

Avani: A Model for Sustainable Online Green Enterprises in India

Sirisha Deepthi Sornapudi¹ and G. Padmini Devi²

1. Assistant Professor, Department of Apparel and Textiles, College of Community Science, Professor Jayashankar Telangana Agricultural University, Saifabad, Hyderabad-500004, Telangana.
ssdeepthi@pjtau.edu.in
2. Lecturer in Home Science, Govt. College for Women (A), Guntur - 522001, Andhra Pradesh.
padmini.gopireddy@gmail.com

ABSTRACT

Amidst growing concerns about dwindling natural resources and the current unsustainable lifestyle, there is an urgent need for green advocacy, environmental conservation, and the generation of sustainable livelihoods. Avani stands out as a beacon of hope and stands tall as a successful business model for a sustainable green online enterprise in India. A case study on Avani, the green entrepreneur, is presented in the current paper. This Kumaon-based ecopreneur from Uttarakhand, India, is an eco-enterprise that originated from an NGO, focusing on reviving lost traditional knowledge of hand spinning, hand weaving and natural dyeing of textiles. This self-reliant cooperative has integrated solar and bioenergy technologies into its ecological farm practices, thereby standing out as a 'Model Place-based Green Enterprise'. The study employs a qualitative, descriptive case study design, utilizing secondary data collected from Avani's official website and other published sources. The findings reveal that Avani is successfully utilizing the local traditional knowledge of weaving and plant sources for natural dyeing to produce Eco-friendly textiles, which has created meaningful livelihood opportunities for local artisans, thereby empowering rural communities. In conclusion, this case study offers valuable insights for policymakers, social entrepreneurs, and development practitioners seeking to advance sustainable rural enterprises that strike a balance between economic viability and environmental and social well-being.

Keywords: Green enterprise, online, sustainability, natural dyeing, textiles and women empowerment

1. INTRODUCTION

Modern technology, adopted in various production systems, is beneficial in terms of speed of processing and output. However, it is undeniable that it has put a significant strain on natural resources and disrupted local communities. The textile industry is one of the most resource-intensive and polluting industries, consuming significant amounts of water and chemicals during dyeing, which leads to water contamination and carbon emissions (Dhawale & Mohanty, 2025; Textile School, 2024). Indian textiles have a remarkable reputation worldwide, playing a crucial role in strengthening the country's economy and generating employment opportunities in rural areas. However, current production methods come with environmental costs and present significant challenges that need to be addressed (Dhawale & Mohanty, 2025; Textile School, 2024). The textile industry needs to shift towards eco-friendly production methods, as it generates nearly 8.5% of the world's textile waste, including untreated waste that harms aquatic ecosystems (Down to Earth, 2024). The increasing use of synthetic fibers and the fast fashion trend also contribute to landfill accumulation and microplastic pollution (India Today, 2025).



According to the UNDP (2023), inclusive green enterprises are vital for achieving the SDGs, particularly Goal 8 (Decent Work and Economic Growth) and Goal 12 (Responsible Consumption and Production). Green enterprises, by aligning their business models with circular economy principles and community engagement, can reduce environmental footprints while generating livelihoods and empowering marginalised groups.

The hilly regions of Uttarakhand are plagued by limited employment options, high rural youth migration to urban areas, and a decline in traditional knowledge systems, particularly in handloom and handcrafted occupations. The local artisanal produce lacks a suitable market, design innovation, and access to modernised tools, which has impacted the community. (IFAD & Government of Uttarakhand, 2022; News Gram, 2025).

In this dual context of **environmental urgency** and **rural livelihood insecurity**, place-based green enterprises offer an innovative and sustainable solution.

2. PROBLEM STATEMENT

Avani is an exemplary model that offers a solution to the aforementioned problems, prompting the researchers to select it for the case study. The manner in which the eco-enterprise has utilized indigenous raw materials and traditional knowledge to develop 'Eco Textiles' by integrating solar and bio-energy technologies into its value chain is worth exploring in more depth.

This study, therefore, explores Avani's origin and evolution, operational model, sustainable practices, market approach, and the broader social and environmental impacts of its initiatives, along with the challenges faced and the lessons it offers for replicating its model across other regions in India and beyond.

3. OBJECTIVES

- To identify the key factors that contributed to the evolution of Avani as a green enterprise
- To analyse Avani's core business model that integrates sustainability and community participation
- To find out the challenges Avani faces in maintaining economic viability while implementing the eco-friendly practices

4. LITERATURE REVIEW

Green entrepreneurship focuses on minimizing ecological impact while generating social and economic value (UNDP, 2023). Studies indicate that green enterprises play a key role in promoting sustainable production, climate action, and decent work (Shrivastava & Singh, 2023). Further, researchers emphasise that local context and community participation are vital to ensuring long-term sustainability (Bansal & Sharma, 2022).

A study by Dutta and Ghosh (2023) highlights how integrating traditional handloom weaving and natural dyeing with modern green technologies can significantly reduce pollution while preserving cultural heritage.

The International Renewable Energy Agency (IRENA, 2023) reports that decentralized solar energy has enabled small-scale enterprises to reduce operational costs, expand productivity, and minimize carbon emissions.

Research by Joshi and Negi (2024) on Himalayan women artisans highlights that empowerment through eco-enterprises extends beyond economic independence—it also fosters confidence, leadership, and cultural revival.

RESEARCH DESIGN

A qualitative research design, employing a case study approach, was used to examine and analyse the business model of Avani. The case study method was chosen because it enables an in-depth analysis of the enterprise's origin, working models, sustainable practices, its social and environmental impact, and the challenges faced in operating the enterprise.

5. METHODOLOGICAL APPROACH

DATA COLLECTION

The study is based on **secondary data sources**. Relevant information was gathered from varied sources such as

- The official website of Avani (<https://www.avaninaturals.in/>),
- Published reports, articles, and case documents on Avani's initiatives,
- News features in print and social media posts, such as Instagram, which provided insights into Avani's ongoing projects and community engagement.

DATA ANALYSIS

A descriptive and thematic analysis approach was employed. The collected data were reviewed, categorized, and analyzed under specific themes aligned with the study's objectives

ETHICAL CONSIDERATIONS

All data were obtained from publicly accessible and credible sources. Proper citations and references were maintained to ensure authenticity, transparency, and academic integrity.

6. FINDINGS

6.1 The Idea behind establishing the enterprise

Kumaon, once renowned for its traditional textile skills, including spinning, weaving, and the use of local wild silks and plant dyes, has lost this knowledge due to the seasonal migration of its people in search of low-paid labour, resulting from limited economic opportunities. Avani NGO (in the late 1990s) has identified these problems and devised a solution – 'Craft Revival' targeted at creating dignified local work, conserving biodiversity and traditional knowledge and tying production to low-impact energy and materials. Kumaon Earthcraft Cooperative (established in the mid-2000s) established the production activities to give local artisans ownership and long-term sustainability.

6.2 Business model and online operations

The textile supply chain, from fibre to fabric, starting with fibrous raw materials (Wool, silk, etc), spinning the fibres into yarns (hand spinning), hand weaving, finishing the grey fabric with natural dyes extracted from

the indigenously available plants, and the ultimate end products (garments and home textiles) in the supply chain are all done in the community-based cooperative. The eco-textiles of the enterprise are green, as the raw materials come from local hamlets, addressing the dwindling livelihoods, and are sustainable, possessing a lower carbon footprint as they do not use environmentally damaging fuel/energy practices.

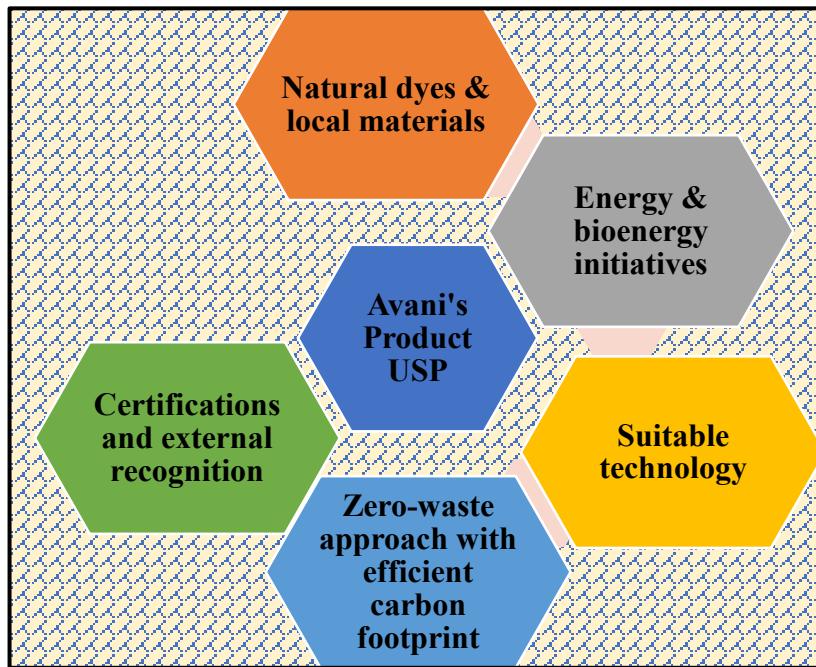
The premium, artisanal products, including shawls, stoles, sarees, scarves, home textiles, and jackets, are marketed through wholesale, retail partnerships, ethical fashion events, and an online storefront. With a strong emphasis on sustainability and ethical sourcing, these products not only stand out for their beauty but also make a positive contribution to the community and environment, ensuring transparency throughout the production process.

6.3 Digital platforms for product promotion and sales

Avani focuses on selling its merchandise in ethical marketplaces as well as directly to consumers through its website. Each product is accompanied by craft provenance, artisan profiles, and process photos exemplifying its ethos of green and ethical production. Social media (Instagram, Facebook) marketing is the brand's forte. Earthcraft connects directly with its customers through its direct sales and online enquiries, shipping the products worldwide to eco-conscious customers. Using the hybrid model of 'Cooperative production with brand-led online distribution' decreases reliance on middlemen and enables the cooperative to retain a greater share of the product value.

6.4 Sustainable practices and green innovations

Avani's sustainability approach is multifaceted:



Natural dyes & local materials: Using natural fibres like wool, eri, tussar, and linen helps promote biodiversity and reduces chemical pollution in landfills.

Energy & bioenergy initiatives: Solar electricity focus is on reducing reliance on fossil fuels by experimenting with pine needles and other biomass sources.

Suitable technology: The organization promotes low-impact production methods tailored to off-grid mountain communities.

Zero-waste approach with efficient carbon footprint: Hand production, local sourcing, and the reuse of agricultural by-products are employed to minimize waste and the enterprise's carbon footprint.

Kholijah (2024) represented in his study on the hospitality and tourism sector that practising energy-saving techniques, such as efficient energy lighting, water conservation, and waste reduction, not only contributed to a reduced carbon footprint but also yielded significant benefits both in terms of money and the environment.

Certifications and external recognitions (e.g., Craftmark, UNESCO Seal of Excellence for selected products, GOTS for dyes/processes, as noted on Avani's marketing pages) help validate the NGO's product base.

6.4 Product categories



Earthcraft's product lines are rooted in textile goods and allied offerings:

- ❖ Apparel & Accessories: Stoles, scarves, dupattas, shawls
- ❖ Art supplies: Natural crayons, natural dyed cards, Tie Dye Kit
- ❖ Lifestyle products: Natural hair dyes, holi colours
- ❖ Hand knits: Knitted head bands, woollen toys

6.5 Market positioning and target customers

Avani positions itself in the ethical/sustainable/craft luxury segment. Primary customer archetypes include:

- Conscious domestic consumers who value made-in-India craft and natural materials.
- International buyers, boutiques and ethical fashion shows (Avani has exhibited at events and received international recognition).
- Institutional buyers (galleries, museums, craft fairs) and design students interested in craft immersion courses.
- Wholesale channels that value traceability, certifications and natural dye credentials.

6.6 Digital marketing tools

Avani uses a combination of digital tools:

- **E-commerce website** (product pages, stories, purchase options).
- **Social media** for storytelling (Instagram posts/reels, Facebook).
- **Online marketplaces** and collaborations with ethical retail platforms to broaden reach.
- **E-content** (Google Arts & Culture features, press stories) to build credibility and attract international visitors and buyers.

The online presence extends beyond transactions, serving an educational purpose by helping consumers understand the time, materials, and environmental considerations behind pricing. This approach, focused on content-driven commerce, is essential since handcrafted textiles using natural dyes necessitate consumer understanding to validate their higher price points. Abilakimova (2025) reported the significance of digitisation in promoting green innovations, as it helps in the effective utilisation of resources, protects the environment, and encourages customers to buy eco-friendly, natural, and sustainable green products.

6.7 Impact of sustainable ecosystem practices

Societal outcome	Environmental outcome
Sustainable Livelihood generation: The cooperative model has provided stable work for hundreds, with reports of over 1,400 artisans involved in Avani's textile production across various Kumaon villages. This initiative reduces distress migration and supports income for women and marginalised groups.	Biodiversity and craft conservation: By utilising wild silks, reintroducing host trees for sericulture, and cultivating dye plants, Avani supports the conservation of local biodiversity and the associated traditional ecological knowledge.
Women's empowerment: Most craftworkers are women; Avani's programs intentionally build women's technical skills, financial inclusion (including bank accounts and savings), and leadership through cooperative ownership.	Reduced pollution: Natural dyes and manual/low-energy processing minimise toxic effluents common in conventional dyeing units. Adopting clean energy reduces household smoke and greenhouse gas emissions compared to fossil fuels.

6.8 Challenges faced and strategies adopted



Production constraints

- **Lead time vs demand:** Hand processes are time-consuming, making it challenging to meet larger orders while maintaining quality. Avani addresses this by targeting premium segments with longer lead times and organizing artisan networks for work distribution.

Quality assurance & standards

- **Consistency of natural dyes and hand spinning:** Natural dye shades can vary from batch to batch; Avani invests in skilled dyers, standardized recipes, and quality checks. Certifications (Craftmark, GOTS) help signal quality to buyers.

Market access & price sensitivity

- **Competition with machine-made textiles:** The cooperative addresses this by marketing provenance, durability and environmental credentials, and by participating in ethical fashion fairs and international exhibitions that value handcrafted goods. It also uses digital storytelling to educate buyers about value.

Logistics & seasonality

- **Rural logistics in a hilly region:** Transporting inputs and finished goods in the Himalayas incurs time and cost. Avani leverages local aggregation points, periodic shipment schedules and partnerships with ethical retailers to reduce friction.

Customer perception and feedback:

Customer testimonials and the brand narrative emphasise:

- Longevity and heirloom quality of products are vouched for by the customers.
- Appreciation for traceability is essential for buyers who value knowing who made the product and how it was manufactured.
- Social media engagement highlights the interest from ethical fashion consumers, designers, and students in seeking immersive craft experiences.

6.9 Future plans and recommendations:



Growth and Market Strategies:

- ✓ **Scale thoughtfully** in premium ethical segments (boutiques, museums, curated marketplaces) rather than mass markets to protect craft integrity.
- ✓ **Product diversification** with designers for limited editions and wider product width and depth; explore natural dye kits or workshops for consumers.
- ✓ **Digital investments** with UX e-commerce, integrate inventory & order management for distributed artisan production, and create richer content (video stories, virtual studio tours).

Impact Assessment & transparency

- ✓ **Publish an annual impact & financial report** summarizing artisan numbers, incomes, environmental metrics (water, chemical use avoided), and financial performance to attract larger institutional buyers and impact investors.
- ✓ **Life-cycle assessments (LCAs) studies** to quantify carbon credits/water benefits of natural dye/handloom compared to conventional goods for use in B2B pitches.

Capacity building & resilience

- ✓ **Strengthen cooperative management skills** with training in bookkeeping, procurement, quality control and digital literacy.
- ✓ **Climate resilience** through cultivation of dye/sericulture host species under climate-resilient norms and diversifying incomes (e.g., value-added farm products) to withstand climate shocks.

6.10 Research Limitations

The study is limited to the analysis of information available from secondary data sources. Primary data such as interviews or field observations were not conducted due to scope constraints. Therefore, the findings rely on the accuracy and completeness of publicly available information.

7. CONCLUSION

Avani's Kumaon Earthcraft Cooperative serves as an inspiring model of a location-based green enterprise that intertwines craft revitalization, social empowerment, and environmental stewardship. Economizing traditional skills with local indigenous resources, coupled with cooperative governance, is a brilliant pathway adopted by the eco-enterprise. Thus, Avani illustrates a viable approach for sustainable rural livelihoods. Advancements in areas such as enhanced financial transparency, structured impact assessment, and thoughtful scaling could bolster its position as a leader in the niche handloom product category and facilitate better market access for its artisans.

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