Uttar Pradesh, 2007, Area Planning Division, Govt. of UP

Rabi: Food Security concerns drain Economic Resources

ECONOMICS OF WHEAT CULTIVATION

ACTIVITY - WHEAT	COST/HA. (Rs.)
Preparation of Land : 5 ploughings	3000
Seed Cost	3500
Sowing Labour	600
Irrigation : 5 times	9000
Fertilizer : 3 bags Urea, 2 bags DAP, Potash 60-70 kg	4000
Harvesting	1200
Threshing	7000
Total Cost	Rs. 28,300
Yield – Optimistic Scenario	35 qt.
Revenue Generated @Rs.1000/qt.	Rs.35000
Maximum Potential Savings	Rs.6700
Yield – Commonly Observed Scenario	13 qt.
Revenue Generated @Rs.1000/qt.	Rs.13000
Net Loss	-Rs.15300

- Most farmers cultivating wheat are under **heavy debt**
- **Averse to purchasing foodgrains** from the market, even if own-cultivation is unprofitable

USEFUL ALTERNATIVES

• Mustard (*Sarson*)

Parameter	Mustard	Wheat
Potential Yield in Region	20-25 qt./ha	35 qt./ha
Market Price	Rs.3000/qt.	Rs.1000/qt.
Potential Revenue	Rs.75000	Rs.35000
Seed Cost	Rs.40/kg	Rs.60/kg
Irrigation Requirement	Rain-fed	4-5 times
Oil Content	48-50%	

- Scope for local **mustard oil-processing**
- **Region-specific varieties:** NDR-8501, Pusa Bold, Agrani

• Gram (*Chana*)

- **Leguminous crop** requiring less fertilizers
- Higher market price: Rs.2500-3000/qt.
- **Single irrigation** requirement
- Suitable varieties for region: KGD-1168, JG-63, Radhe

CASH CROPS

• Barley (*Jau*)

- **Short-cycle** crop: 100-105 days
- Input to distilleries @Rs.900/qt.

• Linseed (*Alsi*)

- Can grow **where nothing else grows** on farm
- Input for oil & varnishing industry

Kharif: Crucial Season for Agricultural Turn-around

LOSSES FROM PADDY

ACTIVITY - PADDY	COST/HA. (Rs.)
Preparation of Land : 3 ploughings x Rs.600	1800
Seed Cost : Rs.25/kg x 80 kg/ha	4000
Sowing: Traditional Broadcasting method – 3 Man Days (MD)	300
Ploughing : Another Round	600
Inter-culturing: 20 MDs x Rs.100/MD	2000
Harvesting : 20 MDs x Rs.100/MD	2000
Total Cost	Rs. 10,700
Yield	10-12 qt./ha
Revenue Generated @Rs.700/ha	Rs.9400
Net Loss	-Rs.1300

- Only suitable in areas with water-shed management projects
- Need for proliferation of techniques like **System of Rice Intensification (SRI)** for paddy
- Promotion of simple but **effective farming practices** can **boost output to 40 qt./ha**:
 - **Transplanting** instead of broadcasting
 - **Maintaining sufficient gaps** between plants

ALTERNATIVES TO PADDY

- Recommended **Short-Cycle** and **Low-irrigation varieties** of pulses, oilseeds etc.
- **Increase area under cultivation of**:
 - Maize
 - Arhar
 - Moong
 - Jowar

SESAME (TIL): HIGH MARKETABILITY CROP

ACTIVITY – SESAME (TIL)	COST/HA. (Rs.)
Preparation of Land & Sowing 4 ploughings x Rs.600	2400
Seed Cost: Rs.100/kg x 4 kg/ha	400
Fertilizer Cost	1000
Inter-culturing Nikai-Budai - 15 MDs x 2 x Rs.100/MD	3000
Harvesting 15 MDs x Rs.100/MD	1500
Threshing :15 MDs x Rs.100/MD	1500
Total Cost	Rs. 9,800
Yield	8 qt./ha
Selling Price (varies from Rs.3000-Rs.11000)	Rs.6000/ha
Total Revenue	Rs.48,000
Net Profit	Rs.38,200

Vegetable Sub-Sector: *Promise for Small-Landholders*

CURRENT SCENARIO

- **'Conflict'** with **tribal lifestyle habits** has led to their **reluctance** in taking to vegetable farming
 - Requires high-maintenance, even at night
 - Men-folk do not wish to give up on their leisure time
 - Women already over-burdened with responsibilities
- Area under vegetable **farming extremely low**

ANALYSIS REVEALS STRONG POTENTIAL

- Sincere **effort for 2-3 months** can provide income for entire year
- Vegetables of **Kharif season particularly lucrative**
 - Water retained in ponds etc. after rainfall sufficient
- Can be cultivated in **small patches** on farms
 - Foodgrain cultivation need not be significantly reduced

Diversification of Agriculture in Different Regions of Uttar Pradesh, TE 1997/98

Region	Commodity Groups	Share in Value of Output (%)	Share in Total Area (%)
Western	Cereals	53	67
	Pulses	4	5
	Commercial Crops	35	22
	Fruits & Vegetables	8	5
Central	Cereals	66	72
	Pulses	9	11
	Commercial Crops	21	14
	Fruits & Vegetables	4	4
Eastern	Cereals	77	81
	Pulses	8	11
	Commercial Crops	8	2
	Fruits & Vegetables	7	4
Bundelkhand	Cereals	38	42
	Pulses	54	49
	Commercial Crops	8	89
	Fruits & Vegetables	0.5	0.5

Source (Basic Data): *Uttar Pradesh Ke Krishi Ank* (Agriculture Statistics of UP) (Various issues) and ICRISAT Database compiled by NCAP.

Onions: Agronomic Analysis

CROP CYCLE	
Jan	Seed Sown
Feb	Standing Crop
Mar	Standing Crop
Apr	Standing Crop
May	Standing Crop
Jun	Harvest
Jul	
Aug	
Sep	
Oct	
Nov	
Dec	

ACTIVITY	COST/BEEGHA (Rs.)
Electricity @Rs.120/H.P./month for 2 H.P. motor	1440
Preparation of field 2 trolleys of manure, each trolley costs Rs. 400-500	1000
Labour	
Preparation of field : 1 worker for 2 days	200
Preparation of nursery : 1 worker, 1 day	100
Sowing : 5 workers for 5-6 days	3000
Watering : Every 7 days, 1 worker	2400
Once the plant is ready, it gets dried up. Then, digging up the plant for 7-10 days, 40 worker days for 1 Beegha	4000
3-4 days for separating the root and the <i>Danthal</i> 10 worker days for 1 Beegha	1000
Seed cost @Rs.500 (1 kg seed @ Rs.500/kg)	500
Chemical Fertilizer 1 bora (50 kg.) @ Rs. 600	600
Urea dressing 3 times, 20 kg urea @ Rs. 5-6/kg	300
Insecticide/ Pesticide : Malatheon 50gm/Beegha in 20 lt. water @Rs.60/packet (50g)	60
TOTAL COST	14600
OUTPUT	6000 kg/Beegha (60 qt.)
TOTAL SALES (Rs.)	Rs. 60000

Onions: Agronomic Analysis

SCIENTIFIC VARIETIES	
Item	Description
Seed	
- Variety	Agrifound Lightrate, Pusa Madhavi, Aarkaniketan, Pusa Red
- Quantity	4 kg/ac.
- Cost	Rs.1000-1200/kg
Irrigation Req.	Every 15-20 days, more frequently at the time of bud formation
Fertilizer/Manure Qty.	Pre-sowing: 80-100 qt./ac. organic manure, NPK 40-20-20 kg/ac., 45 kg DAP, 70 kg Urea, 32 kg Murate of Potash At the time of sowing: 5 kg organic manure, 30g DAP, 25g Urea, 25g Murate of Potash for each <i>kyaari</i> (3m L x 75cm W, 25 <i>kyaaris</i> per ac.)
Crop Protection	Monochrotofos, Mancozeb
Yield	100-120 qt./ac.
Cost of Production	Rs.125-130 /qt.
Profit	Rs.27000-32000/qt. if sold @ Rs.400/qt.

Qualitative and quantitative analysis performed on similar pattern for all vegetables with potential in region

Source: Krishi Vigyan Kendra, Majhgawan

Vegetables with Potential in Region

Vegetable	Cost/ac. (Rs.)	Yield (qt./ac.)	Revenue/ac. (Rs.)	Profit Potential/ac. (Rs.)	Fruiting Months
Onion	35,656	156	1,56,000	1,20,344	Jun
Potato	1,71,616	130	1,95,000	23,384	Mar
Brinjal	81,976	65-78	1,19,600	37,624	Winter Fruit: Oct-Dec, Jan-Mar Summer Fruit: May-Jun
Tomato	10,816	312	4,68,000	4,57,184	Oct-Dec, Jan-Mar
Pumpkin	10,696	130	1,04,000	93,304	Apr, Oct
Raddish	18,376	100	41,600	23,224	Year-round
Cauliflower	42,996	52	1,04,000	61,004	Nov-Dec
Lauki	78,036	130-150	1,88,500	1,10,464	May-Jun, Sep-Oct

Source: Team analysis of inputs from KVK, Majhgawan, local small & large farmers, NGO volunteers, published studies on pilot models in region

Vegetables Sub-sector: *Value Enhancers*

- Adoption of models such as **1.5ac/2.5ac model** to grow vegetables in conjunction with cereals
 - Farm based self-sufficiency
- **Organic farming**
 - Products sold at premium in market
- **Effective Practices:** Raised-bed system of sowing, drip irrigation, local seeds
- Suggested **New Crop Growers' Groups**

Kharif

Paddy (JR-353) – 1.5 acre					
Urad (PU-30)-0.5 acre	Brinjal 0.05acre	Tomato 0.05acre	Okra 0.05acre	Lobia 0.05acre	Spinach + Radish 0.05acre
	Chilli 0.125 acre			Onion - 0.125 acre	

Rabi

Wheat (WH-147) + Mustard (Varuna) – 1.0 acre				Gram (JG-315) - 0.5 acre	
Mustard (Varuna) - 0.5 acre	Tomato 0.05 acre	Pea 0.05 acre	Potato - 0.125 acre	Spinach + Radish 0.025 acre	
	Coriander - 0.125 acre			Garlic - 0.125 acre	

Zaid

Fallow/Green manuring – 1.0 acre			Fallow/Green manuring - 0.5		
Bottle Gourd - 0.5 acre	Lobia 0.0625 acre	Okra 0.125 acre		Spinach + Radish 0.025 acre	

INFRASTRUCTURAL NEED: COLD STORAGE FACILITIES

Vegetable	Yield/Ac. (kg)	SP/kg (Rs.) in Season	SP/kg (Rs.) Off- Season	Total Sales/Ac. (Rs.) without Storage	Revenue Potential/Ac. with Storage (Rs.)	% Revenue Gain /Ac.
Onion	15600	10	20	156000	234000	50.00%
Potato	13000	15	28	195000	279500	43.33%
Tomato	26000	8	15	208000	299000	43.75%
Pumpkin	13000	8	12	104000	130000	25.00%

Assumption: Half the produce is directly taken from the field to the market and half is stored for sale later

Source: Team Analysis, Deendayal Upadhyaya Research Institute, Chitrakoot

Non-Timber Forest Produce (NTFP): Overview

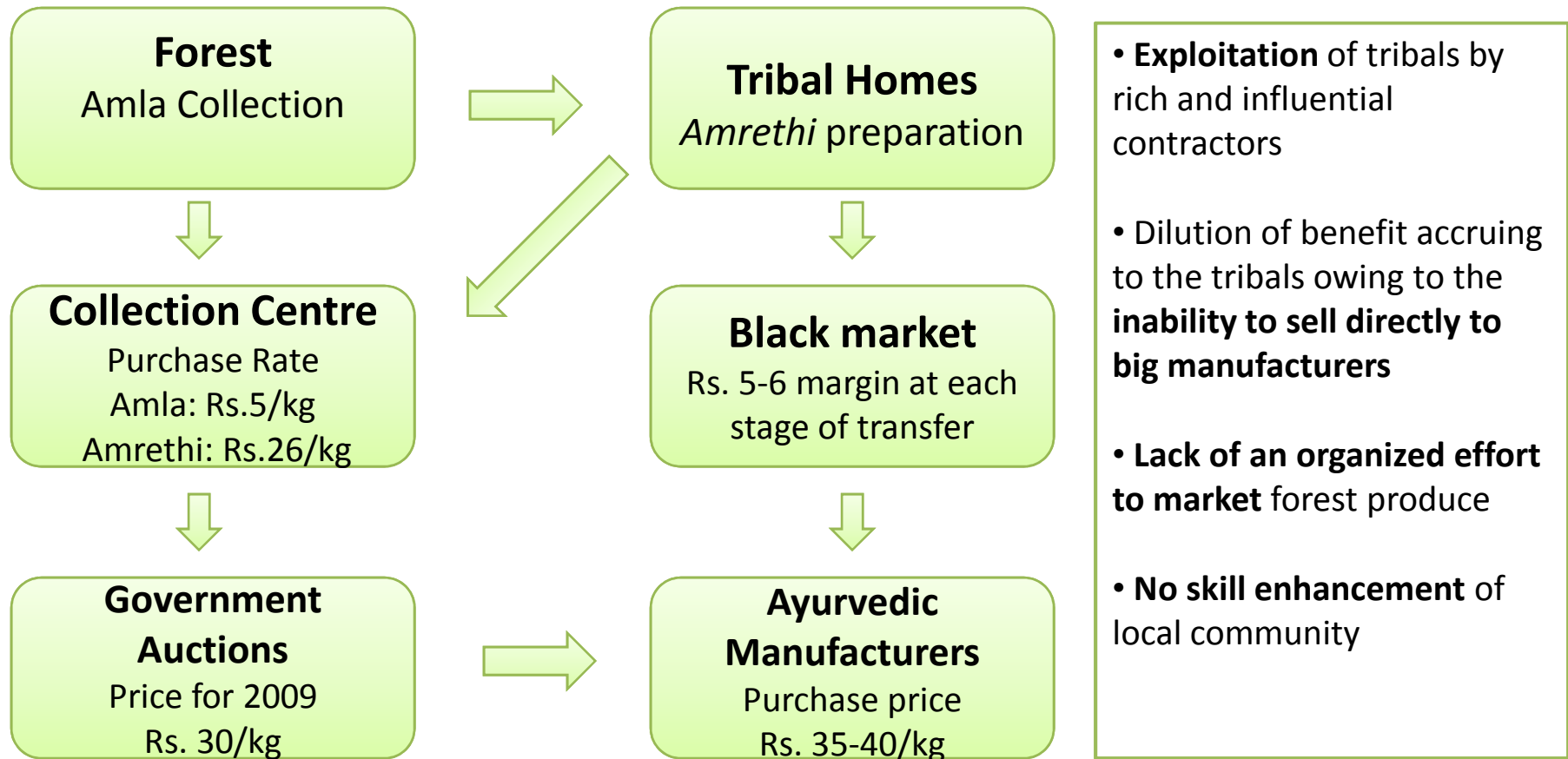
- Forests in the *Patha* Region are a **rich source** of NTFP

Name	Plucking Season	Use	Annual Availability
Mahua	March-April (flower) June-July (fruit)	Production of liquor, soaps, medicines	20,000-25,000 qt.
Tendu Patta	May-June	Production of bidis	80,000 Standard Bags
Amla	Oct-Nov	Ayurvedic chyawanprash, oil, powder, <i>achaar</i> , <i>murabba</i> ,	50,000 qt
Medicinal Plants (40 diff. species)	Year-round	Manufacture of medicines	Various
Bamboo	Year-round	Making <i>tokris</i> , small furniture and decorative items	5 lakh bamboo sticks

- **Deforestation** and **failing monsoons** have caused reduction in availability over the years
- **Year-round dependence** of tribals on forest-based income
- **No value-addition**, used only for supply to big manufacturers in Allahabad and other cities by the contractors

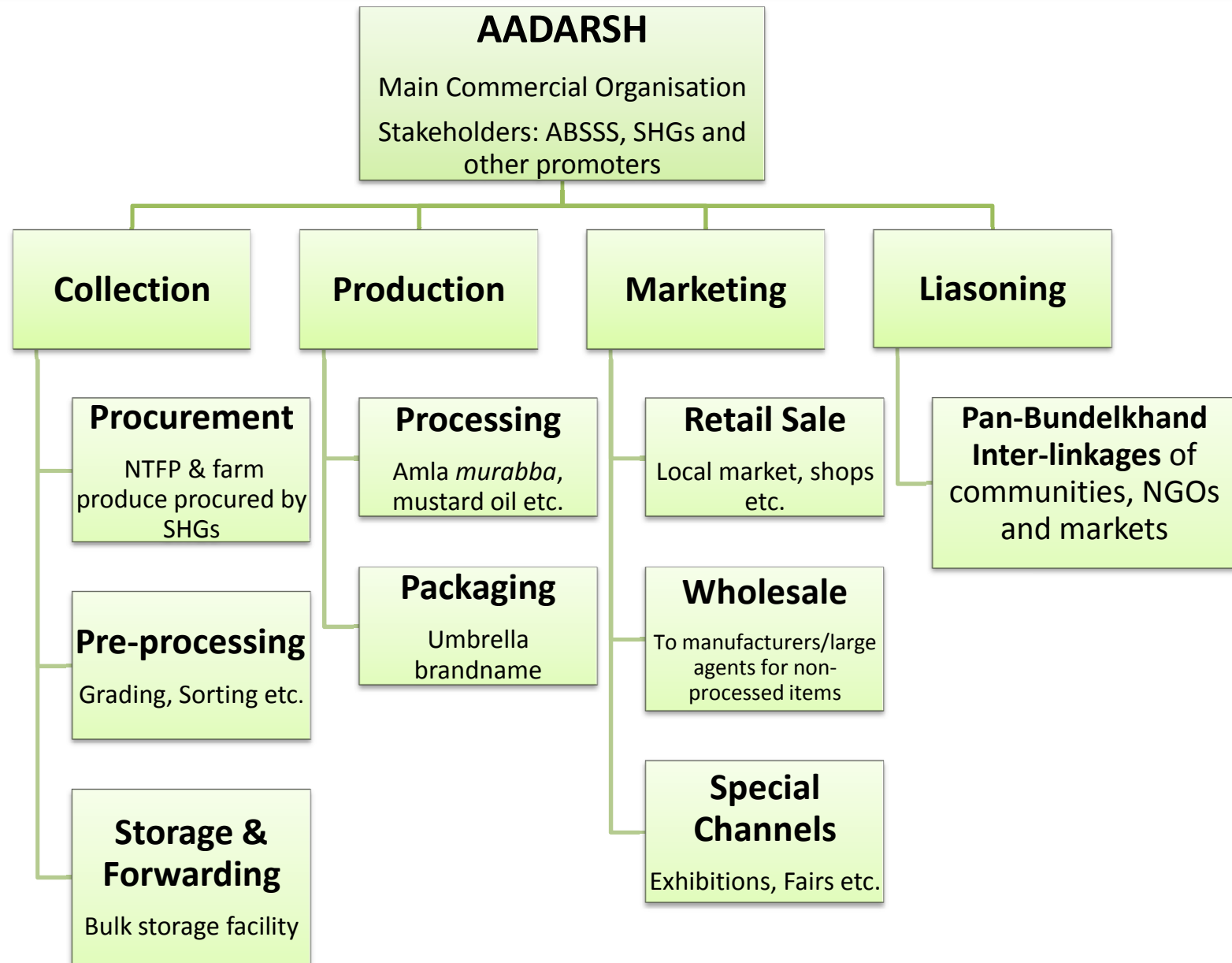
1 Standard bag = 40 kg (approx)

Existing Trade Channel

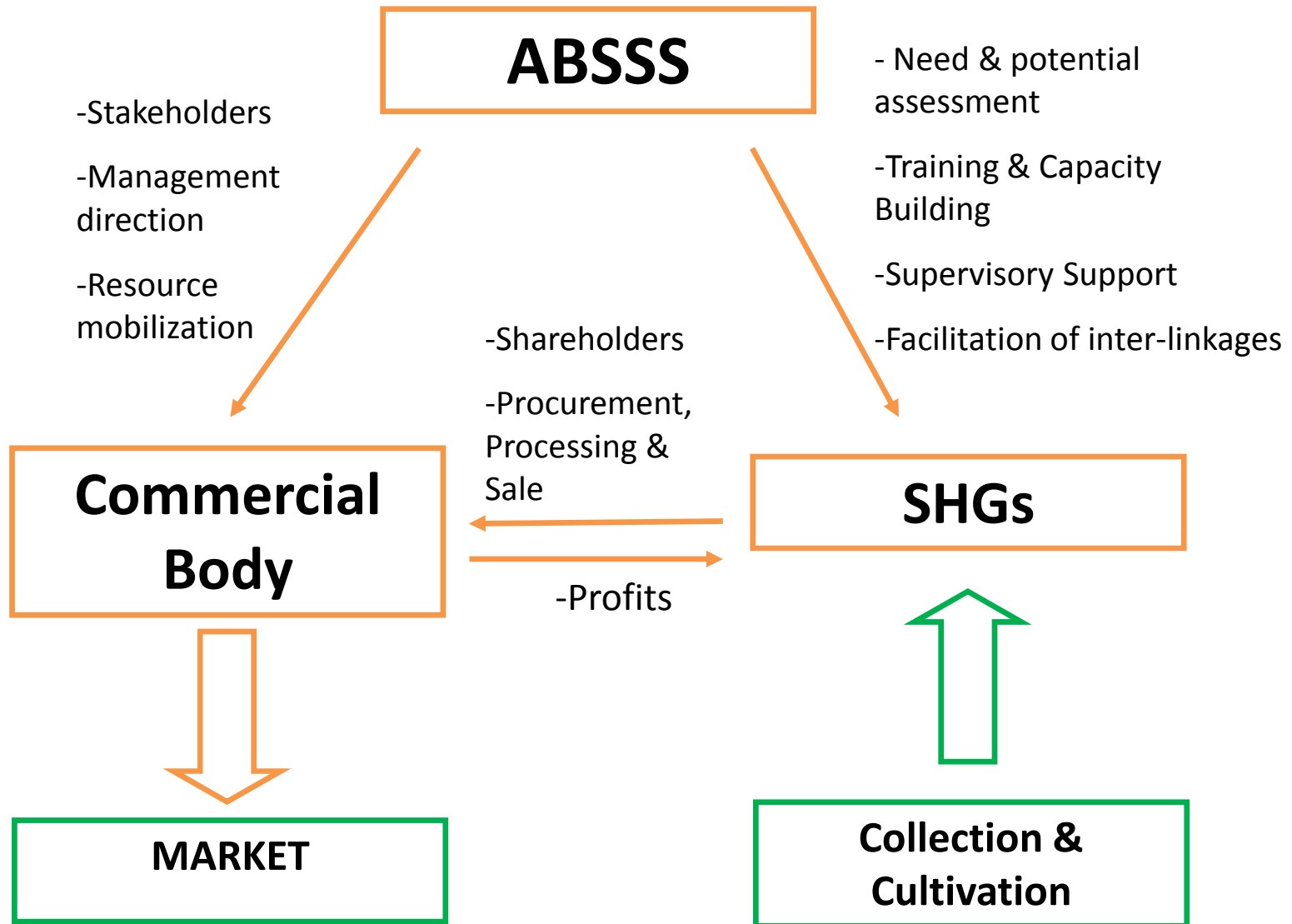


Hence, Need for Organised Collection, Marketing and Value Addition

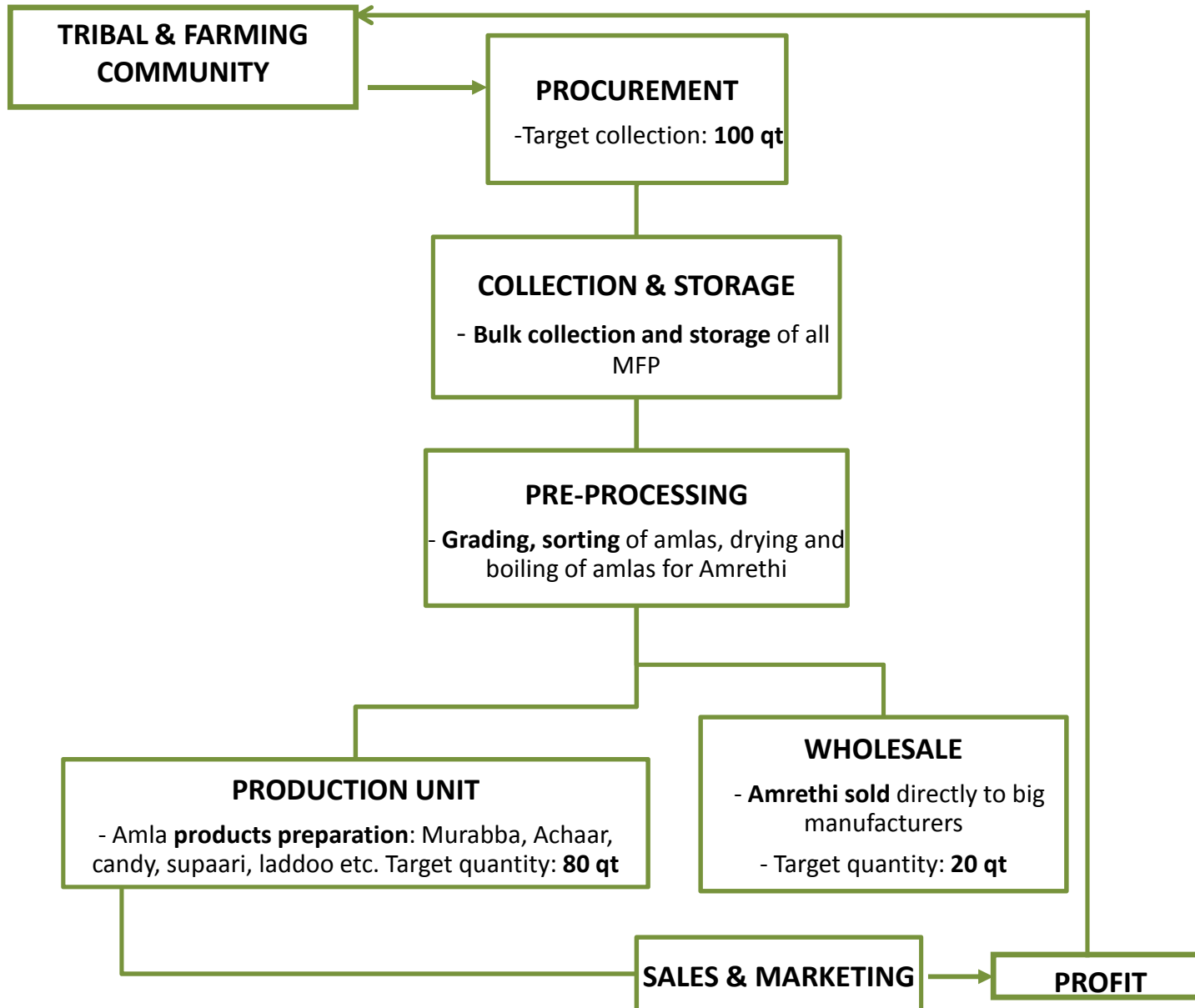
Market Intervention Organization: *Aadarsh*



ABSSS, Aadarsh, Community & Market



Market Intervention for Amla: *An Illustration*



Transfer of Benefit at Each Stage to the Community

Item	Unit cost	Quantity	Cost (Rs.)
Raw Material	6/kg	10000	60000
Cost			
Storage			15000
Space			
Training cost			40,000
Production	28/kg	8000	2,04,000
Cost			
Packaging	12/kg	8000	96,000
Cost			
Marketing			20,000
cost			
Transportati			15,000
on Cost			
Administrati			60,000
ve cost			
Total Cost			5,10,000

Item	Quantity (kg)	Unit Price (Rs./kg)	Revenue (Rs.)
Amrethi	2000	40	80,000
Murabba	4500	70	3,15,000
Achaar	750	70	52,500
Candy	750	140	1,05,000
Supaari	750	100	75,000
Laddoo	750	100	75,000
Total Revenue			7,02,500

Expected Profit = Rs.7,02,500 – 5,10,000
= Rs. 1,92,500

- **Involvement of 50 families** in the value chain initially
- Going forward, many such units can be established under the parent company Aadarsh

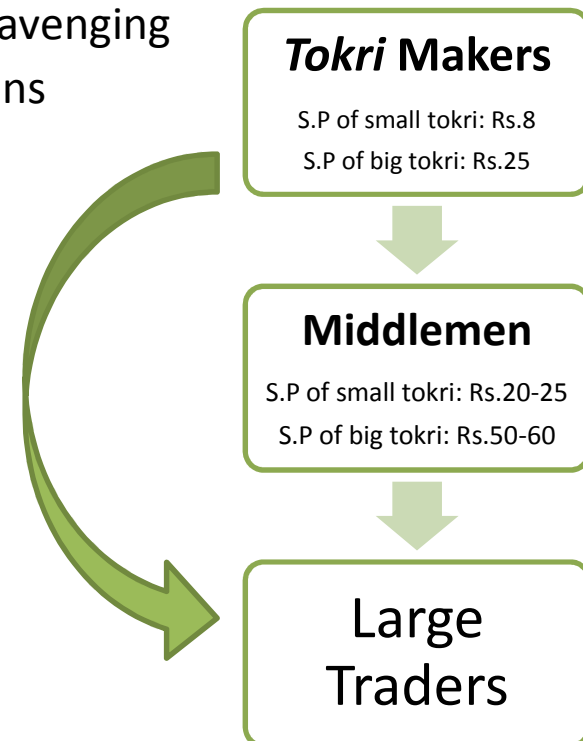
Other Livelihood Interventions

UPLIFTMENT OF BASORH COMMUNITY

- Comprise about 3% of Bundelkhand's population, 10-15% of SC population
- Traditional **untouchable** status in Bundelkhand
 - Several engaged in **human scavenging** till date
- Suggested **ABSSS mentors an Independent NGO** to take up their cause
 - Independent survey & **social audit** of community
 - **Restore dignity** by relieving them from human scavenging
 - **Skill development** for respectable livelihood means

INTERVENTION : BAMBOO-PRODUCTS COOPERATIVE

- **Location:** Basorh *Basti*, Majhgawan
- **Target:** 150 basket-making families
- **Purpose:**
 - Elimination of exploitative middlemen
 - Skill enhancement for higher-value add items
 - Collective bargaining power
 - Local brand name
 - Evolve ahead for alleviation of larger community



Credits: Adivasi Adhikar Manch, Majhgawan; Udyamita, DRI, Chitrakoot

Other Livelihood Interventions

SHG-OWNED ASSET RENTAL SERVICE



ITEM	COST	RENTAL RATE	PAY-BACK PERIOD
Mobile Phone	Rs.1000-2000	Actual + Rs.1/10 min.	50-60 days
Bicycle (2nd hand)	Rs.600	Rs.5/day	7-8 months
Tractor (with acc.)	Rs.6,00,000	Rs.300/hr	3 yrs
Diesel Pump	Rs.35,000	Rs.60/hr	1-2 yrs

Risks & Vulnerabilities of Interventions

No 'one-size-fits-all' Approach in Agriculture

- **Soil & water condition** different for every farmer
- Need for farm-specific soil testing & crop selection
- Direct impact of **climate variations**

Local Nexus & Mafia

- Difficult environment for development work as well as businesses
- **Contractor cartels & influence** in NTFP trade difficult to break
- **Upper class doesn't want lower class to get educated** and progress

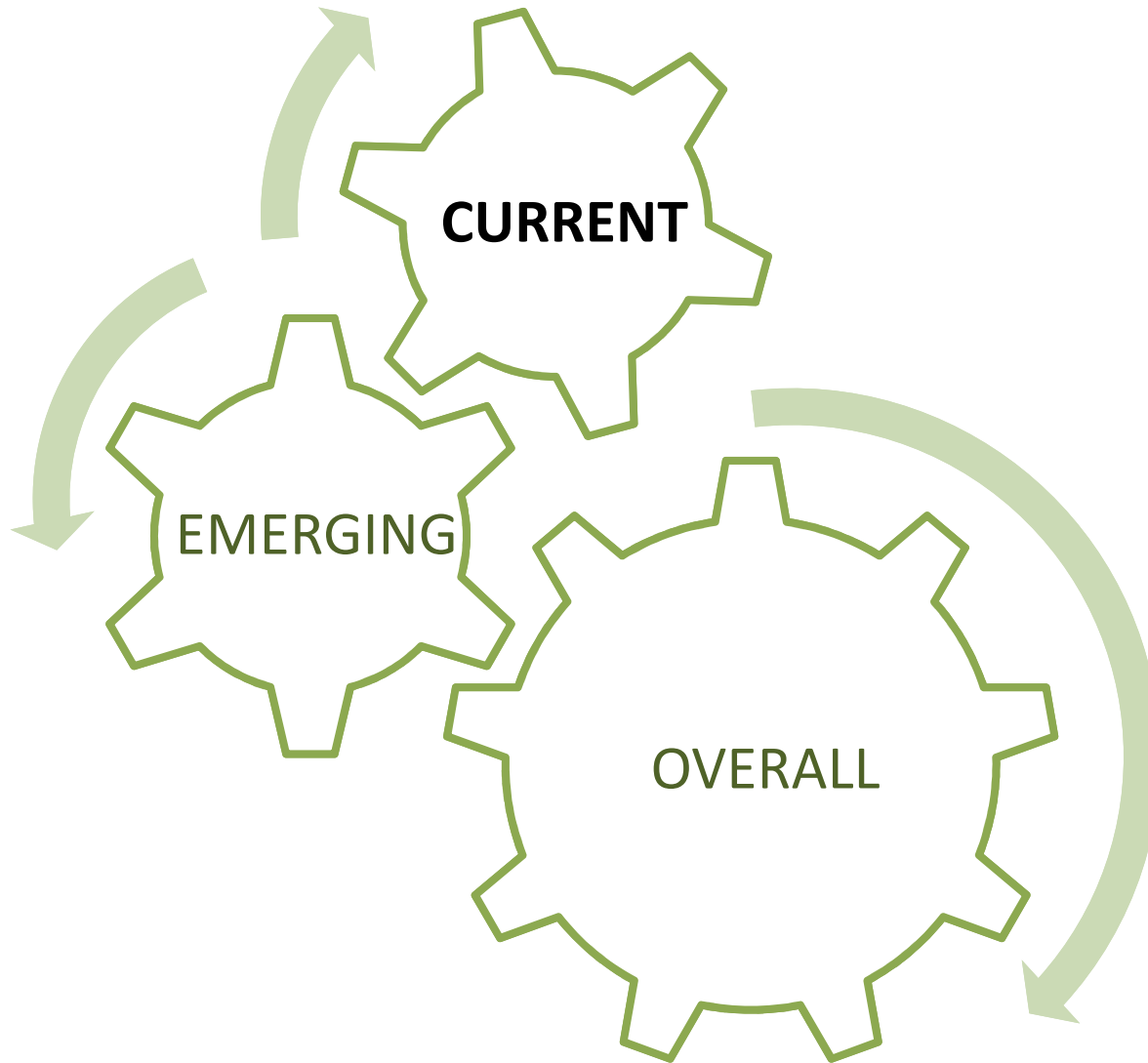
2-State Administrations Rampant Corruption

- Community settled in **UP & MP**
- Different policies, SC-ST status, govt. schemes further complexities
- **Funding & credit** difficult to obtain

Community

- Attitudinal and lifestyle shifts can only take place **over a long period**
- Long history of exploitation
- **Aspiration for mere sustenance**
- **Hand-to-mouth survival** means long-term planning & investment difficult
- **Moral hazard** of economic growth

ABSSS & Regional Development



- **Water Resource Management**

- Rain-water harvesting
- Wells, lift-irrigation

- **Land-use Diversification**

- Horticulture
- Afforestation
 - *Jetropha, Mehandi, Jungle Jalebi, fruits*

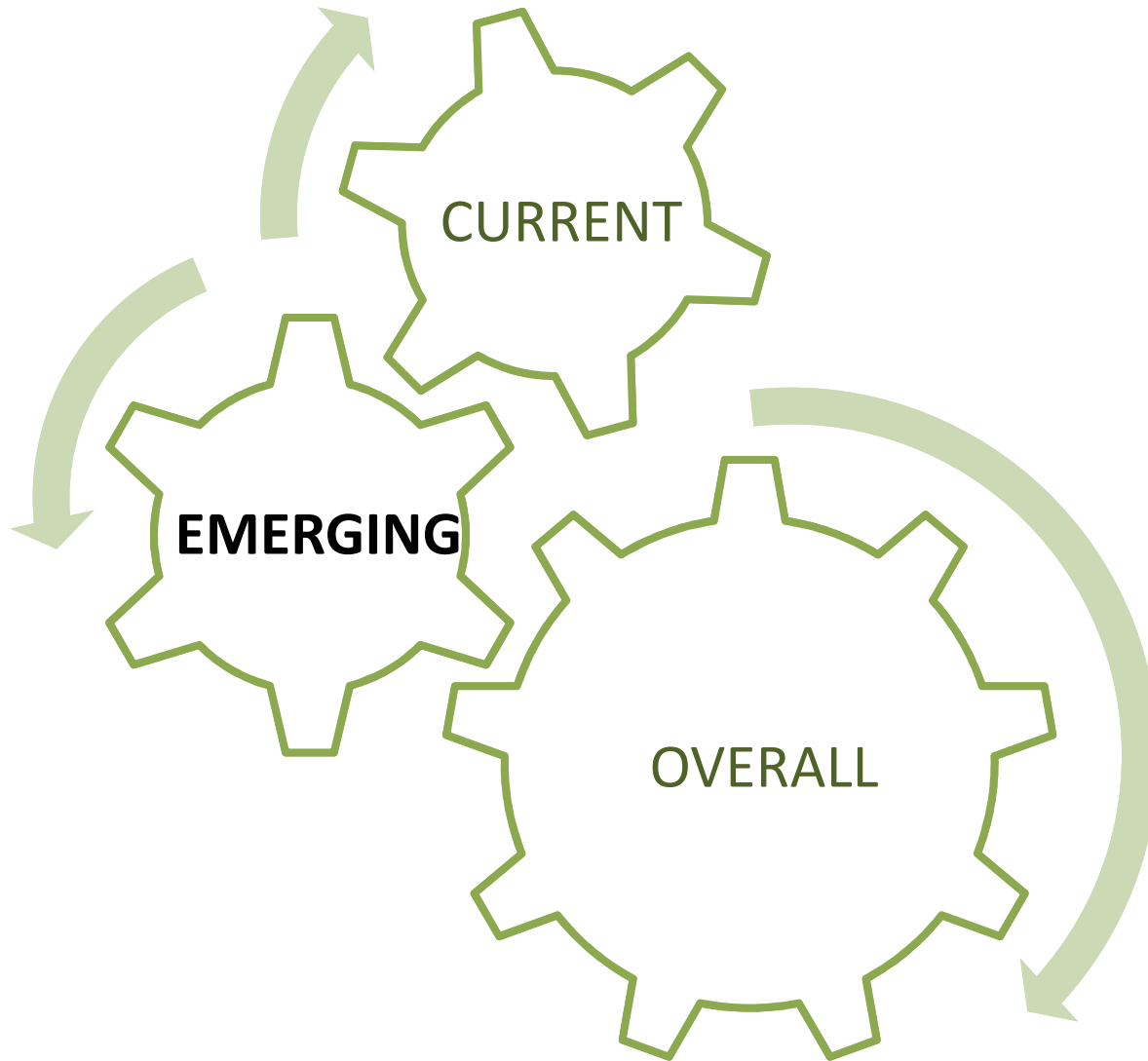
- **Agriculture Development**

- Alternative Rabi & Kharif crops
- Cash crops
- Improved practices like soil testing, green manuring
- Compost-pit, organic farming

- **Capacity Building Initiatives**

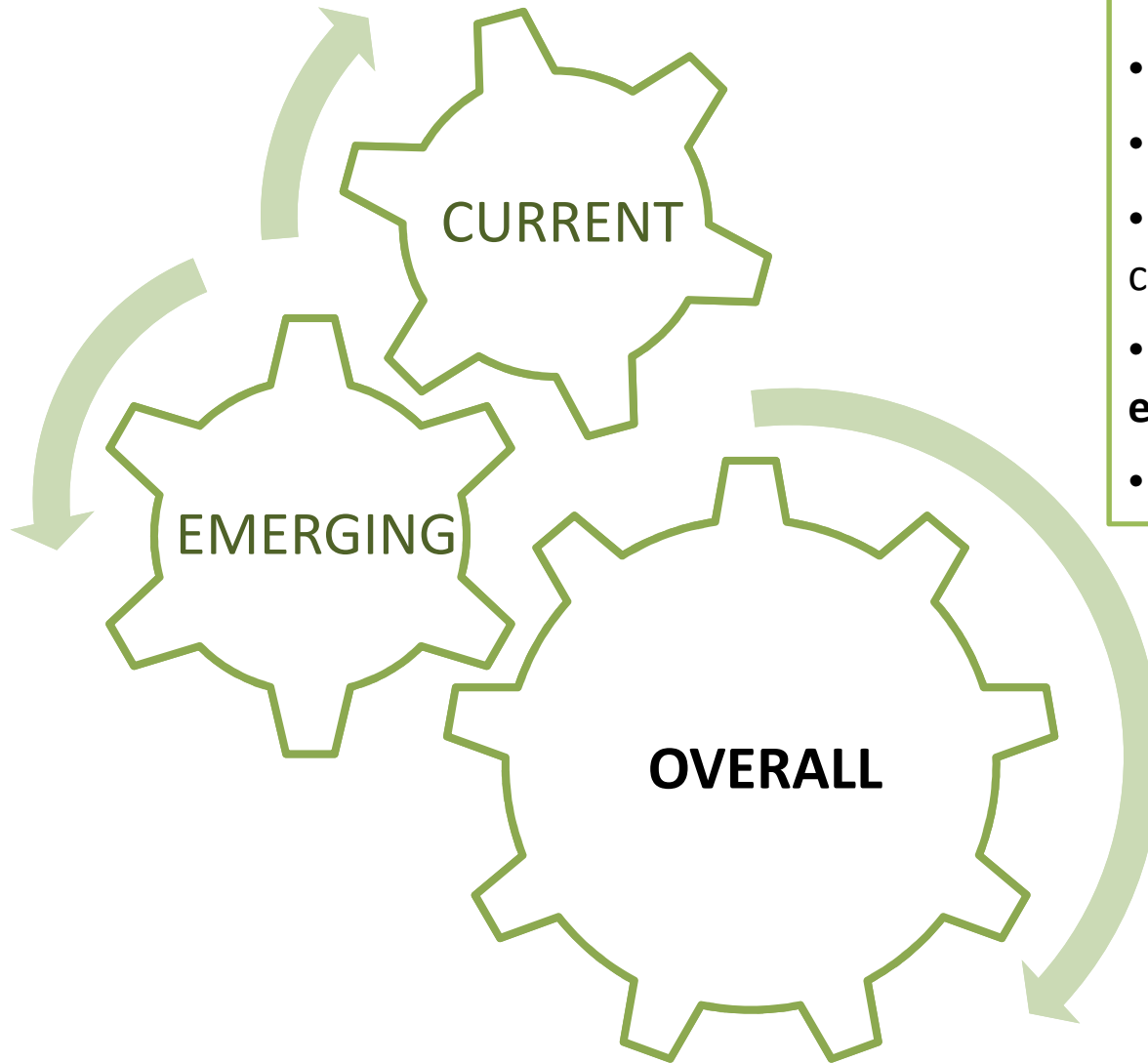
- Development of SHGs
- Trainings, dissemination workshops
- New Crop Growers' Groups

ABSSS & Regional Development



- **Vegetable sub-sector** development movement
- **Organisation of NTFP-based livelihood sector**
 - Processing & local value-addition
 - Collection & selling to manufacturers
 - Market interventions through commercial organisation
- **Extension of water-shed management programs** across Bundelkhand
- Promotion of traditional art-forms

ABSSS & Regional Development



- **Micro-finance** & credit needs
- **Seed Resource** Centre
- Storage & Logistics infrastructure
- Upliftment of other oppressed communities like **Basorh & Sahariyas**
- Preparing the community for **entrepreneurship**
- Evolve from Dignity → Self-reliance

Takeaways and Learning

- Exposure to organization at its most basic level: **Self Help Groups**
- Difference between **Grass-root Level NGOs** and **Institutional NGOs**
- **Challenges of Community Engagement** at Grassroots Level
 - *Flip side of transparency – banks*
 - *Operational challenges – transportation means*
- Importance of **Government Schemes** to the rural community
 - *NREGA, NRHM, STP etc.*



- **Journey** from being 'bandhua' to leading a dignified life
 - *Permanent scars of an inhumane past*
- Link between **stage of family transition** and the **level of aspirations**
 - *People in villages only desire to satisfy their sustenance needs*
- **Generosity & warmth** can be independent of economic & social status









Thank You

