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# Humari Udaan, Humari Pehchaan

**Green Economy Opportunities: Enterprises and Livelihood** 

Reshma Begum, 48 e-rickshaw entrepreneur, Mirzapur, Uttar Pradesh

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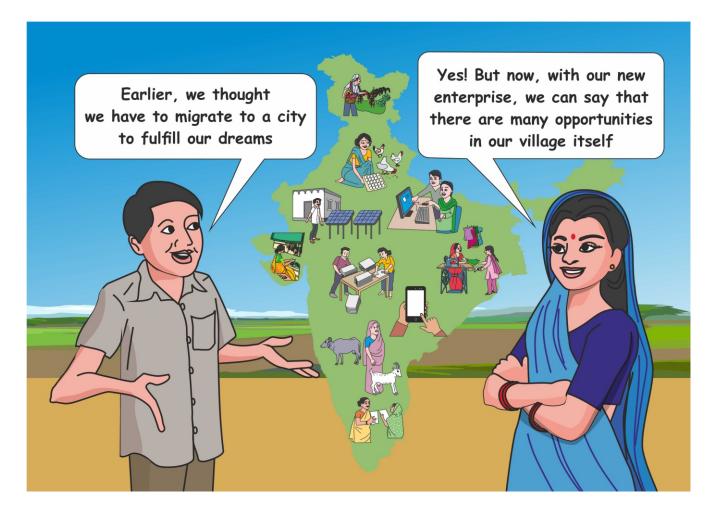
Aarya

#becomingvisibletogether

# Why Just Green? How about an Inclusive, Multi-hued Economy...

### Kanika Verma

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n 2019, just before the world got hit by the global pandemic COVID-19, India announced its ambition to become a \$5 trillion economy and global powerhouse by 2024-25 (PTI 2022). At the COP26 meet in Glasgow, India set a seemingly conflicting target to cut its net carbon emissions to zero by 2070 (BBC 2021). While we may seem to be on our way to becoming a \$3 trillion economy already, challenges such as poverty and joblessness still prevail in the country, with more than 32 million individuals unemployed (CMIE n.d.) and 84 million stuck in poverty (Natti 2020).

Constructing a 'green economy' has become the shared vision of development that can help achieve this economic progress within the ecological limits. And, India's movement towards a green economy with an inclusion lens can result in improved human well-being and social equity while significantly reducing environmental risks.

Experts, including neo-classical economists, have been trying to predict when this would be possible and

project various scenarios. India Inc also seems to be taking the lead in tackling these two dominant dualities under the 'framework' of a capitalist-based economy that needs continuous economic growth — without contextualising it in its reality. An archaic system got us in trouble in the first place, where subsidies are deemed incentives for large businesses, while the poor are seen as 'liabilities' who need to be subsidised. Examples include an attempt by a multinational to reduce its waste and carbon footprint while encouraging the consumption of a mineral water bottle product in rural communities located 1500 km away from its unit.

Moreover, 90% of India's labour force is employed in the informal economy (Das 2021). With its ability to innovate within the ecological limit, be inclusive, generate livelihood opportunities, and quickly respond to risks, micro-entrepreneurship is a phenomenon, positioned in informality, which can enable such an envisioned change.

Juxtapose the aforementioned bottled water example with a local e-rickshaw business run by a young, specially-abled woman, known as Sangita. Her physical challenge was overcome through redesigned hand brakes to ease her riding, by another local entrepreneur who recreates battery-powered rickshaws from scrap. This narrative is not a dream or work of future fiction, but Sangita's beautiful journey of courage that has sparked a 'movement' of women-led mobility businesses in a region where women-led businesses were not even seen or heard of. Read more about other such stories of change in this DANL edition.

The green economy can be efficiently, effectively, and relevantly achieved through the strengthening of microenterprises in a systemic manner. It will, however, call for - (i) enabling equitable distribution of resources, especially finance and compensation for those who are most at risk; (ii) changing the power structures that exist in knowledge by accepting what we do not know and learning from those whose identities are entrenched in responding to economic growth with climate solutions and; (iii) facilitating access to opportunities that are future forward and cater to 'aspirations' of entrepreneurs and communities.



Through the entrepreneurial ecosystem built by the DA-led Work4Progress program, Sangita, 29, is living her dream of riding an e-rickshaw in the streets of Mirzapur

It is undeniable that the pandemic has shaken systems, but it has also exposed the fault lines to give us an excellent opportunity to build a multi-hued economy, where we can witness the culture and demand of environmentally conscious-cum-small businesses, thriving to create a regenerative future. Ultimately, not just shades of green, the economy will then represent hopes and aspirations in the form of reds, blues, and yellows as well. As we celebrate 75 years of independence, let us make a vow for millions to be free from the shackles of poverty, suppressive 'structures' that inhibit many from employing or showcasing a unique identity, and finally, the worn-out 'notions of development' that stand in the way of creating a pathway for prosperity for our people and planet.

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# 'Money Movement' - A Story of Innovation, Inclusion, and Collaboration

## By Ankit Mudgal and Muskan Chawla

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ccess to finance plays a major role in the evolution of entrepreneurship and economic growth of any country as it acts as a catalyst for the development of mini- and micro-enterprises, which constitute 99.5% of all micro, small, and medium enterprises (GoI 2022). For many years now, there has been a strong drive for the financial inclusion of microenterprises. Although several programmes have been launched, complete financial inclusion is a long way off, as micro-enterprises still suffer from a lack of easy and affordable access to finance. Data suggest that such enterprises receive less than 5% of total loans by banks and non-banking financial companies (NBFCs) going to MSMEs (Bandyopadhyay 2021). As compared to enterprises with a turnover of less than \$12,500, largersized and medium-sized firms were found to have higher probabilities of formal funding as the most important source.

The financial requirement of setting up a microenterprise usually ranges from \$350 to around \$3500. This range is such that, on one hand, banks often find it difficult to provide a credit of such small amounts and, on the other hand, availing of loans from microfinance institutions (MFIs) involves legal formalities and high interest rates. Thus, this segment of micro-enterprises gets excluded from the financial services from both banks as well as MFIs. The financial gap in this segment has been described as a problem of the 'missing middle'. In most places, this forces micro-enterprises to opt for informal lending sources with high-interest rates, thereby forcing them into a vicious cycle of debt.

"Easy and affordable access to credit enables hundreds of thousands of people, particularly women, who have been at the threshold of entrepreneurship, to overcome barriers and set up small businesses."

- Shrashtant Patara, CEO, Development Alternatives

To overcome this challenge, Development Alternatives (DA), through various projects, has innovated solutions that are community-led and provide easy access to collateral-free, formal credit at affordable rates. DA's three-pronged approach for meeting the financial needs of communities includes options such as:



Rajkumari, who runs a tailoring unit for last 7 years always wanted to diversify her business. In 2021, she took a loan of \$370 to procure machines to set up a paper-making enterprise. Her enterprise enabled-

- two-fold increase in her annual income to \$3100 in 2021
- linkages with 5 retail units (3 women-run)
- creation of 2 jobs

## Capitalising on community assets

To tackle the challenge of access to finance for microenterprises in rural regions, DA leveraged the power of 'community influence' to develop a micro-credit facility (MCF). It is an inclusive credit-based facility, managed by three women-led self-help group (SHG) federations in the Jhansi and Niwari districts of the Bundelkhand region, providing micro-loans of up to \$650. Such loans are provided to micro-enterprises that are technically feasible and financially viable. In the last four years, a total of 132 enterprises have been linked to the microcredit facility, with a repayment rate of 99%, and loans worth \$51,000 have been disbursed. The MCF has been supporting a diverse range of enterprises from vermicomposting manufacturing units to information centres and e-rickshaws. Efforts are currently underway to replicate this model in other locations.

# Influencing financial institutions

DA has established a multi-stakeholder, collaboration platform, called as Regional Entrepreneurship Coalition (REC), in seven districts including Niwari, Madhya Pradesh and Jhansi, Mirzapur, Bhadohi, Basti, Bahraich, and Lakhimpur, Uttar Pradesh to collectivise efforts of entrepreneurs and stakeholders working towards entrepreneurship development. By encouraging synergies and resource optimisation among various departments, RECs have supported over 250 microentrepreneurs since 2018. Along with building partnerships with training institutes, government

departments, and academic institutions, this platform has also enabled the co-creation of innovative and context-relevant solutions with banks, Non-Banking Financial Companies (NBFCs) and MFIs to provide credit products and services to diverse range of entrepreneurs. For instance, the REC in Mirzapur district has helped more than 250 entrepreneurs to access loans from financial institutions and support under government schemes worth \$175,000 in the last five years from multiple stakeholders such as financial institutions and government departments at the district level.

After being an active member in Mirzapur REC and developing trust in the platform, **HDB Financial Services** (HDBFS), a NBFC, increased the ticket size of the loans provided by them. HDBFS now provides loans greater than **\$2600** which is four times the average loan size provided by other NBFCs. Six entrepreneurs have been provided loans worth **\$35,000** by HDBFS in last 15 months, with a repayment rate of 100%.

### Alternative lending platforms

The term 'alternative lending' refers to a broad range of loan options that are accessible to business owners in addition to traditional bank loans. Platforms that allow for alternative lending enable individuals to get access to affordable loans when she/he is unable to get a typical bank loan for any reason. One such platform is Rang De [rangde.in], a peer-to-peer social investing and lending platform, in partnership with the Indian Micro Enterprises Development Foundation (IMEDF). Rang De connects social investors with the community of entrepreneurs. At Rang De, each borrower can access



Ramshankar Tiwari, Jhansi gave up farming, seeing a gap in the availability of good quality compost in the market. In 2020, he set up his own vermicompost manufacturing enterprise. As his business grew, he applied for a loan of \$630 to procure raw chemicals in bulk. His enterprise has enabled

innovative credit products that cater to the particular needs of the borrowers. During the last seven months, over 600 loans worth approximately \$314,000 have been disbursed through the Rang De platform with a fixed interest rate of 8%.

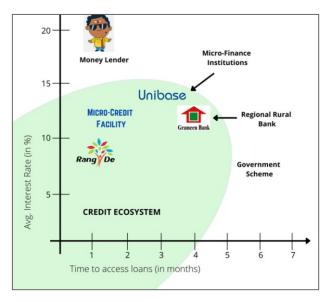
"The partnership between Development Alternatives and Rang De is critical to enable entrepreneurship to become a way of life in the communities. We use social innovation tools to unleash entrepreneurial energies in rural communities, which are then actualised through trust-based affordable credit provided by the Rang De platform."

- Kanika Verma, Associate Vice President, Development Alternatives Group

The portfolio of solutions has enabled DA and our partners to create an enabling local credit ecosystem for entrepreneurs to access timely loans at affordable rates. These innovations, built largely through local initiatives and collaborations, have been successful in creating impact at micro and meso levels in the form of either decreasing time to access loans or interest rates or both.

### **Future of innovative finance**

Da's focus is now on innovating and developing cuttingedge prototypes and tools for inclusivity. One such prototype is the 'Digi-Socio currency', which assesses the creditworthiness of borrowers not based on financial grounds but by leveraging social matrix and connections.



Innovative solutions bringing various finance providers under the umbrella of credit ecosystem, supported through programmes at DA  $\,$ 

<sup>-70%</sup> increase in monthly revenue to \$420 in last 1 year

<sup>-</sup>Aggregation of compost for 10+ retailers

Such prototypes will also help entrepreneurs, excluded from the formal credit ecosystem, in accessing formal loans. In addition, acknowledging the fact that financial literacy is the first step towards financial inclusion, DA in partnership with Rang De, through its interactive financial literacy training, will ensure that financial literacy now reaches a wider swatch of people with the use of a 'Digital Bioscope'.



**Digital Bioscope** offers financial training to interested individuals. The users, through the eyepiece, learn from interactive modules and take test after the financial training. After clearing a test on the device, individuals can also apply for loans through the digital bioscope

For a large section of grassroots entrepreneurs who are out of the credit ambit or 'digitally absent', upcoming new credit protocol systems like Open Credit Enablement Network (OCEN) (Mulye 2021) are empowering new players (digital platforms) by:

- Reducing the entry barrier to offer financial services
- Enabling them to widen their market and provide innovative credit products while reducing the cost of acquiring customers
- Utilising digital infrastructure in order to facilitate presence-less, paperless and cashless service delivery (Sahamati 2020)

To address the challenge of access to finance at the right place and right time, DA has partnered with financial institutions at micro and meso levels. These partnerships will strengthen the existing financial delivery systems along with innovating new products and services, enabling rural communities to move a step closer to entrepreneurship.

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# Making Solar Energy Transition for Rural MSMEs Viable and Profitable

## By Sudhir Sah

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ndia has witnessed phenomenal growth in the renewable energy sector over the last decade. With a total installed renewable energy capacity of 151.37 GW (as of December 2021), India ranks fourth in the world in terms of installed capacity (Manohar 2022). This includes 49.34 GW of solar, 40.08 GW of wind, 10.61 GW of bio-power and 51.34 GW of small and large hydropower. During the last eight years, India's renewable energy capacity has almost doubled, with solar energy capacity expanding over 19 times.

Despite making strides in overall renewable energy capacity addition, a more disaggregated view of India's rooftop solar sector shows that it has largely remained untapped. Against the government's target of installing 40 GW of rooftop solar power by 2022, it has only been able to achieve 7.6 GW by March 2022 (Mercom 2022). Bridging this gap over the next few years would require collaborative efforts from all actors in the rooftop solar business ecosystem, including consumers, project developers, financiers, policymakers, and regulators.

One area of opportunity to achieve this target lies in the micro, small and medium enterprise (MSME) sector. Besides playing a prominent role in the Indian economy, the MSME sector is also one of the largest consumers of energy in India, accounting for approximately 54% of the total energy consumed by industries (World Bank 2019). Moreover, a significant number of MSMEs, mostly in rural areas, use highly polluting diesel generators as the power source at an exorbitant cost. Adoption of solar energy by these rural MSMEs can help contain the demand for fossil fuels and provide a cushion against escalating energy expenses and volatile market conditions while improving their competitiveness, profitability, and sustainability. However, despite a huge untapped market opportunity and a strong business case to shift from fossil fuelbased power sources to solar energy, the rural MSMEs have so far been lagging in the such energy transition.

A major barrier to the adoption of the solar energy among rural MSMEs has been the lack of access to low-cost finance. Micro-enterprises, in particular, from the rural areas are perceived to be a credit risk by lenders. High transaction costs due to the small size of projects, lack of quality assurance, challenges in implementing net metering, and concerns about legal enforceability of contracts are some of the other barriers that are holding the adoption of solar energy at scale (Gulia, Thayillam,

and Garg 2022). There is also a socio-cultural barrier typical of a rural customer base. Unlike their urban counterparts, rural MSMEs desire a one-stop solution for all their solar energy transition needs including assurance of their quality and after-sales support. On the supply side, most of the actors in the solar rooftop business ecosystem tend to work in isolation and struggle to make the unit economics viable.

Addressing these challenges and creating an enabling rooftop solar business ecosystem for rural MSMEs can unlock a huge lending opportunity for microfinance institutions, non-banking finance companies, commercial banks, and emerging innovative financial start-ups. This would also pave a low carbon pathway for India and significantly contribute to achieving the government's target of 500 GW of non-fossil power capacity by 2030 (GoI 2021), and becoming a carbon neutral (net-zero) economy by 2070 (BBC 2021).

The Development Alternatives Group (DA Group), in collaboration with Smart Power India (SPI), is creating an enabling ecosystem for rural solar energy transition by partnering with various private and public actors in the business ecosystem such as technology providers, financial institutions, service providers, and relevant government agencies. By leveraging digital technology, it is generating and aggregating rooftop solar demand from rural MSMEs, and unlocking economies of scale for incentivising technology providers, financial institutions, and system installers to operate in rural areas. The initiative, in partnership with financial institutions, has successfully introduced an innovative financing model for easing the energy transition journey of rural MSMEs.

Under the model, besides providing a highly competitive low-cost finance, the equated monthly instalment for servicing the loan is lower than the monthly cost savings on using electricity from rooftop solar instead of a diesel generator. Besides mitigating carbon emissions, the reduced cost of enterprise operation is helping entrepreneurs expand and grow their business; thereby creating vibrant local green economies.



Suryanarayana Bind, pictured with installed rooftop solar panels at his enterprise

# A successful energy transition by a rural microenterprise

Suryanarayana Bind from Mishrainpur, Bhadohi district of Uttar Pradesh owns an integrated flour mill-cum-oil extraction enterprise. He used to power his business with a diesel generator. However, the escalating diesel expenses and cost of operation and maintenance negatively impacted the competitiveness and profitability of his enterprise.

Under the Joint Rooftop Solar Initiative by the DA Group and SPI, Bind was made aware of the benefits of using solar energy, and a business case for energy transition was established. By providing a one-stop solution at his doorstep, a 16-kWp rooftop solar power plant was installed at his enterprise at a cost of ₹ 7.12 lakh, with financing support from ProgCap. Using solar energy, the micro enterprise is estimated to have cut down its energy cost by up to 70% while mitigating on an average 2.00 tonnes of carbon emissions, every month. Bind has been able to pass on a part of the energy cost savings to his customers by reducing the processing cost, much to their delight.

The government has identified energy transition and climate action as a key priority area for reaching netzero carbon emissions by 2070, and has declared a goal of making India energy independent by the 100th year of India's independence (Jain 2022). The rural MSMEs can play a very important role in ensuring livelihood security while decarbonising the Indian economy more equitably and inclusively. The DA Group, through collaborative efforts and innovative financing models, has been creating an enabling ecosystem for making rural solar energy transition viable and profitable, and co-providing social, economic, and environmental benefits to the larger community in rural areas.

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# Rekindling the Spirit of Circularity in Rural India

# By Debasis Ray and Rashika Sharma

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s the global population increases, resources are dwindling, further deepening the gap between the richest few and the poorest masses. This is evident from the fact that to provide the current demands of the population, we will need on average 1.75 times the current capacity of the earth (Earth Overshoot Day n.d.). This divide is prominent in a developing yet fast-growing nation like India, which struggles to strike a balance between current demands and future needs.

Striking the balance is challenging, but a solution may be hidden in plain sight. Consider, for example, the Indian agriculture system, which is unique for optimal utilisation of limited resources. Take agricultural waste: Straws used to have a variety of uses — as roofing materials, as fuel, as a handicraft material, or as a value-added product as ropes. But in the current industrial format of agriculture, straws are not only seen as 'waste' but have become a major cause of air pollution.

In other words, there is a need to rediscover old conventional practices to increase resource efficiency. One such method that has been implemented by Development Alternatives, with support from Godrej Agrovet Limited, is combining poultry and fishery, wherein waste from poultry is used as fertiliser and feed for fish. This not only reduces waste but also increases the savings for farmers. Diversifying the sources of income from poultry and fishery ensures financial stability for farmers. From the implementation of these integrated fishery and poultry models, more than 160 entrepreneurs have seen a 51% increase in revenue within a year. These entrepreneurs have also reused more than 30 tonnes of poultry waste, contributing to almost 20% savings in their input cost. There are many such models, such as vermicomposting, integrated goatery models and integrated horticulture models, which have been practised in Indian rural areas for a long, but the recent industrialisation of farming has diminished the relevance of these practices.



The integrated fishery and poultry model at work in Barabanki,

Uttar Pradesh

## Waste to Wealth: Repurposing Textile Waste

Scaling the impact in the circular economy at the grassroots through circular models such as the integrated fishery and poultry enterprise adds value to the rural economy while also reinforcing regenerative models of business. One such business model is ropeweaving cluster, promoted by the Indian Micro Enterprises Development Foundation (IMEDF) under the Scheme of Fund for Regeneration of Traditional Industries (SFURTI) of the Ministry of Micro Small and Medium Enterprises (MSME), Government of India.

At the IMEDF-SFURTI rope-weaving cluster in the Muzaffarnagar district of Uttar Pradesh, textile waste is converted into ropes, which are then used to make furniture and décor items. The artisans make products such as charpoys, stools, and racks, using natural fibres like cotton and jute, and up-cycling plastic wrappers are used in fast-moving consumer good (FMCG) products. Set up in 2021, this cluster provides a source of livelihood to women and an additional source of income to their households, helping them send their children to school and pursue higher education. The 300-odd women at the cluster, belonging to the minority Muslim community, are creating economic opportunities for themselves and also setting a model for replication in other geographies.

On average, the women turn around 7000 kg of waste in a month to make a diverse range of products. The raw material is procured from textile units, the waste of which would have otherwise gone to landfills.

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The artisans at the IMEDF-SFURTI rope-weaving cluster, Muzaffarnagar, Uttar Pradesh



Upcycled products made by artisans at the rope-weaving cluster in Muzaffarnagar, Uttar Pradesh. (Pictures courtesy: Sirohi)

Gauhar, 30, has mobilised more than 300 women from the nearby villages to join the cluster. Initially, she had been the only one willing to work while other women were a bit reluctant. Earlier, she used to do weaving with plastic material, but now she uses cotton or jute fibre as she has become more aware of the environmental impact of the materials. She supports her family of five including two sons, aged five and seven. She says, "After joining the cluster, I have become highly confident."



# E-rickshaw: Women Empowerment through Green Economies

### By Rajeev Kumar and Roopali Gupta

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ue to the lack of safe transport, many young women are forced to drop out of school (Sateesh and Sekher 2014), which reduces their ability to access mainstream economic opportunities. Further, the lack of access to mobility also hinders them from fulfilling their basic needs such as seeking medical support and securing personal items. For these purposes, they often have to depend on men, widening the gender gap and keeping the women disempowered. In order to overcome this challenge, Work4Progress India, through dialogue with the community, co-created an e-rickshaw model to provide-

- support to women to enhance livelihoods through erickshaw and ancillary enterprises,
- safe commuting services to community members including girls and women, and
- inspire women to move towards non-traditional enterprises and contribute strongly towards economic, social, and environmental impact in their community.

The model gives women the ownership of mobility through e-rickshaws, breaking gender stereotypes in the community. Moreover, replacing a conventional autorickshaw with an electric auto-rickshaw can reduce carbon emissions by about 37 tonnes/per auto over its 10-year lifetime (India Innovation Lab for Green Finance 2018). The implementation of this model has seen multifaceted impacts, with women transitioning from traditional enterprises to opting for e-rickshaws, young girls going for higher education, women entrepreneurs travelling to market on their own, and women becoming independent in getting medical help for themselves or their children.

### A light in Prabha's life

Prabha Devi, 42, is a hardworking woman from Maharajpura village, near Orchha town of Tikamgarh district, Madhya Pradesh. She was a member of Sakshi FPO (Farmer Producer Organisation), a successful spice processing unit selling turmeric, chillies, and coriander. As its members started quitting it to start their stores, the FPO was temporarily shut down in 2019.

Looking for a fresh start, Prabha chanced upon 'Namaste Orchha', a tourism promotion festival, and its special scheme for women-led e-rickshaws. She liked the idea and joined the programme. She underwent immersive 15-day training under the scheme in which she learnt about traffic rules, how to talk to customers, and finally rode an e-rickshaw. After the successful completion of the training, she was rewarded with a driving licence. Her business skills came in handy in making her new business profitable and responding to new challenges. She plies her e-rickshaw between Maharajpura and Orchha, targeting the localities with schools and markets, and earns ₹13,000 a month.

She has become an inspiration for many women in Orchha



Prabha Devi plying her e-rickshaw in Orchha

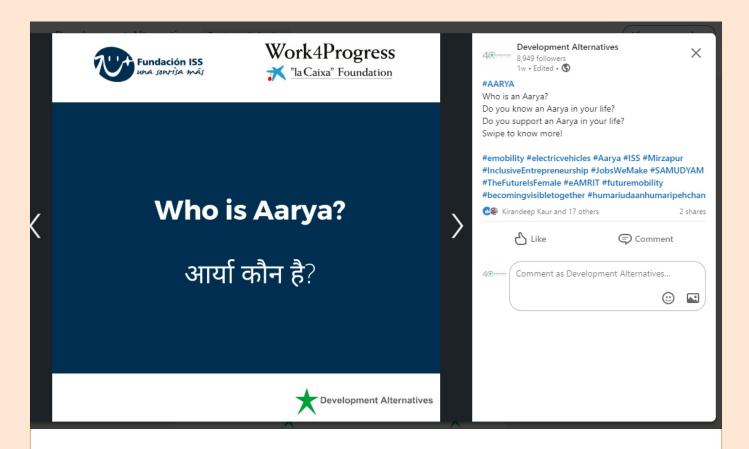
who have come forward to ply e-rickshaws. As Orchha is a tourist town, there is a good demand for commuting facilities as tourists look for quick and easy modes of transport to visit the many beautiful locales of the town. E-rickshaws also spread the message of green transportation with low carbon emissions. Recently the local administration of Orchha mandated that the e-rickshaw is the preferred mode of transport near the historical fort area and the temple. This proactive approach of the authorities has made the women running e-rickshaws more visible in the community.

Prabha's story does not stop here. She is also a certified security guard and promotes "women at work". She supported her daughter-in-law by enrolling her in the local police force. She has also trained two fellow women to ride e-rickshaws. Prabha says, "Since I started driving the e-rickshaw, my confidence has increased and I feel accomplished."

Meanwhile, in Mirzapur, Uttar Pradesh, a two-year project is underway, with co-funding leveraged from ISS Foundation of Spain, to scale the existing e-rickshaw prototype and its adoption by young women. Under Aarya e-mobility programme, Development Alternatives envisions to create a network of women-run e-rickshaws in Mirzapur and Bhadohi, Uttar Pradesh to provide safe mobility to women and young girls. #becomingvisibletogether #humariudaanhumaripehchan.

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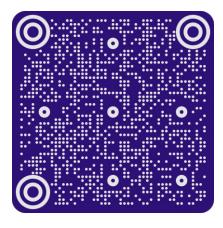


### **#AARYA**

Who is an Aarya?
Do you know an Aarya in your life?
Do you support an Aarya in your life?

Click on the image to know more!

Come be a part of the #Aarya movement in creating safe mobility for women and young girls. For more information, please reach out to kverma@devalt.org



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

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