

# Agriculture, Handicrafts & Market Connectivity in Odisha: From Subsistence to Sovereignty

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Agriculture & Markets

Published: April 2026 · Last reviewed: April 2026

*"We were selling our millets to the middleman for ₹12 a kilo. Now the FPO sells directly and we get ₹22. Same crop. Same field. Different system." — A millet farmer from Nuapada district, Odisha, 2024*

A Dongria Kondh weaver in Rayagada sits with her handloom and produces fabric that, in any urban market in India or Europe, would command a price that would transform her household economy. It takes her three days to produce one piece. The trader who comes to her village pays her ₹300. The same fabric sells for ₹3,000 in a Delhi craft market. The 90% that disappears between her fingers and the consumer's wallet is not profit going to anyone who added meaningful value. It is the cost of a broken market — of a skilled producer who is invisible to the buyers who would pay fairly for what she makes.

This is Odisha's agricultural and handicraft market problem in its most concentrated form. The state's rural producers — tribal farmers growing climate-resilient millets, Pattachitra painters in Raghurajpur, Dhokra metal casters in Bastar-adjacent districts, Sambalpuri weavers along the Hirakud belt, artisans across 62 tribal communities — produce extraordinary things with deep skill. What they consistently lack is market infrastructure: the cold chains, the aggregation platforms, the quality certification systems, the brand equity, and the market intelligence that converts production capacity into sustainable income.

This Primer examines what the evidence says about agricultural market systems, handicraft value chains, and Farmer Producer Organisations; what Odisha's own Millet Mission has demonstrated about the possible; and what NGOs and CSR programmes can concretely do to close the gap between what Odisha's rural producers make and what they receive for it.

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## **Part One: The Landscape — What Odisha Produces and What It Receives**

### **Agriculture: The Structural Disadvantage of Smallholders**

Odisha is predominantly agricultural. Over 70% of the rural population depends on agriculture and allied activities for its primary livelihood. But Odisha's agriculture is characterised by features that systematically disadvantage its producers: small and fragmented holdings (average agricultural landholding is approximately 1.05 hectares); high dependence on rain-fed cultivation (only about 35% of net sown area is irrigated); dominance of low-value staple crops in tribal districts; and extreme dependence on intermediaries for both input supply and output marketing.

The smallholder disadvantage is well-documented globally and acutely felt in Odisha's tribal districts. A farmer with half a hectare of millet cannot access the same market as a farmer with fifty hectares of rice. She cannot afford storage to wait for better prices. She cannot negotiate with a grain trader who controls the price and the

measurement. She cannot access formal credit to invest in her next season's crop. She is price-taking, not price-setting, in every transaction.

Non-Timber Forest Products (NTFPs) — mahua flowers, kendu leaves, siali leaves, tamarind, honey, bamboo, tubers — are a critical secondary income source for tribal households, constituting 30–40% of household income for many PVTG communities. The NTFP market is particularly exploitative: middlemen who visit villages to purchase forest produce typically pay 20–30% of the price that the same produce commands at the district headquarters market, let alone at a processing facility or retail outlet.

The kendu leaf example from Kalahandi's community forest rights programme is instructive precisely because it shows what changes when the intermediary is removed: the Kalahandi Gram Sabha Mahasangha's collectivised kendu trade generated ₹15 crore in 2023–24, benefiting 7,000+ households across 78 villages, by replacing the middleman with direct gram sabha procurement and sale. The crop did not change. The market access did.

## **Odisha Millet Mission: The Policy That Changed the Equation**

The Odisha Millet Mission, launched in 2017 and scaled to 177 blocks across all 30 districts with a total outlay of ₹2,687 crore for 2023–27, is one of the most comprehensive state-level agricultural interventions for tribal farmers in India. Its significance goes beyond the specific crop: it represents a conscious policy decision to treat tribal farmers' traditional knowledge and existing cropping systems as assets to be supported, not deficits to be overcome.

The OMM works on the full value chain: seed supply (community seed banks with locally preferred varieties identified through Participatory Varietal Trials among eight local and one improved variety); production support (Custom Hiring Centres for processing equipment, bio-input preparation by SHGs); procurement (at Minimum Support Price through TDCCOL, FPOs, and SHG federations); processing (block-level processing units for de-hulling, grading, packaging); consumption promotion (ragi

included in school midday meals, ICDS supplementary nutrition, government hostels, Anganwadis); and export facilitation.

The results, documented at the end of the International Year of Millets 2023, show substantial increases in millet cultivation area, improved seed quality, and — most importantly — the creation of functional markets for a crop that previously had no reliable buyer. Millet Shakti Cafés have been established serving lakhs of people. Malkangiri and Nuapada have been identified as One District One Product (ODOP) districts for millet-based products.

The OMM has also demonstrated something important about the NGO role in government programmes: the Mission's own documentation acknowledges that a traditional NGO approach alone — mobilisation and awareness without delivery targets — was insufficient, and that when CSOs were trained in a delivery-oriented model combining mobilisation with measurable targets, clearer results followed. The Mission is implemented through FPOs and SHGs with NGO facilitation, and the three-way interaction between community institutions, civil society facilitation, and government oversight is what produces the best outcomes.

## **Handicrafts: Skill Without Markets**

Odisha's handicraft tradition is one of the richest in India. Pattachitra painting from Raghurajpur; Appliqué work from Pipili; Dhokra (lost-wax) metal casting; Sambalpuri Ikat weaving; Gopalpur tussar silk; Kotpad handloom; Odisha brass and bell metal; Sandstone and soapstone carving — these are not cottage industries in decline. They are living art forms practised by skilled artisans whose cultural knowledge is irreplaceable.

The market problem is structural and multi-layered. Geographic isolation from markets. Dependence on intermediaries who extract most of the margin. Lack of branding and quality certification — most artisans cannot certify their handmade products in the ways that premium markets require. Limited e-commerce penetration,

both because of connectivity constraints and because of the skills needed to photograph, list, price, and service online orders. Seasonal income volatility — many artisans have no income during monsoon months when travel is impossible and markets are closed.

The GI (Geographical Indication) tag provides legal protection for regional products but does not automatically create market access. Pattachitra has a GI tag. Its producers still frequently receive 10–15% of the retail price for their work.

Odisha has significant institutional infrastructure for handicraft promotion: the Odisha State Handloom Cooperative Society (Utkalika), the Odisha Tribal Development Cooperative Corporation (TDCCOL) for tribal artisan products, and the state's Marketing Mission. The weakness is in sustained market development for individual artisan communities — building the market relationships, brand equity, and quality systems that allow artisans to access premium markets consistently, not just through periodic craft fairs.

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## **Part Two: What the Global Evidence Says**

### **Farmer Producer Organisations: What the Research Shows**

Farmer Producer Organisations (FPOs) are now the central instrument of Indian agricultural policy for smallholder market access. The Government of India's programme to promote 10,000 FPOs has generated a substantial body of evidence on what makes them succeed or fail.

The headline finding from this evidence: FPOs that become viable business entities — with strong management, clear market linkages, adequate working capital, and product focus — produce significant income increases for member farmers. FPOs that remain primarily credit-and-savings groups in an agricultural wrapper produce minimal market access benefits.

The specific outcomes from rigorous studies: FPO members receive 15–25% higher prices for their produce than non-members in comparable settings; input costs fall 10–20% through collective purchasing; access to formal credit improves significantly; and post-harvest losses fall through shared storage and handling infrastructure.

What makes FPOs fail is equally well-documented: inadequate working capital (FPOs need credit to purchase farmer output before receiving payment from markets, and most struggle to access this); weak management capacity at the FPO board and CEO level; absence of reliable market linkages before production is aggregated; and over-dependence on government procurement that leaves FPOs without alternatives when government procurement pauses.

Odisha has approximately 900+ registered FPOs across all 30 districts. Their effectiveness varies enormously — from the highly functional Kalahandi Mahasangha model to paper FPOs that exist in registration records but have no operational activity.

**What this means for Odisha NGOs:** FPO promotion is not the same as FPO development. Registering an FPO is easy. Building one that has functional governance, working capital, market relationships, and the management capacity to sustain operations across multiple seasons is a multi-year investment. NGOs that facilitate FPO registration and then move on are not producing FPO outcomes. Those that invest in governance training, market linkage, and management capacity over three-to-five-year timeframes are.

## **Value Chain Development: Lessons from Global Evidence**

The evidence on agricultural value chain development in contexts comparable to Odisha's — small, geographically isolated producers of specialty crops and artisan products — is consistent on several findings.

The first is about price premium: quality differentiation and direct market access consistently produce larger income gains than volume aggregation alone. An artisan who sells directly to a premium retailer at ₹2,500 earns more than one who sells

through four intermediaries at ₹300, even if the second model involves larger volumes. For artisan products, quality differentiation and storytelling — the narrative of who made the product, where, and how — is a primary driver of premium pricing.

The second is about aggregation and negotiating power: for commodity agricultural produce, the income gains from collective aggregation (eliminating the middleman) are most significant at the final market interface. A collective of 200 millet farmers selling directly to a processor or institutional buyer receives a substantially better price than individual farmers selling to a local trader.

The third is about market intelligence: producers who know what their product is worth in end markets — who understand the wholesale and retail price chain — are substantially better positioned to negotiate. Most smallholder farmers and artisans in Odisha have no reliable access to market price information. They accept what the trader offers because they have no basis for comparison.

The fourth is the most important: the interventions that produce durable income change are those that change the market structure, not just the individual transaction. Building an FPO's market relationship with a food company is more durable than facilitating a single direct sale. Helping an artisan community establish a brand with quality standards is more durable than organising a craft fair. Changing the system, not just helping individuals navigate the existing one, is what produces sustained outcomes.

## **Digital Market Platforms: Realistic Assessment**

Government of India has launched multiple digital agricultural market platforms — eNAM, Agrimarket, various state-level portals. The promise is straightforward: digital platforms should allow farmers to access multiple buyers simultaneously, improving price discovery and reducing intermediary dependence.

The evidence on uptake is sobering. Most smallholder farmers, particularly in remote tribal areas, do not use these platforms. The barriers are multiple: smartphone access

and data connectivity; digital literacy to navigate the platform; the logistics of getting produce to the designated trading point; and the absence of trust in a digital transaction with an unfamiliar buyer.

Where digital platforms have worked for smallholders is where they were combined with: physical aggregation infrastructure (collection centres where farmers can bring produce and have it weighed, graded, and listed); human intermediaries (FPO staff who manage the platform transaction on behalf of farmers); and established buyer relationships (corporate buyers who commit to purchasing from specific FPOs through the platform, rather than the platform generating anonymous competition).

For artisan products, e-commerce platforms — Amazon Karigar, GoCoop, iCraft, Craftsvilla, and export-focused platforms — offer genuine market access potential. The barriers are not primarily about technology; they are about photography, product description, packaging, logistics, and the sustained attention required to manage an online store. These are skills that can be built with training and support.

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## **Part Three: Five Organisations Doing This Exceptionally Well**

### **1. PRADAN (Professional Assistance for Development Action)**

PRADAN has worked in Odisha's tribal districts and comparable eastern Indian tribal states for four decades. Their livelihood model — combining SHG formation with intensive agriculture and market linkage support — has produced some of the most documented income improvement outcomes in India's tribal development sector.

Their approach to millet and NTFP value chains in tribal areas is specifically relevant: they have built FPOs linked to SHG networks, developed market relationships with institutional buyers, and produced the multi-year trust relationships with communities that allow genuine income change to occur. Their intensive immersion model — young professionals based in specific communities for extended periods — is expensive but

produces outcomes that shorter-engagement models do not.

**Transferable lesson:** Livelihoods transformation in tribal communities requires sustained, intensive engagement over multiple agricultural seasons — not a one-season demonstration project. The organisations that produce durable income change are the ones that have been in the same place long enough to understand the market calendar, the social dynamics, and the specific constraints of specific communities.

## **2. WASSAN (Watershed Support Services and Activities Network)**

WASSAN is the Programme Secretariat for the Odisha Millet Mission — giving them a unique combination of field presence, technical knowledge, and government partnership. Their work on participatory varietal selection (helping communities identify the best-performing local millet varieties for their specific conditions), community seed banks, and FPO market linkage has been foundational to OMM's success.

Their approach to community resource persons (CRPs) — training farmers to train other farmers, building peer-to-peer knowledge networks rather than top-down extension systems — is the model that the evidence on agricultural extension consistently validates as more effective than government agricultural officer-based extension.

**Transferable lesson:** Agricultural extension that works through peer networks — farmers teaching farmers — is more trusted, more contextually relevant, and more sustained than external expert delivery. NGOs that invest in building CRP networks within communities they work in are producing extension infrastructure that outlasts their programme funding.

## **3. Digital Green (India)**

Digital Green works on video-based agricultural extension — producing short videos in local languages featuring local farmers demonstrating specific practices, then showing

those videos in community screenings facilitated by local extension workers. Multiple RCTs across India and Africa have found that farmers who view locally produced videos of peers demonstrating practices are significantly more likely to adopt those practices than those who receive the same information through conventional extension.

The Odisha-specific relevance: for millet farming practices, post-harvest handling, value addition techniques, and artisan production quality improvements, locally produced video content in tribal languages could reach communities that conventional extension cannot. The production costs are low; the distribution through SHG meetings and community screenings is already infrastructure that exists.

**Transferable lesson:** Video-based peer learning is an evidence-backed, low-cost mechanism for knowledge dissemination in communities where literacy is low and conventional extension is limited. The content must be local — showing local farmers, in local languages, demonstrating practices in familiar landscapes.

#### **4. Tata Trusts / RRAN (Revitalising Rainfed Agriculture Network)**

RRAN — with Tata Trusts support — worked closely with the Odisha Millet Mission's pilot phase in building proof of concept. Their role in identifying locally preferred millet varieties through Participatory Varietal Trials, creating seed centres through FPOs, and engaging women's SHGs as the procurement and processing interface for millet supply chains established the model that OMM then scaled.

Their approach to making the SHG the market interface — not just the financial collective — is specifically important. SHGs that procure millets from farmers, process them in block-level units, and sell to hostels and institutional buyers are functioning as micro-enterprises with market intelligence, not just savings groups. This integration is what produces sustainable income rather than one-off transaction improvements.

**Transferable lesson:** Women's SHGs can function as supply chain actors, not just credit vehicles. The skills required — procurement, basic processing, quality grading, payment management — are teachable with sustained support and can transform an SHG from a savings group into a business entity.

## **5. Craftmark / All India Artisans and Craftworkers Welfare Association (AIACA)**

AIACA's Craftmark certification — a handmade product certification that provides quality assurance and artisan identity to handloom and handicraft products — addresses one of the core market failures in India's artisan sector: the inability of buyers to distinguish genuinely handmade products from machine-made imitations.

For Odisha's Pattachitra painters, Sambalpuri weavers, and Dhokra casters, Craftmark certification provides market credibility in premium domestic and international markets. It is not a silver bullet — certification alone does not create market relationships — but it is a necessary component of any strategy to access the premium segments of the handicraft market.

AIACA's broader market linkage work — connecting certified artisans to retail buyers, exhibition opportunities, and e-commerce platforms — is the practical complement to the certification programme.

**Transferable lesson:** Artisan market access requires both quality certification (to credentialize products for premium markets) and active market linkage (building the relationships with buyers that certification enables). Neither alone is sufficient.

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## **Part Four: The Odisha Adaptation**

### **What Transfers Directly**

**FPO development as a multi-year investment** — the understanding that a functional FPO takes three to five years to build, not one — transfers directly from the national and global evidence. NGOs in Odisha working with FPOs need to resource and

design their programmes for this timeline.

**The OMM model of SHG-as-supply-chain-actor** — women's SHGs as procurement, processing, and marketing entities for millet value chains — is already operational in Odisha and directly transferable to other agricultural value chains: NTFP processing, organic vegetable aggregation, artisan product aggregation.

**Peer video-based agricultural extension** in tribal languages — the Digital Green model — is directly transferable in a state where tribal language diversity makes conventional extension ineffective and where SHG meeting infrastructure already exists for content distribution.

**Community seed banks and Participatory Varietal Trials** — WASSAN's model for identifying and conserving locally preferred crop varieties — is directly transferable and critically important for climate resilience. Communities with diverse, locally adapted seed stocks are substantially more resilient to climate disruption than communities dependent on purchased hybrid seeds that require specific rainfall timing.

## **What Requires Significant Adaptation**

**E-commerce for artisan products** requires substantial infrastructure before it produces income. A Pattachitra artist in Raghurajpur who does not have reliable internet connectivity, a smartphone capable of producing adequate product photographs, packaging materials, and knowledge of how to price and describe her work for an online buyer is not able to access e-commerce as it is typically designed. The pathway to e-commerce for remote artisan communities runs through: aggregation organisations that manage the digital interface on behalf of communities; quality and packaging standards built before platform listing; and reliable logistics to the nearest courier collection point.

**Market intelligence systems** — giving farmers and artisans access to what their product is worth across the value chain — require both data (what are wholesale and

retail prices at different market levels?) and the analytical capacity to use it. Building this as a community resource, rather than as proprietary NGO information, requires deliberate design.

## **What Must Be Built**

**Cold chain infrastructure in tribal agricultural blocks** is essentially absent. For horticultural products — vegetables, fruits — that tribal communities could sell at premium prices if they reached urban markets in adequate condition, the absence of cold chain means they spoil before reaching buyers. The capital investment required is beyond individual NGO capacity but is appropriate for CSR partnerships and government convergence.

**A permanent, brand-equity-bearing platform for Odisha tribal artisan products** — not a craft fair, not a government emporium, but a sustained brand with quality standards, storytelling, and online and offline retail presence — does not yet exist at the scale the sector needs. TDCCOL's Utkalika retail stores are the closest approximation but are limited in reach and not oriented toward premium domestic and international markets. Building this platform is a multi-year, multi-stakeholder project that requires NGO expertise in brand development, CSR investment in platform building, and government partnership for quality certification and GI tag activation.

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## **Part Five: Government Scheme Mapping**

**Odisha Millet Mission (OMM):** Implemented in 177 blocks across 30 districts. FPOs and SHGs are primary implementing agencies with NGO facilitation. Total outlay ₹2,687 crore (2023–27). NGO role: FPO capacity building, SHG processing unit management, CRP networks, market linkage.

**PM Formalisation of Micro Food Processing Enterprises (PM-FME):** Central scheme for micro food processing enterprise development — direct relevance to millet processing units, NTFP value addition, and artisan food products. NGO role: awareness and application facilitation, capacity building for enterprise operation.

**One District One Product (ODOP):** Malkangiri (millets) and Nuapada (millets) are currently designated. NGO role: supporting ODOP product quality, market linkage, and brand development in designated districts.

**NABARD — FPO Equity Grant and Credit Guarantee:** NABARD provides equity grants (up to ₹15 lakh per FPO) and credit guarantee support to FPOs. NGO role: facilitation of FPO access to NABARD finance; financial literacy for FPO boards.

**TDCCOL (Tribal Development Cooperative Corporation):** Procures NTFP and agricultural products from tribal communities at MSP; operates Utkalika retail stores. NGO role: connecting FPOs and community forest rights holders to TDCCOL procurement; quality improvement to meet TDCCOL standards.

**eNAM (Electronic National Agriculture Market):** Digital agricultural trading platform. NGO role: support FPO registration and use of eNAM; build digital literacy for FPO staff managing platform transactions.

**National Handloom Development Programme:** Yarn bank, cluster development, marketing, design development. NGO role: connect artisan FPOs to programme benefits; support design documentation for GI claims.

**GI Tags (Geographical Indication):** Protects regional product identity. Relevant Odisha GI tags: Pattachitra, Dhokra, Sambalpuri, Kotpad, Gopalpur. NGO role: awareness of GI rights; support for community enforcement of GI protection; documentation for new GI claims.

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## Part Six: Further Reading

### FPO Evidence:

- *A Review on Farmer Producer Organization: A Catalyst for Empowering Small and Marginal Farmers* — Plant Science Today (2025): Comprehensive review of FPO evidence across India including Odisha-specific studies.

- *Odisha Millets Mission: An Update at the End of IYM 2023* — WASSAN / Ideas for India (2023): The most current honest assessment of OMM's achievements and challenges, with specific attention to the NGO role in delivery-oriented programming.

### **Value Chain Development:**

- *How Odisha Millet Mission Revived Millet Production* — CEEW (2024): Case study of OMM implementation including RRAN and WASSAN's model for FPO-led seed and market systems.
- *Odisha Forest Rights: Kalahandi's Gram Sabhas Lead Sustainable Change* — Down to Earth (2025): Documents the kendu leaf and bamboo value chain transformation under community forest rights — the most compelling Odisha case study of what market access through collective action produces.

### **Artisan Markets:**

- *Market Linkages for Handloom Weavers in India* — AIACA / IHDS: Evidence on what market development approaches produce sustainable income for handloom producers.

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## **A Final Note: The Distance Between Production and Price**

The farmer in Nuapada who now receives ₹22 a kilo for her millets instead of ₹12 has not changed anything about how she farms. She has changed her relationship to the market — from isolated producer dependent on a single trader to a member of a functioning collective with multiple buyers and price knowledge.

That is the intervention. Not a new farming technique. Not a technology package. Not a government scheme delivered through a beneficiary list. A changed market relationship, produced by sustained investment in collective action, governance capacity, and market linkage.

This is the work. It is slow. It compounds across seasons, not across project quarters. It requires organisations willing to be in the same community for long enough to see the changes that only time produces.

The artisan in Rayagada is still sitting with her handloom. The question is whether, three years from now, she is selling to a middleman for ₹300 or to a premium buyer for ₹2,000. The difference is not in her skill. It is in the market architecture that NGOs, CSR partners, and government can build — or leave unbuilt.

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*Written by the JaBaSu Trust knowledge team. Published April 2026. Corrections: [knowledge@jabasu.org](mailto:knowledge@jabasu.org) Evidence Grade: B — Multi-study. Last reviewed: April 2026*

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### **Related Knowledge Commons:**

- Practice Note: Farmer Producer Organisations — Building Them to Last
- Practice Note: Millet Value Chains — The OMM Model and What It Teaches
- Practice Note: NTFP Market Development — From Forest Produce to Fair Price
- Practice Note: E-Commerce for Artisan Communities — Realistic Pathways
- Org Spotlight: PRADAN — Multi-Year Livelihoods in Tribal Odisha
- Org Spotlight: WASSAN — Agricultural Extension Through Peer Networks
- Sector Primer: Social Justice & Tribal Welfare (Sector 03) — Community forest rights and NTFP
- Sector Primer: Environment (Sector 07) — Forest conservation and livelihoods

**Schemes Referenced:** Odisha Millet Mission · PM-FME · ODOP · NABARD FPO Support · TDCCOL · eNAM · National Handloom Development Programme · GI Tags (Pattachitra, Dhokra, Sambalpuri, Kotpad)