



Livelihoods, Green Economy and Rural Enterprises Building the Foundations of *Viksit Bharat*

Rural India lies at the heart of India's transition towards a green and inclusive development model. As the country advances towards the vision of *Viksit Bharat*, livelihoods are increasingly being reshaped through sustainable agriculture, renewable energy, circular economy practices, and rural entrepreneurship. Government initiatives such as DAY-NRLM, PM-KUSUM, GOBARdhan, and natural farming missions are integrating economic growth with ecological balance and social inclusion. At the same time, Self Help Groups, farmer collectives, and village enterprises are emerging as key drivers of this transformation. This article examines how rural livelihoods are evolving within the framework of the green economy and becoming central to India's sustainable development journey.

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India's development story has always been rooted in its villages. Even today, with nearly 65 percent of the total population residing in rural areas, a significant share of livelihoods continues to depend on agriculture and allied activities. This demographic reality makes rural India not merely

a recipient of development policy but its central driver. At the same time, India's rapid economic expansion has brought visible environmental stress, ranging from groundwater depletion and soil degradation to rising emissions and waste generation. The challenge, therefore, is no longer whether growth should continue, but how it can be aligned with ecological sustainability.


It is in this context that the idea of a green economy has gained policy prominence globally and in India. As defined by the United Nations Environment Programme (UNEP), a green economy is “low carbon, resource efficient and socially inclusive,” designed to improve human well-being while reducing environmental risks and ecological scarcities. India’s evolving development strategy increasingly reflects this framework, particularly through rural transformation, renewable energy expansion, and livelihood diversification.

The Green Economy Framework

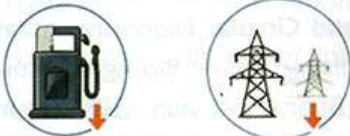
The concept of the green economy first gained structured attention through David Pearce’s *Blueprint for a Green Economy* (1989), but it has since evolved into a core pillar of sustainable development within UN frameworks and national policies. In India, this transition is reflected in multi-sectoral policy convergence:

- Ministry of Environment, Forest and Climate Change (MoEFCC) initiatives on climate action and circular economy
- Ministry of New and Renewable Energy (MNRE) programmes such as PM-KUSUM
- NITI Aayog strategies on resource efficiency and waste-to-wealth systems
- NABARD interventions in rural credit, FPOs, and green financing


PM-KUSUM SCHEME - KEY FEATURES



Promotion of solar-based irrigation infrastructure



Reduction in dependence on diesel and grid electricity





Integration of farmers into energy value chains

Source: MNRE, Government of India

NATURAL FARMING AND TECHNOLOGICAL CONVERGENCE

<p>Natural farming focuses on:</p> <ul style="list-style-type: none"> • Chemical-free cultivation • Soil regeneration • Biodiversity enhancement • Reduced input dependency 	<p>Technological innovations such as drone-based agriculture enable:</p> <ul style="list-style-type: none"> • Precision farming • Crop monitoring • Efficient input use • New livelihood opportunities
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This convergence of traditional knowledge and modern technology is creating sustainable productivity and new income avenues for rural youth and women.

- Ministry of Rural Development (MoRD) schemes like DAY-NRLM and MGNREGS (now being restructured and referred to as VB-G RAM G, with a stronger focus on asset creation, climate resilience, and sustainable rural infrastructure). VB-G RAM G aims to move beyond wage employment towards durable rural asset creation, natural resource management, and climate-adaptive livelihood support systems. While MGNREGS primarily focused on providing wage employment and short-term livelihood security, VB-G RAM G represents a strategic shift towards long-term rural asset creation, productivity enhancement, and climate-resilient development outcomes.

According to NITI Aayog (2023), India’s circular economy alone could generate millions of jobs and unlock significant material recovery value if properly integrated with rural systems. The green economy is now understood not as a standalone environmental agenda but as a development model integrating economy, society, and ecology.

From Welfare Model to Enterprise Ecosystem

A major structural shift underway in rural India is the transition from a welfare-based model to an enterprise-driven livelihood system.

DAY-NRLM and Institutional Transformation:

The Deendayal Antyodaya Yojana–National Rural Livelihoods Mission (DAY-NRLM), launched by the MoRD, Government of India, represents one of the largest community institution-building programmes globally. Its core architecture—Self Help Groups (SHGs)—has fundamentally reshaped rural financial inclusion. According to NABARD’s SHG-Bank Linkage Programme reports, millions of rural women now access formal credit channels, reducing dependence on informal lenders.

PANCHAYATI RAJ INSTITUTIONS INSTITUTIONAL BACKBONE OF THE GREEN RURAL TRANSITION

Gram Panchayats occupy a central position in India's rural governance architecture and are emerging as critical institutions for enabling the green economy at the grassroots level. As the closest tier of governance, they act as convergence platforms for rural development schemes and local planning processes. Their role extends to integrated functions such as planning and convergence of programmes like DAY-NRLM, MGNREGS, SBM-Grameen, PM-KUSUM, and GOBARdhan; local management of natural resources including water conservation, soil health, and commons; supervision of waste and sanitation systems under circular economy models; and facilitation of Self Help Groups (SHGs), Farmer Producer Organisations (FPOs), and village enterprises.

In several regions, Panchayats have demonstrated strong leadership in driving sustainable development

outcomes. For instance, in Maharashtra's Hiware Bazar Gram Panchayat, participatory watershed management and water conservation planning transformed a drought-prone village into a model of water sufficiency and rural prosperity. Similarly, Piplantri Gram Panchayat in Rajasthan has gained recognition for integrating environmental conservation with social development through large-scale tree plantation linked to girl child welfare, strengthening ecological balance and community participation.

These examples highlight how empowered Panchayats can translate policy intent into measurable ground-level outcomes. In the context of the green transition, Gram Panchayats function as the institutional bridge between national policy frameworks and grassroots implementation, making them indispensable to building sustainable and climate-resilient rural India.

More importantly, SHGs have evolved beyond savings groups into producer collectives, micro-enterprises, and service providers, engaging in dairy and livestock value chains, food processing, tailoring, handicrafts, retail, and local services. This transformation reflects a shift from survival-based livelihoods to institutionally supported rural entrepreneurship ecosystems.

Building Village-Level Enterprises: The Startup Village Entrepreneurship Programme (SVEP) under DAY-NRLM marks a critical evolution in rural development strategy. Unlike subsidy-led models, SVEP focuses on business planning support, enterprise incubation, access to credit, mentoring, and capacity building. This has led to the emergence of micro-enterprises in services, agro-processing, repair work, and small manufacturing, thereby reducing distress migration and strengthening local economies. As highlighted in MoRD policy briefs, rural entrepreneurship is increasingly viewed as a tool for employment generation and local value creation.

Linking Economy with Ecology

The green economy becomes most tangible in rural India through its linkage with livelihoods.

Sustainable agriculture: Programmes like *Paramparagat Krishi Vikas Yojana* and the National

Mission on Natural Farming (NMNF) promote reduced chemical inputs, soil regeneration, organic farming clusters, and climate-resilient practices. Studies referenced by the Food and Land Use Coalition (FOLU India) show that sustainable agriculture remains limited in scale but has strong potential for expansion if supported by robust market linkages and institutional backing.

Renewable Energy and Rural Energy Transition : The PM-KUSUM scheme (MNRE, Government of India) is transforming rural energy systems by promoting solar irrigation pumps, decentralised renewable generation, and enhancing farmer income through surplus electricity sales. According to MNRE updates, India has already achieved significant renewable capacity expansion, positioning rural areas as active contributors to the country's energy transition.

Waste to Wealth and Circular Economy: Initiatives like GOBARdhan (Galvanising Organic Bio-Agro Resources Dhan) under Swachh Bharat Mission (SBM-Grameen Phase II) promote biogas generation, organic fertiliser production, and circular waste systems. MoEFCC's circular economy framework (2021 onwards) further supports the integration of waste management with rural livelihoods, creating both environmental and economic value at the grassroots level.

Gender and Green Economy: An Underutilised Force Multiplier

One of the most transformative but under-recognised dimensions of rural green growth is women's participation. According to World Bank and ILO estimates, increasing women's workforce participation could significantly boost India's GDP, with some projections suggesting gains of up to USD 700+ billion in the medium term.

In rural India, SHGs are largely women-led and are actively engaged in agro-processing and enterprise development. Moreover, renewable energy programmes like Surya Mitra (MNRE) are training women in solar technology. Initiatives such as "Drone Didi" further demonstrate how women are entering high-tech agriculture and precision farming.

Despite this progress, women still constitute a relatively small share of formal enterprises (as per government MSME data). This indicates that the green economy is not only an environmental transition but also a gender inclusion opportunity of macro-economic scale.

Natural Farming and Technological Transition

India's shift towards natural farming reflects a hybrid model combining traditional knowledge and modern science. Natural farming reduces input costs, improves soil organic content, enhances water retention, and strengthens climate resilience.

Simultaneously, initiatives like "Drone Didi" demonstrate how rural women are entering precision agriculture through drone technology for crop monitoring, spraying, and yield optimisation. This convergence of ecology, technology, and gender empowerment is redefining rural productivity systems.

Key Challenges: Why the Transition Is Still Uneven

Despite policy momentum, the green rural economy faces several structural constraints:

- Fragmented implementation across states
- Limited access to market linkages for green products
- Knowledge gaps at the grassroots level
- Weak integration between schemes
- Inadequate climate finance penetration in rural areas

As noted in NITI Aayog and World Bank reports, institutional convergence remains the most critical missing link in scaling impact.

GENDER DIMENSIONS OF THE GREEN ECONOMY

Women are key drivers of rural green transformation through SHGs and related initiatives.



Renewable energy enterprises



Organic input production



Agro-processing units



Recycling and waste management activities



Programmes such as Surya Mitra (MNRE) are enabling technical skilling in solar energy systems. However, greater institutional support and market integration are needed to enhance women's participation in formal enterprises.

From Schemes to Systems

The future of India's rural green economy depends on three structural shifts:

- **Institutional convergence:** Schemes such as DAY-NRLM, MGNREGS, PM-KUSUM, and SBM must operate as an integrated ecosystem rather than isolated programmes.
- **Capacity building:** Gram Panchayats must evolve into local climate and enterprise planning units, supported by technical training and digital tools.
- **Market integration:** Without stable markets for organic produce, renewable energy, and circular products, rural green enterprises cannot scale sustainably.

Conclusion: Towards a Green and Inclusive Rural Future

India's transition towards a green economy is no longer aspirational; it is actively unfolding across its rural landscape. However, its success depends on whether rural India can be transformed from a passive beneficiary into an active architect of sustainability. From SHGs and solar pumps to natural farming and circular waste systems, rural India is gradually building the foundations of a *Viksit Bharat* rooted in ecological balance and inclusive growth. The next phase of transformation will depend on scaling integrated systems, strengthening local institutions, and ensuring reliable market linkages. If these elements align, India's villages will not only sustain the green economy, they will lead and define its future trajectory. □