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# DEVELOPMENT ALTERNATIVES



Towards a Greener Economy: How Women-Led Enterprises Drive Jobs and Climate Solutions

The Green Enterprise Gazette



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The views expressed in the articles in this newsletter are those of the authors and not necessarily those of Development Alternatives.

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## Women-Led Micro Movements: Shaping the Future of Work



A woman shop-owner selling goods to a woman customer

Sixty-seven per cent of India's 1.4 billion population is in the working age group, and over 100 million young women and men are expected to seek gainful employment by 2030. However, the nation is close to facing an employment crisis, as the market is ill-equipped to absorb them. Despite being one of the fastest-growing economies in the world, India struggles with significant sectoral imbalances and a lack of job opportunities in villages, small towns, and peri-urban areas. This situation confines millions in cycles of low-income, undignified work.

Women and youth, who could make up half of the workforce, remain critically underrepresented in the jobs market and entrepreneurial ventures due to systemic barriers. Meanwhile, India's youth, particularly in rural areas, grapple with skill mismatches, limited market access, and a

lack of local employment options. If these challenges are left unaddressed, they could lead to economic stagnation, deepen social inequities, and result in missed opportunities for inclusive growth.

We view inclusive entrepreneurship, or 'SAMUDYAM', as a vital driver of innovation, job creation, and economic growth. This approach empowers 'job seekers' to transform into 'job makers'. To enhance the green economy, our approach is focused on unlocking the potential of women by building their capacities and creating supportive ecosystems through social innovation.

Our approach at Development Alternatives (DA) prioritises inclusivity and environmental well-being by offering grassroots solutions that empower women and promote sustainable development. Women play a crucial role in the sustenance and development of communities, which is



rooted in solidarity and a deep understanding of agency—both its presence and absence. They are uniquely placed in the evolution of ecosystems that support both people and nature. There is undeniable wisdom in how women operate; they know what it means to ‘replenish’ as opposed to ‘depleting’ resources, which also informs their commitment to more sustainable use of resources. These capabilities stem from their lived experiences, particularly in rural and resource-dependent communities.

At DA, we look at economic growth through a lens that places women at the centre of designing processes that engineer systemic shifts in local entrepreneurship and employment landscapes. As we pursue this approach, we recognise the importance of growth being scalable, sustainable, and relevant to the diversity of India.



A woman entrepreneur at her flour mill

Women tend to prioritise long-term community benefits over short-term gains. After years of working in the field of women-led entrepreneurship, we have observed that women, both individually and collectively, are enthusiastic about adopting energy-efficient methods, water conservation practices, sustainable farming techniques, and waste reduction strategies, particularly when these new opportunities enhance their incomes and bring benefits to their families and community.

Women and youth constitute more than half of the working-age population and yet only one in five enterprises are run by women. Lack of family support has emerged as one of the strongest reasons for the unequal participation of women in entrepreneurial ventures. Women excel in managing resources sustainably and almost 40% of

young women aspire to own a business in rural India but succumb to gender barriers such as lack of societal support, resources, and self-confidence. Furthermore, a lack of entrepreneurial and management skills, inadequate infrastructure, and poor marketing channels inhibit the existing enterprises from becoming profitable.

Aspiration-driven entrepreneurship, as opposed to subsistence-based income generation activities, has gained considerable recognition in the economy and the Indian society at large. Over the years, grassroots entrepreneurship has emerged as a response to the changing paradigm of employment in the country. It offers an avenue for local, opportunity-driven, and dignified employment, especially for women and youth, who have been the most vulnerable to macroeconomic shocks.

Deep listening sessions lay a solid foundation for initiating the process of social innovation and systemic change. By listening to communities, we gain insights for prototyping for entrepreneurship and build collective intelligence that leads to the co-creation of ‘systemic prototypes’—processes driven by local stakeholders that unlock new opportunities and resources with which they can be tapped. The impact of adopting a social innovation approach and co-creating processes is evident in the stories shared in this edition of the newsletter.

More irrefutable evidence can also be found in the survival rate of enterprises set up by DA and our partners. In Uttar Pradesh, for example, over 90% of the businesses set up by women continue to grow after three years. Currently, over 1600 enterprises are being established across 15 development blocks in 5 districts every month, creating more than 3000 new jobs. If this trend continues nationwide, approximately 2 million people every year could find employment in a new green and inclusive rural economy.

Women are no longer receivers of ‘innovation’ but co-conspirators in activating an ecosystem where their role as innovators and entrepreneurs becomes embedded in society. □

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# Women Driving Climate Solutions: Innovating for a Just Green Transition

According to the Socio-Economic Caste Census Data of 2011, nearly 48 per cent of rural population in India is composed of women, making them an equal contributor to India's economic and social development.

The global shift towards a greener economy is essential for tackling the climate crisis and building a sustainable future. **This transformation calls for innovative, inclusive solutions that create jobs while promoting environmental stewardship.** At the heart of this transition are women-led enterprises, which play a vital role in catalysing change. By creating green jobs, reducing carbon emissions, and enhancing resilience, these enterprises demonstrate how sustainable practices can foster equitable economic growth.

Traditional economic models often fail to recognise women as essential economic contributors, thus perpetuating a gender gap that hinders sustainable progress. Without targeted interventions, the gender divide is likely to widen, particularly in emerging sectors like renewable energy and green technology, where men currently dominate, leaving women underrepresented in leadership, employment, and entrepreneurship. To achieve a just and inclusive low-carbon future, it is essential to amplify the voices of marginalised groups, particularly women, racial and ethnic minorities, LGBTQ+ individuals, persons with disabilities, refugees, displaced persons, and indigenous peoples.

## Challenges and Opportunities on the Path to a Greener Economy

The current global economy relies on unsustainable practices that deplete natural resources and exacerbate climate change. Simultaneously, women in many regions face significant socio-economic barriers that restrict their access to financing, skill development and leadership opportunities. These barriers hinder the creation of climate solutions and weaken economic resilience, especially in the context of a green economy.

**Research has shown that when women lead businesses, they are more likely to set ambitious climate goals and achieve superior environmental and economic outcomes, underlining the crucial link between gender equity and effective climate action** (World Bank, 2022).

The gender disparity in access to resources crucial for climate change adaptation is a pressing issue. Women, especially in developing countries, experience significant inequalities in access to credit, land ownership, agricultural inputs, technology and training, compared to men (WEDO, 2007). These inequalities are perpetuated by



**Pragya Devi, an e-rickshaw entrepreneur, ensures safe and reliable transportation for young girls and boys on their way to school**

deeply ingrained cultural and social norms (Andrijevic et al., 2020). Additionally, women often face mobility restrictions due to social and religious factors, which limits their ability to migrate and adapt to climate impacts, a flexibility that is more commonly afforded to men (Haque et al., 2022).

However, the green economy presents a unique opportunity to empower women, particularly in rural and underserved communities, to lead enterprises that simultaneously address climate challenges and economic disparities. Women-led enterprises often prioritise sustainability,



integrating community-centered approaches that enhance the broader socio-economic environment. Grassroots organisations focused on women's empowerment are vital in bridging the gap between government efforts and women's development needs.

### Women as Change Agents

Empowering women, children, and marginalised groups is increasingly recognised as key to driving successful climate action. This empowerment not only stimulates economic and socio-economic growth but also significantly contributes to poverty reduction and environmental protection (Ajani et al., 2013). Women, particularly in vulnerable communities, are often at the forefront of resilience building. They leverage traditional knowledge and problem-solving skills to navigate shifting social and environmental landscapes (GI, 2011). **When**



Madhuri didi, a dedicated member of the Urja Mandala Samiti, monitoring energy utilisation at a solar plant

**women receive investment in their economic advancement, the impact extends to their families, leading to improved education, healthcare and household well-being, which helps break the cycle of intergenerational poverty.** Empowering women elevates their communities, benefiting all members, especially when young girls and boys observe their mothers' successes.

### The Power of Collective Action

In India, women-led green enterprises are emerging as powerful agents of change, particularly in rural regions affected by

environmental degradation, water scarcity, and pollution. Women entrepreneurs are leading the way in developing sustainable solutions in sectors such as renewable energy, water conservation, sustainable agriculture, and waste management.

In many cases, women's self-help groups (SHGs) provide a safe and supportive space for discussing community issues and developing solutions. This collective approach takes advantage of diverse perspectives, fostering localised and sustainable solutions through collaborative support. By amplifying the voices of women and strengthening their solidarity, society can harness their transformative potential for a more equitable and prosperous future.

### Development Alternatives' Green and Inclusive Initiatives: Safe Mobility and Urja Mandala

At Development Alternatives (DA), we aim to create entrepreneurial ecosystems that provide underserved groups with the resources, opportunities, and market linkages they need to succeed. **Our approach to social innovation focuses on identifying systemic challenges, designing solutions tailored to local contexts, and fostering collaboration among stakeholders.** By leveraging partnerships and facilitating co-creation, we ensure scalable and sustainable impact. Our community-based model centres on **collective action, knowledge empowerment, and building leadership skills.** DA's flagship initiatives, Safe Mobility and Urja Mandala, exemplify our commitment to creating sustainable, inclusive, and green enterprises.

Urja Mandala provides renewable energy solutions to rural communities through a decentralised solar mini-grid model that places women collectives at the centre of energy management. These collectives are responsible for collecting, managing, and distributing clean, affordable energy to local entrepreneurs, such as small-scale manufacturers, artisans, and shop owners. By fostering economic growth and environmental protection, the initiative challenges societal norms and transforms power dynamics in rural India.

In many regions of India, gender and technology are often perceived



as incompatible. To challenge this misconception, Urja Mandala actively involves women collectives from the outset in energy operations, customer acquisition, and financial management. This inclusive approach, integrating technical training, leadership roles, and knowledge sharing, creates a paradigm shift in perspective. By positioning women as leaders in energy management, Urja Mandala not only empowers communities to thrive economically but also reduces reliance on fossil fuels, enhancing resilience to climate challenges.

Similarly to the Safe Mobility prototype, DA aims to promote safe, sustainable mobility for women while creating economic opportunities through green transportation solutions. In partnership with local women's groups, we are facilitating the formation of women-run e-rickshaw enterprises. These women receive not only training in driving but also support in business management and financial literacy. This project addresses the pressing need for safe public transport, offers an alternative to fossil-fuel-powered vehicles, and empowers women to be champions of sustainable mobility.


Our initiatives demonstrate firsthand how women-led enterprises can drive the green economy forward. The collective action approach has allowed us to address socio-economic barriers and ensure that women have the training, resources and support needed to run successful enterprises. These projects not only create employment opportunities but also foster an environment where women lead sustainable solutions to pressing environmental challenges.

## The Way Forward

As we navigate the path towards greater equity and inclusivity, it is evident that empowering women is not merely a choice but a conscious and strategic decision if the nation aims to strike a just socio-economic balance.

Building a greener economy that fosters climate resilience, job creation, and gender equity requires collaborative action from policymakers, private sector leaders, and civil society. Women-led enterprises play a crucial role in this transformation. By supporting

and scaling such enterprises, we can unlock the untapped potential of women as drivers of climate solutions and economic growth. Investing in women-led enterprises not only builds a greener economy but also paves the way for a more inclusive and equitable world.

At DA, our focus on green and inclusive entrepreneurship reinforces our belief that women are pivotal to achieving a sustainable future. As we continue to expand our efforts, we remain committed to creating an environment where women can lead, innovate, and inspire change in their communities and beyond. 

## References

- Ajani, E., Onwubuya, E., & Mgbenka, R. (2013). Approaches to economic empowerment of rural women for climate change mitigation and adaptation: Implications for policy. *Journal of Agricultural Extension*, 17(1): 23. Details available at <https://doi.org/10.4314/jae.v17i1.3>
- Andrijevic, M., Crespo Cuaresma, J., Lissner, T., Thomas, A., & Schleussner, C.-F. (2020). Overcoming gender inequality for climate resilient development. *Nature News*. Details available at <https://www.nature.com/articles/s41467-020-19856-w>
- Groots International (GI) (2011). Leading Resilient Development: Grassroots Women's Priorities, Practices and Innovations. Details available at [https://link.springer.com/chapter/10.1007/978-981-16-0680-9\\_29](https://link.springer.com/chapter/10.1007/978-981-16-0680-9_29)
- Haque, A. K. E., Mukhopadhyay, P., Nepal, M., & Shammin, M. R. (2022). South Asian Stories of Climate Resilience. In *Climate Change and Community Resilience: Insights from South Asia* (pp. 3–6, 4450454). Details available at [https://doi.org/10.1007/978-981-16-0680-9\\_29](https://doi.org/10.1007/978-981-16-0680-9_29)
- World Bank. (2022). Gender equality and the green transition: Towards a more sustainable and inclusive future. Details available at <https://documents1.worldbank.org/curated/en/099718102062367591/pdf/IDU08c737dd00f8580412b0aed90fce874ab09b0.pdf>
- Women's Environment & Development Organisation (WEDO). (2007). Report of High-Level Roundtable: How a Changing Climate Impacts Women. Details available at <https://wedo.org/wp-content/uploads/2007/12/roundtable-final-report-6-nov.pdf>

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## Unlocking the Potential of Women-Led Enterprises for Economic Growth and Climate Resilience



Bhukli Oraon from Village Gunia operating an oil expeller using clean energy

**A** greener economy offers a transformative opportunity to align economic growth with sustainability. Amid the intensifying climate crisis, adopting low-carbon solutions is critical, especially in vulnerable regions. Women-led enterprises, positioned at the crossroads of these challenges, have immense potential to generate jobs, pioneer sustainable practices, and build resilient economies when supported by appropriate policies.

### The Unique Role of Women-Led Enterprises

Women-led enterprises leverage local knowledge and community networks to drive sustainable practices. A notable example is Deep Sakhi, a women-led initiative promoted by Mlinda in Jharkhand's Gumla district. Launched in 2022 by six tribal

women, it revitalised traditional mustard oil production using sustainable methods and expanded to turmeric, karanj oil, and deshelled groundnuts. By integrating technical knowledge with solar-powered operations across the value chain, Deep Sakhi engages nearly 200 women producers and 15 processors, all while reducing its carbon footprints.

Additionally, 30 women-led collection and distribution enterprises ensure smooth procurement and sales to rural customers. Beyond environmental benefits, this initiative strengthens the micro-enterprise ecosystem, diversifies income sources, and enhances financial independence. These ripple effects improve family nutrition, education, and resilience, exemplifying scalable models of inclusive growth and climate resilience.

## Barriers Hindering Women-Led Enterprises

Despite their potential, women-led agribusinesses encounter significant barriers. Bulk procurement of raw materials during post-harvest periods is constrained by inadequate storage facilities, limiting turnover and competitiveness. Additionally, a lack of insufficient working capital loans exacerbate these challenges, while market access remains confined to local areas. Socio-cultural norms further restrict women's participation in leadership roles, particularly in traditionally male-dominated sectors like manufacturing.

These barriers not only hinder individual enterprises but also obstruct transitions to community-led, sustainable economic models.

## Policy Recommendations for Empowerment

To unlock the potential of women-led enterprises in fostering economic growth and climate resilience, inclusive and targeted policies are essential. Key recommendations include the following:

### 1. Access to Finance

- Develop micro-credit schemes and working capital loans tailored for agribusinesses, enabling bulk procurement and uninterrupted production cycles.
- Introduce low-interest loans for enterprises adopting green technologies, such as solar-powered processing units.

### 2. Infrastructure and Storage Solutions

- Invest in decentralised solar-powered storage facilities to preserve raw materials and finished products, managed as community assets.
- Create shared packaging units to reduce operational costs and enhance product quality.

### 3. Capacity Building and Technical Training

- Provide training on value chain management, financial literacy, and marketing strategies, climate-resilient technologies, and modern agricultural practices to enhance productivity.

- Establish mentorship networks to connect experienced entrepreneurs with emerging leaders.

### 4. Market Linkages and Outreach

- Foster public-private partnerships to connect women-led enterprises with urban and international markets.
- Develop e-commerce platforms for rural enterprises, reducing dependency on intermediaries.

## Conclusion

Women-led enterprises possess transformative potential to drive economic growth and climate resilience. Initiatives like Deep Sakhi highlight how sustainable practices combined with local ingenuity embed enterprise development skills in the community and promote environmental stewardship.



Radhika Devi and her group members from village Chundri run a micro enterprise on clean energy-based turmeric powder processing

However, realising this potential requires inclusive policies that address systemic barriers and expand opportunities.

Collaboration among governments, private sectors, and civil society is essential to create enabling environments with accessible finance, training, and market linkages. By fostering women's leadership, we can build a greener, more equitable economy that benefits communities and the planet.

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## Radha Ahirwar's Journey: Transforming Lives Through Community-Driven Water Solutions in Bundelkhand



Radha Ahirwar at one of the community taps of the LOCO Model in Ahirwar Basti

**T**he story of Radha Ahirwar from Ahirwar Basti in Mador village, located in the Tikamgarh district of Madhya Pradesh, exemplifies how grassroots initiatives can bring about transformative change. The hilly region of Bundelkhand, where Mador is located, has often faced acute water shortages due to its challenging terrain and lack of infrastructure. In Mador, women would trek long distances to fetch water for their families, which left them particularly

exhausted and reduced the time they could spend on other meaningful activities, such as education or income generation. In many Indian societies, women are often expected to adhere to traditional roles, including taking care of their family, managing household chores, and, in this case, primarily procuring water for the household. In the Ahirwar Basti, Radha and other women from the community found themselves burdened by this usual drudgery.



## Identifying the Challenge

In 2017, representatives from Development Alternatives visited Radha as part of their survey, during which a significant issue of water scarcity in the village came to light. Radha explained that the women in their Basti had to walk 2 km every day to fetch water, which consumed much of their time and energy. Development Alternatives had already implemented a successful water supply model in a neighbouring locality, which inspired Radha to mobilise the women in her community and propose a similar solution for Ahirwar. Through a deep listening and interaction session with the women of the community, discussions centred on making water more accessible and generating livelihoods through poultry farming.

## From Crisis to Solutions: Mobilising the Community

Development Alternatives and the Work for Progress team guided the community, emphasising that they would need to

contribute labour for the project and manage the construction work themselves. In return, the project would handle the design and provide technical support. After deliberations, the community agreed, and Radha took on the leadership role in implementing the project. She supervised the construction, maintained financial records, and ensured active community participation.

## Implementing the LOCO Model

The water supply system operates under the **Locally Owned and Community Operated (LOCO)** model. It is a solar-powered initiative implemented by Development Alternatives with support from the Department of Science and Technology (DST). This self-sustaining model provides safe drinking water and lighting solutions powered by renewable energy. To promote ownership and ensure long-term sustainability, every household contributed ₹1,000 to a common fund for construction. The project features a solar-powered system with a 10,000-litre water tank, supported by a ₹316,536 grant



10000 litre solar powered tank system managed by Siddh Baba Water Supply Committee



and a ₹60,500 community contribution. Additionally, each household contributes ₹50 every month for maintenance.

The Siddh Baba Water Supply Committee meets regularly to manage funds, make collective decisions, and address maintenance issues, fostering a true sense of community ownership.

For the past seven years, the LOCO model has addressed the often ignored and visibly invisible issue of women's labour in accessing the most basic needs in Ahirwar. This initiative is run and maintained by the women on the committee.

### **A Leadership Journey**

Initially hesitant to speak or engage with others, Radha has transformed into a confident leader. She now manages the water supply committee and collects the monthly fee from each beneficiary. The project has also trained women on the committee, equipping them with technical skills, bookkeeping, and record-keeping proficiency. Radha is now determined to extend this initiative throughout the village by seeking support from government departments and organisations.

### **Impact: Beyond Access to Water**


The main aim of the project is to assist communities in their access to basic services, generate livelihoods, and empower them to take leadership in designing their own futures. The implementation of the LOCO model in Ahirwar has saved time and made water available, enabling the entire community to develop poultry farming in association with public sector programmes and partners. The increased access to water has boosted economic activities within the community. Additionally, the project has empowered women to take on leadership roles, promoting a green and sustainable economy while improving their overall quality of life.

### **A Model for Sustainable Future**

The LOCO model emphasises community-led actions, creating a sense of community ownership of services and accountability. Together, these principles make it a sustainable model and ensure equitable distribution of basic services, resulting in positive outcomes in sanitation, health, and income.

### **A Ripple Effect of Change**

A seemingly small but significant intervention, such as making water more accessible, can trigger a chain reaction of positive effects across the development landscape of a society. This collaborative effort involving the community, Development Alternatives and Work For Progress has made resources available for families to expand their poultry business and engage in more livelihood-generating activities. The active participation of women in the entire process of water supply management and distribution has also raised awareness about sanitation and health, empowering them to test drinking water and prevent waterborne diseases. The Siddh Baba Water Supply Committee continues to grow and evolve, driven by the active involvement and frequent assessments of this resilient community of women who are driving change.

The story of Radha's transformation from a homemaker constrained by societal norms to a community leader actively solving practical problems, generating livelihoods, and promoting an inclusive and green economy is both inspiring and instructive. 

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## Women Leading the Just Energy Transition: How Meenu Devi's Enterprise is Shaping a Greener Economy

**M**eenu Devi, a 36-year-old entrepreneur from Sikhar, Mirzapur, Uttar Pradesh, is an inspiring example of women's economic empowerment. Originally from Lucknow, Meenu's family moved to rural Mirzapur, where they faced several challenges, including limited resources, financial instability, and inadequate infrastructure. In 2019, to improve her family's situation, Meenu joined the Nav Chetna Agro Producer Farmer Company (FPO). Through her involvement with the FPO, she developed the vision to establish her own Atta Chakki unit (flour mill), aiming to create sustainable livelihood opportunities.

Initially, she relied on a diesel-powered mill, but the high costs and environmental impact were constant challenges. Her monthly income from the mill averaged ₹20,000, with diesel costs consuming about ₹5,000. In 2023, during a community meeting organised by Development Alternatives as part of the Energy Transition for Rural Empowerment project, she learned about transitioning to solar energy through the Urja Mandala initiative. The Urja Mandala (energy constellation) economic model, which employs decentralised renewable energy systems, represents a pioneering approach that integrates private, public, and community-driven solutions, with women collectives at the forefront of an inclusive and equitable energy transition. This model empowers local communities by combining reliable renewable energy with productive uses, demonstrating its role as a catalyst for driving sustainable socio-economic growth.

Women's collectives manage solar mini-grids that encompass power generation, storage, and distribution, leveraging technology to optimise these systems. These women's collective, supported by public agencies such as state rural livelihood missions and local panchayats, enter into long-term agreements with renewable energy supply company (RESCO) to install solar generation systems. It co-funds the storage and distribution infrastructure with partial grants and sells solar electricity to local micro-



Meenu Devi managing her Atta Chakki unit powered by Nav Chetna Urja Mandala's 30 kWp solar energy

Meenu's success goes beyond her individual achievement. Her shift to solar power has become a powerful source of inspiration for other women in her community, encouraging them to adopt sustainable renewable practices. The tangible benefits of her decision have created opportunities for women to explore the advantages of solar energy in their own enterprises, helping them cut costs, boost productivity, and adopt renewable energy solutions.





Meenu Devi recording the metre reading of her atta chakki unit

entrepreneurs at a profit. This model provides reliable energy, fosters entrepreneurship, drives economic growth, and reduces carbon emissions.

Participating in the listening and co-creation sessions conducted by the Development Alternatives team was crucial in shaping Meenu's decision to adopt solar power. These sessions offered her and other women entrepreneurs a safe space to share their needs, aspirations, and challenges. The team offered valuable insights into how solar energy could uplift their businesses, helping Meenu recognise the full potential of transitioning to clean energy. This collaborative approach strengthened her confidence in adopting and championing the Urja Mandala model, ultimately leading her to make the switch to solar energy.

The impact of this decision has been transformative. By transitioning to solar power, Meenu was able to reduce her operational costs by 70% and increase her income by 30%, while significantly reducing her carbon footprint by eliminating diesel emissions. Her monthly expenses dropped drastically from ₹5,000 for diesel to just ₹1,000 for maintenance. Moreover, her income surged to ₹30,000 due to enhanced production capacity. This shift has not only

improved her business efficiency but also contributed to carbon mitigation, as her operations now run on clean, renewable energy.

Her journey exemplifies the transformative power of women-led, green enterprises in driving local economic growth and climate solutions. She inspires other women to pursue green entrepreneurship.

When asked about her biggest inspiration, she says, 'My husband is my greatest supporter in life. He has faced life's challenges with resilience and instilled in me the importance of diligence.' Meenu envisions expanding her business by introducing an advanced stitching unit powered by solar energy in the future. This initiative would create more jobs and boost the local economy, enabling women to learn advanced stitching techniques. By utilising solar power, the unit will reduce operational costs and enhance productivity, offering women valuable skills that lead to decent employment opportunities while promoting a cleaner and more sustainable future. □

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Sangita Vishwakarma in her Namkeen Unit



# Spices and Condiments: Glocalising Local Flavours of the Country



## Medicinal Herbs and Flavours from the Plains of Uttar Pradesh

In the Amethi district of Uttar Pradesh, farmers grow medicinal plants such as tulsi, vetiver, moringa, mint organically which are being processed into value added products like herbal tea, essential oils under the brand name of Raw & Kind which are then marketed on e-commerce platforms.

## Hills of Manipur Nurturing the Growth of Organic Spices

Despite the internal stressful situation, this organic spices cluster portrays the resilience of women farmers who cultivate turmeric, ginger in the hills of Churachandpur district of Manipur in North-Eastern India. The spices are value-added to make ginger slices and turmeric powder. The farmers have named their brand as 'Zopui Aieng' meaning - Mountain Turmeric and tagline as "Taste from the Hills".



## Exotic Spices from the Valley of Sirsi, Karnataka

Enriching cultivation of spices by the indigenous farmers such as white pepper, yellow cardamom, mace and nutmeg in the Western Ghats of Uttara Kannada district of Karnataka. The farmers are institutionalised under Totakashi Farmer Producer Company (FPC) and have a website [www.totakashi.in](http://www.totakashi.in)

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