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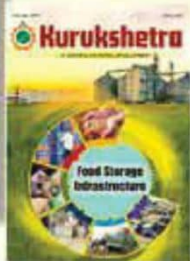
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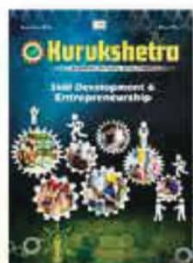
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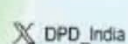
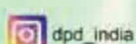
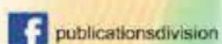
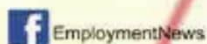
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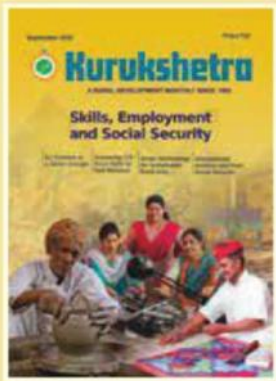


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Contents

Fostering Jobs, Building Bharat ELI Scheme as a Gamechanger

Dr. K. K. Tripathy

5



Unorganised Workers and Social Security Measures - An Overview

Manjula Wadhwa

11



Gramoday 2.0 From Skills to Self-Reliance

Dr. Harender Raj Gautam

17

Green Technology for Sustainable Rural Jobs

Dr. Nimish Kapoor

24



The Success of 'Digital India' in Rural India

Balendu Sharma

33



India-UK FTA: From Farm Gate to Premium Shelves

BS Purkyastha

39



AI-Enabled Digital Skilling for Rural India

Dr. Arti, Sayantan De

45

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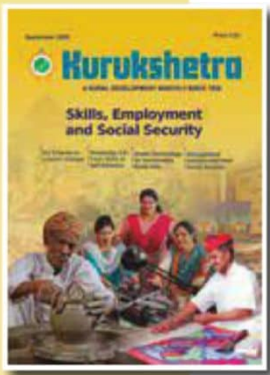
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Editorial

Rural India, home to nearly 65% of the nation's population, holds the key to India's inclusive growth story. Yet, even today, vast swathes of the rural landscape remain trapped in poverty, informal employment, and inadequate access to basic social security. The need to address the intertwined challenges of skill development, employment generation, livelihood, and social security has never been more urgent.

Employment in rural areas is predominantly informal and seasonal, heavily dependent on agriculture. Non-farm employment is growing, but slowly. The solution lies in a two-pronged approach: boosting agro-industries and rural entrepreneurship while also promoting rural infrastructure development.

Government Programs like MGNREGA have served as a crucial safety net, but there's a need to move beyond subsistence work. Providing credit access, enhancing digital connectivity, and establishing rural clusters for small-scale industries can stimulate sustained job creation. Government schemes like the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) and Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) have been instrumental in providing rural employment and skilling opportunities. The Employment Linked Incentive(ELI) Scheme has come into force with effect from 1st August 2025 with a projected outlay of Rs. 99,446 cr. aims at refurbishing the employment sphere of the country by facilitating employment, skilling, reskilling and upskilling and other opportunities for India's youth.

One of the most significant roadblocks to rural employment is the lack of relevant and market-oriented skills. Despite government interventions, the gap between skills and employment opportunities remains a pressing issue that needs both immediate and long-term attention. There is often a mismatch between the training provided and the actual needs of local industries or markets. Additionally, a lack of infrastructure, poor digital connectivity, and low awareness about schemes hinder rural participation. Many trained youth are unable to find sustainable employment, either due to quality gaps in training or the absence of local job opportunities

Employment alone cannot ensure a dignified life. Access to health care, old-age pensions, maternity benefits, and insurance remains weak in rural belts. Even schemes like Ayushman Bharat or PM-KISAN have not reached all intended beneficiaries due to administrative and awareness barriers. A universal rural social security framework, similar to the gig workers' welfare code, must be urgently considered.

To address these challenges, a more integrated and localised approach is required. Skill development programs must align with regional economic activities—such as agriculture, agro-processing, handicrafts, and rural tourism—to ensure relevance and sustainability. Public-private partnerships can play a crucial role in upgrading training infrastructure and linking rural youth with market-driven employment. Moreover, empowering local governance bodies like Panchayati Raj Institutions to plan and monitor skill development can improve accountability and outreach.

In conclusion, rural India does not lack potential—it lacks opportunity. By tailoring skill development to local contexts, strengthening implementation of employment schemes, and fostering rural entrepreneurship, India can unlock the vast human capital in its villages. The focus must now shift from simply creating jobs to creating meaningful livelihoods with robust social security in place that retain talent in rural areas and ensure inclusive, sustainable development. □

Fostering Jobs, Building Bharat

ELI Scheme as a Gamechanger



Employment Linked Incentive Scheme (ELI) to support employment generation, enhance employability and social security, spanning across all sectors with a special focus on the manufacturing sector. Under this scheme employers receive financial incentives from the government for generating new employment especially for youth, women and other priority groups. The main objective of the scheme is to ensure equitable access to economic opportunities and to reduce unemployment, to promote self reliance, strengthen industry workforce and drive inclusive and sustainable economic growth.

Dr. K. K. Tripathy



Originally announced as a part of Prime Minister's package of five schemes in the Union Budget 2024-25, the Employment Linked Incentive Scheme (ELI) came into force with effect from 1st August 2025. With a projected outlay of Rs. 99,446 cr., this scheme aims at refurbishing the employment sphere of the country by facilitating employment, skilling, reskilling and upskilling and

other opportunities for India's youth. The ELI scheme in India has been launched with a distinct strategic rationale which differentiates it from various traditional skill-development schemes/programmes focused on training, skilling and upskilling.

Extant Job Scheme Scenario

Government of India's employment programmes have evolved significantly from broad-based initiatives



to more targeted and skill-focused approaches. Various positive programmatic interventions were made to enhance employability of the country's youth through skill development. These programmes spread across multiple Ministries/Departments/institutions, target different population groups – rural, urban, women, school students, industrial workers, etc. The objective is to ensure equitable access to economic opportunities and to reduce unemployment, promote self-reliance, strengthen industry workforce and drive inclusive and sustainable economic growth.

Under the Skill India Mission (SIM), the Ministry of Skill Development and Entrepreneurship (MSDE) ensures delivery of skill, re-skill and up-skill training through an extensive network of skill development centres under various schemes, viz. Pradhan Mantri Kaushal Vikas Yojana, Jan Sikshan Sansthan, National Apprenticeship Promotion Scheme and Craftsman Training Scheme through Industrial Training Institutes, to all the sections of the society. The SIM aims at preparing youth future-ready and equipped with industry relevant skills.

The Government has established 36 Sector Skill Councils (SSCs), led by industry leaders in their respective sectors. These SSCs are to identify skill development needs as well as to determine skill competency standards. Further, National Skill Development Corporation, under the market-led

programme, offers support to training providers that collaborate and align industry validated skill courses. Skill India Digital Hub - a unified platform has been encouraged by MSDE to integrate skilling, education, employment, and entrepreneurship ecosystems and to provide a long-standing array of facilities targeting an extensive variety of participants. Similarly, Deen Dayal Upadhyaya – Grameen Kaushal Yojana and Rural Self-Employment Training Institutes are two schemes of Ministry of Rural Development in the field of skill development for rural poor youth, including sectors like agriculture, handloom and tourism, etc. for their gainful employment.

Earlier, a somewhat similar to the ELI scheme, the Aatmanirbhar Bharat Rojgar Yojana was launched with effect from 1 October, 2020 to incentivise employers for creation of new employment and restoration of loss of employment during Covid-19 pandemic with a terminal date of 31.03.2022. As on 31.03.2024, 60.49 lakh beneficiaries were benefitted through 1.52 lakh establishments in the country.

Why ELI Scheme?

ELI scheme, in comparison to the traditional skill-development schemes, envisages enabling more skilling and sector-specific relevant employment opportunities for the youth. The following privileged points have been considered in the scheme interventions:



Table 1: Employment Linked Incentive (ELI) Scheme: A Brief Overview

S.No.	Dimensions	Descriptions
1	Objective (s)	▪ To place a special focus on the manufacturing sector, ▪ To support employment generation, ▪ To enhance employability, and ▪ To extend and ensure social security across all sectors.
2	Budget	▪ Total Outlay: Rs. 99,446 Crores.
3	Scope and Scale	▪ Pan-India implementation with a target to create 35 million jobs in two years' timeframe.
4	Time Duration	▪ The scheme benefits are applicable to jobs created between 01.08.2025 and 31.07.2027.
5	Major Outcome	▪ Job creation & formalisation of the country's workforce by extending social security coverage to crores of young men and women.

- Laying focus on the skills linking directly to employment;
- Creating a joint responsibility of private players to generate actual employment by incentivising employers, industries, institutional training entities and to ensure accountability;
- Ensuring rolling out of tailored training course mapping with industry need and hence promoting demand-driven skilling;
- Encouraging official job registration at government institutions, thereby bolstering formal employment.

the scheme implementation and the major outcome out of the schematic intervention, is depicted in **Table 1**.

Strong Framework and Structuring Success

The scheme is structured in two parts – (a) incentive to first time employees and (b) extension of support to employers. The first part of the scheme focuses on encouraging new employable entrants into formal workforce. A brief on the incentives envisaged for first time employees under the scheme is at **Table 2**.

The second part of the incentives are meant for employers. The proposed incentive is directed to generate additional employment, with a significant focus on manufacturing. A brief on the incentives

ELI Scheme: A Brief Overview

A brief scheme overview, in terms of objective (s), budget outlay, scope, coverage and scale, duration of

Table 2: Structure of Incentivising First Time Employees

S.No.	Dimensions	Descriptions
1	First Timer Entrant Beneficiaries Targeted	▪ 1.92 Crore first-time employees – registered with EPFO (Employees' Provident Fund Organisation) are expected to be first-timers entering the workforce.
2	Eligibility	▪ Employees drawing salaries up to Rs. 1 lakh per month.
3	Incentive Particulars	▪ First-time employees will receive one month's Employees' Provident Fund (EPF) wage, up to Rs. 15,000 in two instalments. ▪ First instalment is due after 6 months of service, and the second after 12 months of service and completion of a financial literacy program by the employee. ▪ A portion of the incentive will be held in a savings instrument or deposit account for a fixed period, accessible later by the employee.
4	Payment Mechanism	▪ Payments are to be made through Direct Benefit Transfer (DBT) mode using the Aadhaar Bridge Payment System.

Table 3: Structure of Incentivising Employers		
S.No.	Dimensions	Descriptions
1	Target and Scope	- The expectation is to incentivise creation of nearly 2.60 crore additional jobs. - Additional employment to be generated in all sectors but special emphasis should be laid on manufacturing sector.
2	Eligibility Criteria	- Employers to maintain sustained employment for at least six months. - Establishments must register themselves with EPFO. - Registered entities are required to hire a minimum number of additional employees (varies from 2-5 with 50 or more employee strength) on a sustained basis for at least six months.
3	Incentive Particulars	- Employers avail up to Rs. 3,000 per month for two years for each additional employee. - For the manufacturing sector, incentives will be extended to the 3rd and 4th years as well, providing extended benefits
4	Incentive Structure (per additional employment/month)	Proportional incentive of up to Rs. 1,000 for up to Rs. 10,000/month; Rs. 2,000 for Rs. 10,001 – 20,000/month and Rs. 3,000 for Rs. 20,001Rs. 1 lakh/month EPF Wage.
5	Mode of payment of incentive	Payments to employers are made directly through DBT into Permanent Account Number(PAN)-linked accounts.

envisaged for the employers under the scheme is at **Table 3.**

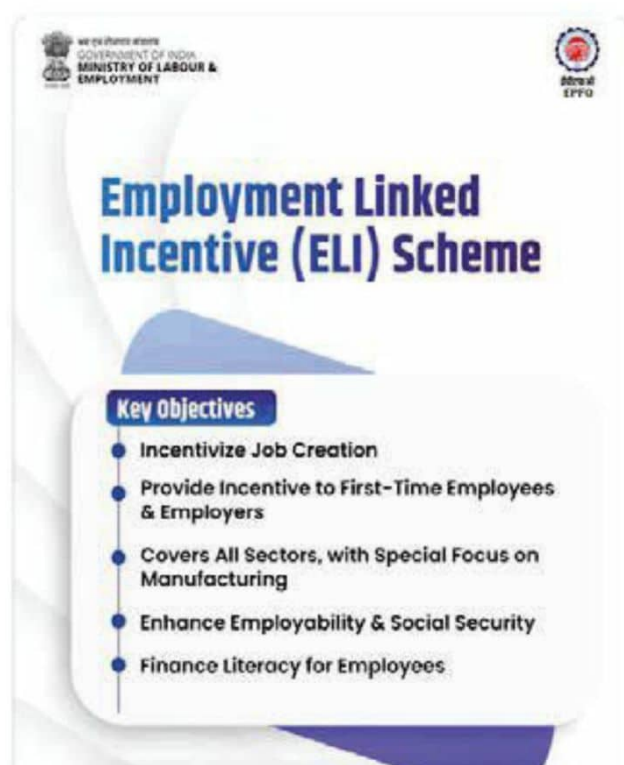
United Stakeholders: One Vision & One Mission

To ensure effective ELI Scheme execution with utmost transparency and accountability, the Government has outlined an integrated and multi-pronged strategy combining technology, regulatory compliance, and institutional monitoring of the scheme activities. Policy design, mapping eligibility criteria, setting up appropriate infrastructure, onboarding employer and employee onto the platform, submission of monthly Electronic Challan-cum-Return (ECR) with correct wage details, Aadhaar authentication, cross-check/comparability with Income Tax/Goods and Service Tax (IT/GST) records, ensuring timely payment of incentive instalments, imparting training, monitoring through performance dashboards, job-data review and retention tracking systems, randomised audits, fraud detection, disqualification and enforcement of all relevant provisions of the ELI scheme are the essential activities of the scheme. The effective implementation of such schematic interventions requires extensive consultation and coordination amongst various agencies viz. Ministries/Departments of Labour, Skill Development and Entrepreneurship, Economic Affairs, Financial Services, Revenue, EPFO, National Informatic Centre (NIC), employers, employees, Unique

Identification Authority of India (UIDAI), National Payments Corporation of India (NPCI), Comptroller and Auditor General (CAG), third-party auditors, etc.

Fixing Roadblocks with Resolutions: The Journey Ahead

The ELI Scheme, even though is well-structured with digitally enabled maneuverability, there may be



a few potential blockades and leakages which could challenge achieving the scheme objectives, if not timely and adequately addressed. The following are the probable problems/leakage points along with their possible solutions which may be taken care of during the phases of the scheme implementation:

- Non-existent, fake/ghost employee records could be generated by some unscrupulous registered employers to claim incentives leading to financial impropriety and misuse of valuable public funds. To remove this difficulty, EPFO, UIDAI and Tax department officials may introduce united cross-verification exercises with due integration of EPFO data with Aadhaar, PAN, GST and Income Tax Returns data. Biometric checks can also be introduced, if need be.
- Salary under-reporting may happen when employers manipulate wage data by presenting lower gross salaries to qualify under the ELI scheme. In order to ensure fairness, EPFO and Labour Inspectors may compare ECR with actual salary slips, bank transfers and IT filings and quickly impose penalty for false reporting and publicise such misdoings in mass media and social media to arrest such type of future occurrence. Auto validation rules may be strengthened in the portal to control misreporting in ECR too.



- Schemes like ELI may suffer from the issue of employee attrition. While the incentives are generally forfeited in this case, to ensure optimum results, the employers, through EPFO need to be sensitised from the very beginning of the scheme intervention to roll-out inhouse employee retention rewards.
- Use of technology ensures ease-of-doing business in any public scheme implementation. Real-time integration with NPCI and Aadhaar Seeding under the active supervision of EPFO, Ministry of Finance and UIDAI will ensure elimination of DBT transaction failures, resolution of bank linkage issues or Aadhaar mismatches to enhance trust and to improve stakeholder participation in the scheme.
- Low awareness about the scheme benefits may lead to less than optimum utilisation of scheme benefits. Thus, massive outreach through State/district labour offices, Ministry of Micro, Small and Medium Enterprises' field offices, trade unions, social media, etc. could be planned in consultation with agencies of Ministry of Labour and Employment and State/UT Governments to make employees and small employers aware about the scheme and the compliance steps to avail needful benefits.
- Weak training delivery at the ground zero may lead to rejection of second instalment requests

to the registered employees. MSDE, Common Service Centres – Special Purpose Vehicle, Non-Government Organisations, Cooperatives can join hands in enhancing access to financial literacy programmes in remote and rural areas.

- Monitoring issues may arise as ELI scheme has huge budget outlays. EPFO, Government Auditors, Ministry of Labour and Employment could benefit from Artificial Intelligence/Machine Learning for any fraud detection/alert and also can institute randomised and targeted third party audits to ensure adequate real-time data validation and appropriate enforcement of schematic guidelines.
- Taking a cue from the implementation of another high-budgeted welfare programme – Mahatma Gandhi National Rural Employment Guarantee Act, it may be necessary to ensure an effective mechanism to address implementation issues and concerns and to ensure impactful interventions of ELI scheme.

Concluding Remarks

The Union Government has launched ELI scheme to support employment generation, enhance employability and social security, spanning across all sectors with a special focus on the manufacturing sector. In comparison to the extant employment linked initiatives for promotion of employment through training and financing job creation activities, the Employment Linked Incentive would emerge as a targeted tool where monetary benefits would be given based on actual job creation and retention. ELI approach strives to bridge the gap between skill development and actual employment at the grass-roots.

The scheme interventions are achievable. Unified efforts of stakeholders will ensure strong data integration, active monitoring and concurrent evaluation, clarify employer accountability, set up citizen-responsive grievance system and expand outreach through grassroots awareness campaigns on the benefits of this novel forward-looking and revolutionary employment linked incentive scheme. □

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Unorganised Workers and Social Security Measures - An Overview

It is estimated that more than 90 per cent workforce engages in unorganised sector and contributes around 50 per cent to Gross Domestic Product (GDP) of the country. Despite their outstanding contribution to the Indian economy, the workers of this sector remain as the marginalised class of the society. As a part of the Labour Law Reforms, the Code on Social Security, 2020 was formulated by the Government to ensure that the condition of the labour force in the country gets better by providing them with other social benefits apart from their basic wages.

Manjula Wadhwa

The existence of ever-growing unorganised sector is a pivotal characteristic of Indian economy. It is estimated that more than 90 per cent workforce engages in unorganised sector and contributes around 50 per cent to Gross Domestic Product (GDP) of the country. Despite their outstanding contribution to the Indian economy the workers of this sector remain as the marginalised class of the society. It is doubtless to say that majority of

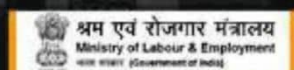
them live below poverty line and fail to fulfil their basic requirements. Besides, exploitation, ill-treatment, gender discrimination are some of the vital problems faced by them on day-to-day basis. Of course, there have been a number of acts enacted by Government of India but mostly designed for the formal sectors. The Unorganised Worker's Social Security Act, 2008 is the only act enacted exclusively for the workers of unorganised sector. The act empowered the government to undertake social security measures for the informal sector workers.

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Who is an Unorganized Worker?

According to
THE UNORGANIZED WORKERS' SOCIAL SECURITY ACT, 2008
an unorganized worker is

UNORGANIZED WORKER means a home-based worker, self-employed worker or a wage worker in the unorganized sector and includes a worker in the ORGANISED sector who is not covered by any of the Acts mentioned in Schedule II



The Ministry of Labour, Government of India has categorised the unorganised labour force into four groups based on the occupation, nature of employment, especially distressed categories and service categories.

Firstly, the occupational unorganised labourers are those labourers who are engaged in agricultural activities. Small, marginal and landless farmers, agricultural labourers, sharecroppers, fishermen, those engaged in the activities of rolling of beedi, labelling, packing, animal husbandry, construction workers, leather workers, salt workers, brick workers, saw-mill workers, oil-mill workers, weavers, artisans and stone quarries, etc.; secondly, the unorganised labourers in terms of nature of employment are those who are attached as agricultural labourers, bonded labourers, migrant workers, contract and casual labourers; thirdly, the unorganised labourers in terms of especially distressed categories are those labourers who are toddy tappers, scavengers, carriers of loads by head, drivers of animal vehicles, persons engaged in load and unload activities come under this category; fourthly, the unorganised labourers in terms of service categories are those labourers who are midwives, domestic workers, fishermen and women, barbers, vegetable and fruit vendors, and newspaper vendors, etc.

As per National Commission of Labour 1969, it could be conceptualised as those persons who are not able to organise in pursuit of a common objective because of certain constraints such as casual and irregular nature of employment; ignorance and illiteracy; marginalised and small size of establishments with less capital investment per person employed; far wide and scattered nature of

establishments and superior strength of the employer operating singly or in combination. Now, let us reflect on the problems which the unorganised workers face in their lives:

- **Low Wages:** Unfortunately, neither equal pay for equal work is applied to the unorganised workers nor the additional incentive, allowances, bonus, fringe benefits are given to them. Facing exploitation, discrimination and injustice in their work place has become an unprotected phenomenon of their life.
- **No Job Security:** The nature of employment of unorganised workers is temporary, unstable, casual and scattered. They engage in casual activities with no specific duties. Seasonality nature of their job makes them as disguised labour. There is no act like Provident Fund act, Bonus act, Pension act, Factory act, Maternity act for unorganised labourers. In fact, the longevity of their job depends upon the will of the employer.
- **Less Protected:** Apart from being exploited by the middlemen, contractors and employers they work in unhygienic conditions and get less attention from the labour and trade unions. They are mentally and physically tortured. Child workers are abused. Women workers are sexually harassed at their work place. Legal protection does not reach them due to illiteracy, ignorance and the far wide location and tiny nature of their work.
- **Deprived of Basic Amenities:** The unorganised workers work in a very unhygienic and overcrowded

conditions where there is no adequate sanitation and water facility in their working areas. They live in small, poorly ventilated congested rooms. Their children are deprived of the basic needs like education, health and nutrition.

- **Traditional Technique:** They do not have skill to use modern technology. Their production is local-market oriented, they bear heavy work load due to their labour intensive work and dearth of modern technology. They are unable to compete with the machine products and thus tend to lose their jobs, many a times.
- **Poverty and Exploitation:** Poor economic background compels them to remain as unorganised workers. They are not able to mobilise more resources to increase productivity or attract new entrepreneurs. Their nature of work is inferior in quality and thus they are paid in lump sum. Resultantly, very often they fall in the web of indebtedness.

As a part of the Labour Law Reforms, the Code on Social Security, 2020 was formulated by the current Government with a view to amalgamate the previous existing laws, which created a multiplicity of laws and thereby caused confusion. However, the code merges all

such laws into one and also widens its ambit by including not only organised workers but also unorganised, gig, and platform workers. The code aims to ensure that the condition of the labour force in the country gets better by providing them with other social benefits apart from their basic wages. The code has also incorporated many provisions relating to different benefits and schemes, which could provide a huge benefit to the workers, as earlier most of these benefits were not mandated by the law. Further, by seeing the condition of the unorganised workers, it is necessary to ensure that they are not exploited and are provided with basic social security during their course of employment.

Now, let us deliberate upon the measures taken by the Government for the welfare of unorganised workers: Life and Disability cover is provided through **Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY)** and **Pradhan Mantri Suraksha Bima Yojana (PMSBY)**. Risk coverage under PMJJBY is for Rs. 2.00 Lakh in case of death of insured, due to any reason, at an annual premium of Rs. 436/-. The risk coverage under PMSBY is Rs. 2.00 Lakh in case of accidental death or total permanent disability and Rs. 1.00 lakh for partial permanent disability due to accident at a premium of Rs. 20/- per annum. By the 10th anniversary of the *Jan Suraksha* Schemes, over

23.6 crore, 51 crore and 7.6 crore enrolments have been done under PMJJBY, PMSBY & APY respectively till April 2025. Under PMJJBY scheme, so far the claims worth Rs. 18,398 crore for over 9 lakh families and under PMSBY scheme, the claims worth Rs. 3,121 crore for over 1.57 lakh families have been settled. The launch of the online Jan Suraksha Portal has made it possible for citizens to enrol conveniently without visiting bank branches or post offices. Digitising the claim process has ensured faster settlements, enabling timely support to bereaved families when they need it the most.

To address the twin challenges of longevity risks and lack of retirement security among India's vast unorganised workforce, the Government of India launched **Atal Pension Yojana (APY)** in 2015. The

Pradhan Mantri Jeevan Jyoti Bima Yojana

Achievements
up to 22.11.2023

Cumulative enrolment
18.58 crore

Cumulative No. of Claims disbursed
7.18 lakh
of
₹ 14,360 crore

Life cover for one year	Insurance coverage of Rs. 2,00,000/-	Affordable premium Rs. 436 per annum
Annual Renewal	Eligibility age for entry: 18 to 50 years	Enrolment can be done at Bank Branches / BC points / Post Office

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scheme was designed to encourage voluntary savings for retirement by offering defined pension benefits, linked to the age of joining and amount of contribution. Targeted primarily at poor and underprivileged workers in the informal sector, the scheme has emerged as one of the most inclusive and accessible social initiatives in India. As of April 2025, APY has accumulated over 7.65 crore subscribers, mobilised a total corpus of Rs. 45,974.67 crore, and recorded increasing participation from women, who now comprise about 48 per cent of all subscribers. The scheme not only ensures financial independence for the elderly but also promotes long-term saving culture among low-income households. The government's continued focus on digital integration, women participation and rural outreach has helped broaden APY's footprint across India. With women making up over 55 per cent of new subscribers in FY 2024–25 and a significant surge in overall enrolments during the same period, the Atal Pension Yojana is steadily progressing toward its vision of 'Pension for All'.

The health and maternity benefits are insured through **Ayushman Bharat- Pradhan Mantri Jan Arogya Yojana** (AB-PMJAY) under deprivation and occupation criteria. It provides health insurance coverage upto Rs. 5 lakh per family for secondary and tertiary care related hospitalisation. In March 2024, the eligibility criteria under the scheme were expanded to include 37 lakh Accredited Social Health Activists (ASHAs), Anganwadi Workers (AWWs), Anganwadi Helpers (AWHs) and their families.

Further, the government expanded AB-PMJAY to provide free treatment benefits of up to Rs. 5 lakh per year to approximately 6 crore senior citizens aged 70 years and above, belonging to 4.5 crore families, irrespective of their socio-economic status. In addition, a three-tier grievance redressal system has been put in place at District, State, and National level for resolving the issues faced by beneficiaries in utilising healthcare services. Budget estimates for the financial year 2025-26 have allocated PMJAY at Rs. 9,406 crore, a 28.8 per cent increase from Rs. 7,300 crore in FY25 BE. The scheme which provides cashless and paperless benefit cover of Rs. 5 lakh per annum per family in empanelled hospitals across India has

been seeing an expansion in its beneficiary base since its operationalisation in 2019. Currently, over 365 million Ayushman Cards have been created till now.

In order to provide old age protection to unorganised sector workers, the Government of India had launched a pension scheme in 2019 namely **Pradhan Mantri Shram Yogi Maan-Dhan Yojana** (PM-SYM) to provide a monthly pension of Rs. 3000/- after attaining the age of 60 years to unorganised workers, who have a monthly income of Rs. 15000/-. As on 31 December 2024, 30.51 crore unorganised workers have registered on the portal. The Government of India matches the worker's contribution on a 1:1 basis. By ensuring a monthly pension of Rs. 3,000, it helps workers lead a dignified life post-retirement. With large number of enrolments and ongoing promotional efforts, PM-SYM aims to provide universal pension coverage, creating a more inclusive social security framework in India. It is for the first time since independence that such a scheme is envisaged for the crores of workers engaged in the informal sector.

It is heartening to note that as per International Labour Organization's World Social Protection Report 2024-26, India's social protection coverage has doubled from 24.4 per cent in 2021 to 48.8 per cent in 2024, with 920 million people already covered under at least one social protection scheme, ensuing financial security and welfare support. Thus, over the past decade, 24.8 crore people have escaped multi-dimensional poverty due

to several social security measures, reflecting the far-reaching impact of government interventions.

Under the **Public Distribution System (PDS)** all families below the poverty line as well as any family which does not have a member between 15-59 years of age, any family which has a disabled member and those who do not have a permanent job and only engage in casual labour, are eligible to get 35 kg of rice or wheat every month, while a household above the poverty line is entitled to 15 kg of food grain on a monthly basis. It is being implemented on One Nation One Ration Card (ONORC) basis to enable migrant workers to receive the food grains wherever they are working. **Health Insurance Scheme for Weavers** is also continuing for weavers earning at least 50 per cent of their income from handloom weaving. The beneficiaries would avail a package of Rs. 15,000 that includes both pre-existing diseases and new diseases.

Another notable milestone is **PM SVANidhi Yojana**. The scheme launched by the Government of India in June 2020, aims to provide financial support to street vendors whose livelihoods have been adversely affected by the COVID-19 pandemic. Initially, it offered affordable working capital loans of up to Rs. 10,000 to help vendors resume their businesses, now the ceiling amount has been enhanced to Rs. 30,000. It has already benefitted over 68 lakh vendors by June 2025. By facilitating easy access to credit and promoting self-sufficiency, the Scheme seeks to empower street vendors and enhance their livelihoods. Under this government offers total interest subsidy of 7 per cent for timely repayments, making loans more affordable for vendors.

Another milestone is Self Employment Scheme for Rehabilitation of Manual Scavengers under which Identified manual scavengers, one from each family, are eligible for One Time Cash Assistance (OTCA) of Rs. 40,000/. The manual scavengers and their dependents shall be provided, free of cost, skill training of their choice from the list of such trainings organised by the

National Safai Karamcharis Finance and Development Corporation (NSKFDC) from time to time. A monthly stipend of Rs. 3000/- or any such amount as may be decided from time to time shall be remitted by NSKFDC to their accounts.

Despite legislative progress, numerous challenges as under, persist in ensuring comprehensive social security coverage in India:

- **Coverage Gaps:** A significant portion of workers remain outside any social security net due to implementation challenges, awareness issues, and eligibility criteria.
- **Financing Constraints:** Limited fiscal space restricts the government's ability to fund comprehensive universal social security programmes.
- **Administrative Fragmentation:** Multiple schemes across different ministries create overlaps, coordination challenges and inefficiencies.
- **Informal Employment Relationships:** Absence of clear employer-employee relationships in many



The infographic for the PM SVANidhi Scheme features a red header with the title "Empowering Street Vendors with PM SVANidhi Scheme". Below the header, it lists "Salient Features" with icons and text: a person icon for "Loan tenure of 1 year on working capital", a percentage icon for "Interest Subsidy at 7% p.a. on timely repayment, paid quarterly", a coin icon for "Monthly cash-back incentive up to ₹100 on digital transactions", a hand icon for "Higher loan eligibility on timely/early repayment of the first loan", and a location pin icon for "Covers urban local bodies across the country". The infographic also includes logos for the Ministry of Housing and Urban Affairs, PM SVANidhi, and myGov, along with a photo of a woman working at a street stall, a photo of a man wearing a face mask, and a portrait of Prime Minister Narendra Modi. The date "Dated: 27 October, 2020" is at the bottom.



sectors complicates contribution collection and benefit provision.

- **Digital Divide:** Technology-based implementation of schemes often excludes the most vulnerable workers with limited digital access or literacy.

In spite of the above bottlenecks, while looking at the bright side, we find, as on June 2025, 68 lakh loans have already been sanctioned under PM SVANidhi Yojana, aimed at the welfare of street vendors. 76.28 lakh vendors are now the part of formal economic system. 30.86 crore unorganised workers have already registered on E-Shram portal, of which, over 53 per cent are women, giving a gender-positive tilt to informal sector reforms. Approx. 2.37 million artisans have registered under PM Vishwakarma Yojana, receiving financial and skill-building assistance. Under the PM Garib Kalyan Anna Yojana, 81 crore people get free food grains. Total budget: Rs. 11.80 lakh crore has been projected for it till 2028. Thus, from poverty reduction to startup acceleration, PM Modi's message is clear: **"Sabka Saath, Sabka Vikas, Sabka Vishwas, Sabka Prayas"**. It is no longer just a slogan - it's a structural shift aimed at inclusive growth.

The Way Forward

Honestly, towards a more inclusive social security system, bridging the gap between organised and unorganised sectors requires strategic interventions and

policy innovations. Some of such significant steps could be as given below-

- **Universal Registration:** Creating a unified worker registration system linked to Aadhaar to facilitate easy identification and benefit delivery.
- **Portable Benefits:** Designing benefits that move with workers as they change jobs or locations.
- **Simplified Contribution Mechanisms:** Developing easy payment systems adapted to irregular income patterns of informal workers.
- **Public Awareness Campaigns:** Enhancing knowledge about available schemes and entitlements among vulnerable workers.
- **Multi-stakeholder Funding Models:** Exploring innovative financing mechanisms involving employers, workers and government contributions proportional to capacity.

With a view to implement the above schemes successfully, the Government should take adequate steps in order to sensitise the workers about their rights since most of them are not aware of their rights and remedies in case of breach. We need to remember the words of Prime Minister Shri Narendra Modi, *"Even small efforts to bring about change in the social fabric, eventually reap large fruits."* □



Gramoday 2.0

From Skills to Self-Reliance

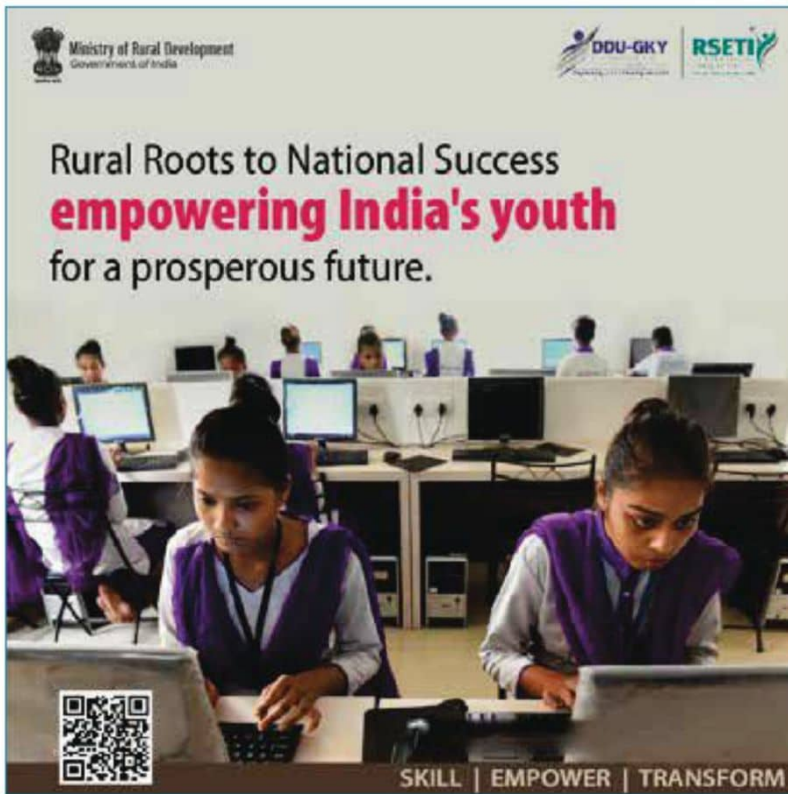
A transformative framework for empowering rural communities through sustainability, skills, and grassroots participation, Gramoday is entering a new phase, moving beyond mere survival to a future of self-reliance and social security built on skills.

Jyoti S. Verma

In the quiet lanes of Daspara in Tripura's Sepahijala district, a silent revolution is taking root. Once an unremarkable rural hamlet, Daspara is now India's first self-sustaining modified bio-village, proof that sustainability and self-sufficiency can flourish far from city skylines. Through the Bio-Village 2.0 initiative, 64 of its 70 households have embraced solar power, biogas, and organic farming, reducing dependence on fossil fuels and harmful chemicals while raising monthly incomes by over Rs. 5,000. The village runs as much on skills as on sunlight, as residents operate puffed rice machines, manage solar pump sets, and nurture fisheries in community ponds. Cleaner air and richer soil are now matched by a stronger sense of

economic independence. Skill development lies at the heart of this transformation. Local farmers and artisans have learned mushroom cultivation, bio-composting, and other sustainable practices, creating new income streams beyond traditional farming. In Daspara, knowledge has become as valuable a harvest as any crop, and self-reliance is the new measure of prosperity.

Far to the west, in the lush green folds of Chhattisgarh's Bastar district, Dhudmaras glows under solar lights. Recognised by the United Nations World Tourism Organization as one of the world's best tourism villages, it blends tribal traditions, pristine landscapes, and adventure tourism with renewable energy solutions. Solar pumps bring clean drinking water, high-mast and streetlights make nights safer, and schools run on



villages as the foundation for the nation's progress. With over 2.5 lakh Panchayats, representing crores of citizens and more than 30 lakh elected representatives, rural India lies at the heart of the country's true development story.

Gramoday envisions self-sustaining, resilient rural communities capable of shaping their own destiny. It reflects a deep commitment to holistic well-being and social justice, laying the groundwork for an equitable and prosperous rural landscape. Compassion, innovation, and perseverance define this model, making it a global example of community-led progress. Education and skill development stand as its pillars for not just literacy, but also as solutions to local challenges and opportunities to grow. Gramoday 2.0 takes this vision further, aligning tradition with modern skill-building.

uninterrupted power. On the Kanger River, trained local youth navigate bamboo rafts and kayaks (Narrow boat), turning the river into a source of livelihood. Artisans craft souvenirs for visitors, while eco-trails meander through a land where preservation and progress walk together. Thanks to training and capacity building by the Tourism and Forest Departments, 40 Dhurwa tribal families now lead kayaking, bamboo rafting, and trekking expeditions. Homestays, run by local households, welcome visitors into the rhythms of tribal life, offering glimpses into unique customs, crafts, and festivals. Cultural heritage here is not only preserved, but also fuels self-reliance and economic growth.

Daspara and Dhudmaras, one rooted in agricultural sustainability and the other thriving on solar-powered tourism, show that rural India's future need not choose between tradition and modernity. Instead, they prove that with vision, technology, skills, and community spirit, Gramoday can be more than a dream. This is Gramoday 2.0, a renewed national commitment to empower villages not merely to survive, but to thrive.

From Vision to Reality

Mahatma Gandhi saw the soul of India in its villages. He urged the nation to realise the vision of *Gramoday to Rashtroday*, which meant uplifting

Visionary reformers like Nanaji Deshmukh brought the vision of Gramoday to life, shaping the model as a holistic blueprint for rural transformation. At its core are the principles of self-reliance, sustainability, and grassroots empowerment, values that embody inclusive growth. Inspired by Gandhian thought and the ideals of other great leaders like Pandit Deendayal Upadhyaya, Nanaji dedicated his life to enriching rural lives, fostering unity, and empowering communities to overcome challenges that had long stalled progress.

The Gramoday approach rests on community-driven development. It encourages local leadership, harnesses indigenous knowledge, and nurtures cooperation. Nanaji's life reflected the ideals of Gandhian philosophy and Integral Humanism, as envisioned by Pandit Deendayal Upadhyaya, emphasising a balanced integration of people and their surroundings. His legacy includes initiatives such as the Bhoodan Movement, models of self-reliance, and innovative conflict resolution methods, all of which continue to inspire sustainable development, social harmony, and people-centric governance in India.

Through tireless efforts, Nanaji translated Pandit Deendayal Upadhyaya's principle of *Antyodaya*, which stands for uplifting the last person, into reality, reshaping the socio-economic fabric of countless

villages. His integrity and vision set benchmarks in public life that remain relevant for generations. Today, the Union Government, under Prime Minister Narendra Modi, draws inspiration from the Antyodaya ideals and carries forward this mission, bringing transformative change to millions of the nation's poorest citizens.

Skills as a Key to Self-Reliance

Rural transformation in India is being driven not just by infrastructure and welfare schemes, but by a strong focus on skill development as the key to self-reliance. Flagship programmes under the Ministry of Rural Development (MoRD) are opening new pathways to sustainable livelihoods, poverty alleviation, and employment, with skills at the core of this change.

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) continues to provide 100 days of wage employment annually to rural households, with special support for vulnerable groups such as Scheduled Castes (SC), Scheduled Tribes (ST), and women-headed families. Mission Antyodaya complements this by integrating resources across ministries, enabling Gram Panchayats to plan and implement coordinated development.

A major driver of skill empowerment is the Deendayal Antyodaya Yojana–National Rural Livelihoods Mission (DAY-NRLM), which strengthens rural women's capacities through self-help groups (SHGs) and community institutions. Its skill arm, the Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY), provides placement-linked training for poor rural youth aged 15-35, ensuring employable skills and jobs offering at least the statutory minimum wage. Social inclusion remains central, with half of beneficiaries from SC and ST communities, one-third women, and 5 per cent persons with disabilities.

The Rural Self-Employment Training Institutes (RSETIs), funded by MoRD and run in partnership with banks and state governments, are dedicated to equipping rural youth, especially those from Below Poverty Line (BPL) households, with practical, market-relevant, entrepreneurship-oriented skills. Based on the RUDSETI (Rural Development and Self Employment Training Institute) model pioneered in Karnataka, one RSETI operates

in every district, with the lead bank responsible for its management. The Government of India provides a one-time grant of up to Rs. 1 crore to develop infrastructure, including classrooms, workshops, dormitories with separate facilities for women and persons with disabilities, and adequate space for training, administration, and staff quarters.

Each RSETI conducts 30-40 short-term skill development programmes annually, lasting from one to six weeks, in sectors ranging from agriculture and allied activities to product-manufacturing, repair and maintenance services, hospitality, construction, and locally other relevant trades. The training integrates soft skills, financial literacy, and motivational inputs such as Shramadan and yoga, and is tailored to meet local market demand. Programmes are offered in two streams—basic orientation for SHGs and advanced skills for microenterprise creation, wage employment, or placement.

At least 70 per cent of RSETI trainees are drawn from rural BPL households, with priority given to SC/STs, minorities, women, and persons with disabilities. Training is free of cost, and certificates issued by RSETIs are recognised by all banks for credit purposes.

The impact of such initiatives is substantial: DDU-GKY has trained over 17.5 lakh candidates, with 11.4 lakh placed in jobs, while RSETIs have trained

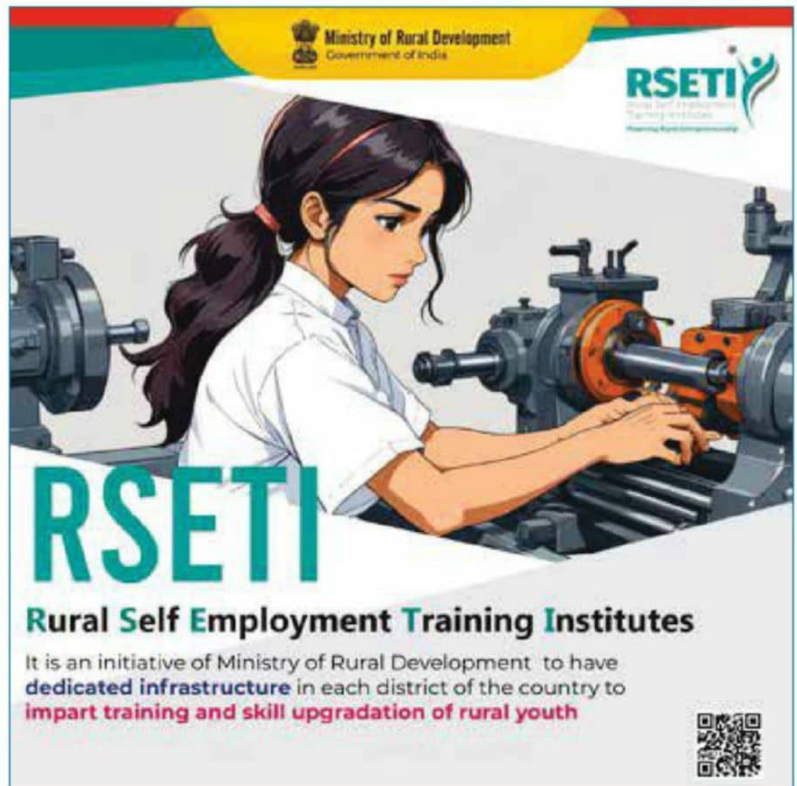


over 56.6 lakh individuals, of whom 41 lakh have established sustainable livelihoods. A June 2025 Memorandum of Understanding (MoU) between MoRD and the Ministry of Skill Development and Entrepreneurship (MSDE) now ensures greater coordination for rural skilling by combining MoRD's grassroots network under DAY-NRLM with MSDE's technical expertise. The partnership aims to equip 10 crore members of SHGs with market-relevant skills, entrepreneurial capabilities, and formal certifications via the Skill India Digital Hub (SIDH).

With a focus on creating 'Lakhpati Didis' and 'Future-Skilled Didis,' the initiative will deliver demand-driven training, financial and digital literacy, and market linkages through ITIs, RSETIs, Jan Shikshan Sansthan (JSSs), and other institutions. Localised modules will ensure women are skilled for both emerging job markets and viable rural enterprises.

Bridging the Skill Divide

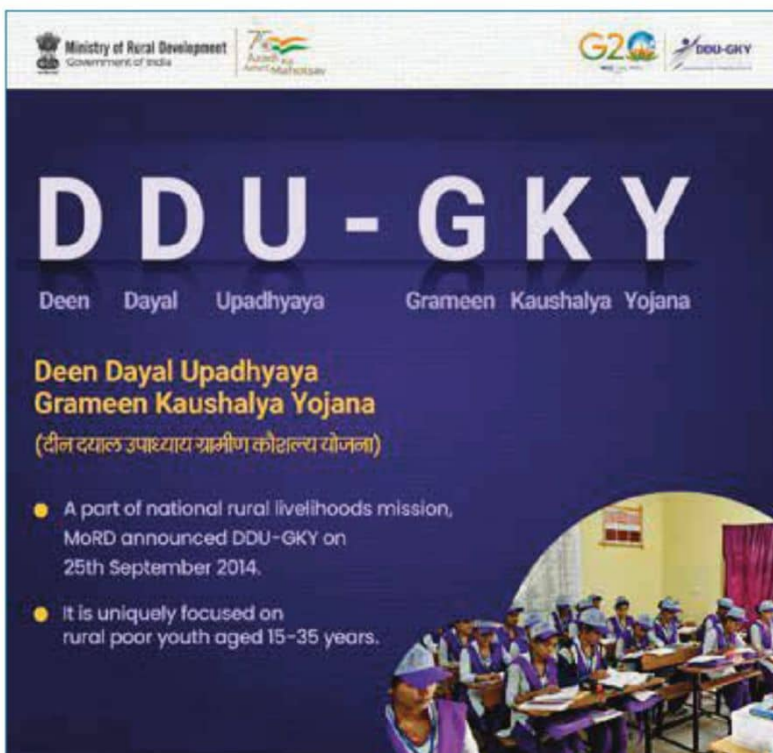
At the Centre, the MSDE plays a central role in aligning training with rural aspirations through schemes such as the Pradhan Mantri Kaushal Vikas Yojana



(PMKVY), Jan Shikshan Sansthan (JSS), and the National Apprenticeship Promotion Scheme (NAPS). Launched in 2015, PMKVY aims to promote skill development by offering free, short-duration training and incentivising youth to obtain skill certification. Currently in its 4.0 phase (FY 2022–2026), the scheme trained over 19.86 lakh candidates under PMKVY 1.0. It has trained or oriented 1.48 crore candidates as of 30 June 2024.

Transferred from the Ministry of Education to the MSDE in July 2018, JSS provides vocational training to non-literates, neo-literates, and school drop-outs in rural areas by identifying locally relevant, market-oriented skills. In FY 2024-25 (as of 28 January 2025), JSS enrolled 4.29 lakh beneficiaries, with 2.45 lakh trained, 2.38 assessed, and 2.37 lakh certified. The programme operates across 32 States and UTs, covering 283 districts through 289 JSS units and 11,338 sub-centres.

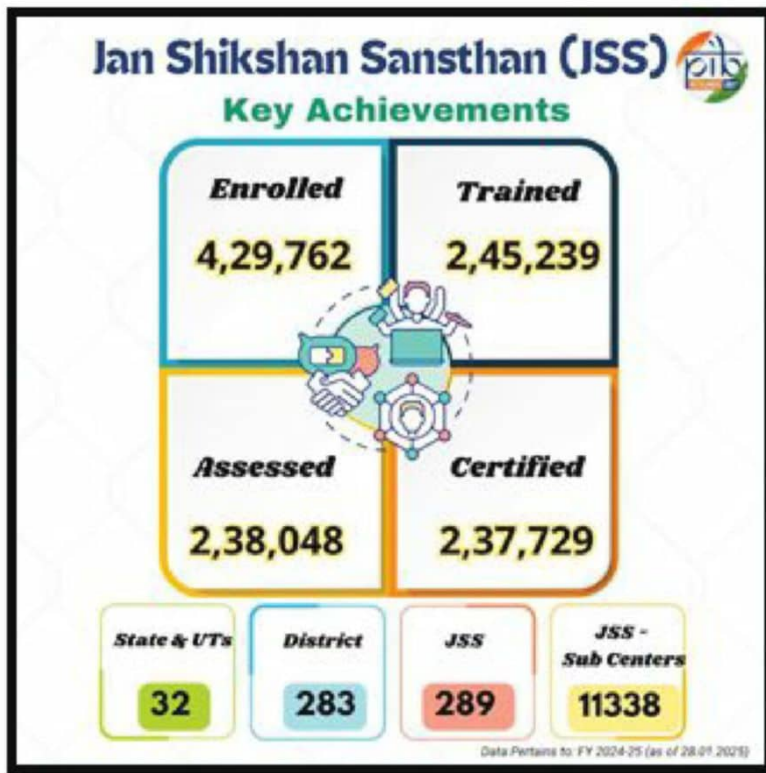
To further enhance youth employability, the MSDE, under the Skill India Mission (SIM), delivers skill, reskill, and upskill programmes via ITIs, National Skill Training Institutes (NSTIs), and other centres. New-



age skills such as Artificial Intelligence (AI), Internet of Things (IoT), Robotics, and Cybersecurity are being introduced through 36 Sector Skill Councils led by industry experts. The National Skill Development Corporation (NSDC) supports training providers in aligning courses with market demand, while the Directorate General of Training (DGT) implements the Flexi MoU Scheme and the Dual System of Training to give ITI students industrial exposure.

Industry partnerships with IBM, Cisco, AWS, Microsoft, Intel, and others are bringing cutting-edge expertise to state and regional institutes. The Indian Institutes of Skills in Ahmedabad and Mumbai, set up under a public-private partnership model, provide hands-on training aligned with Industry 4.0 needs.

The MSDE has also launched the SIDH, a unified platform integrating skilling, education, employment, and entrepreneurship, offering access to jobs, apprenticeships, and a database of trained candidates for employers. According to the India Skill Report 2024, overall young employability in India has risen to 51.25 per cent from 40.44 per cent in 2017, while the rural unemployment rate for those



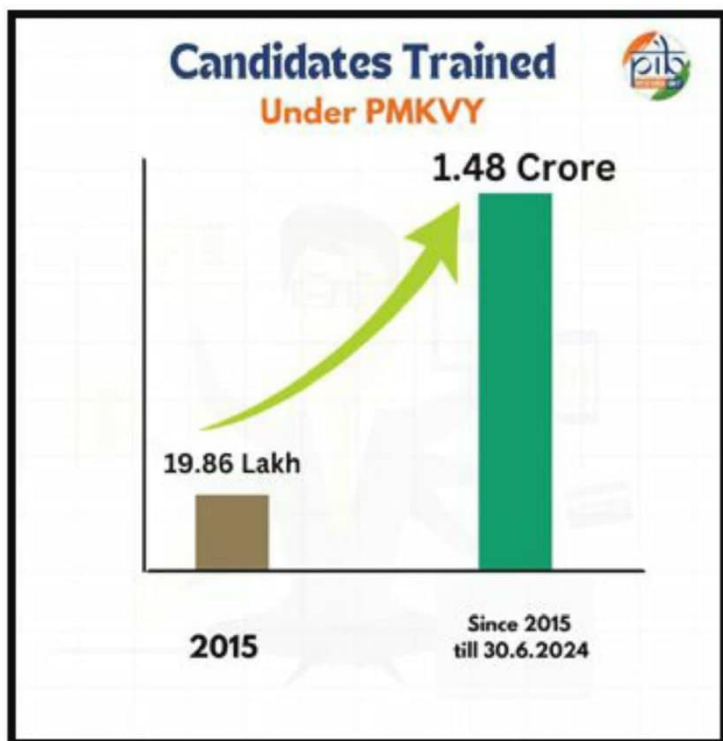
aged 15-59 has dropped from 5.7 per cent in 2017-18 to 2.8 per cent in 2023-24.

Digital India at the Village Doorstep

A strong digital foundation underpins this rural transformation. In July 2025, the Ministry of Electronics and Information Technology marked ten years of the Digital India programme and the expansion of the Common Service Centre (CSC) network from 83,000 centres in 2014 to over 5.5 lakh today, reaching nearly 90 per cent of India's villages.

Established in 2009 under MeitY, the CSC network has emerged as one of the world's largest digital service delivery ecosystems. Each CSC is operated by a Village Level Entrepreneur (VLE), many of them are women. These local change-makers provide citizen-centric services such as Aadhaar updates, PAN and passport applications, banking, insurance, telemedicine, education, legal aid, and agricultural support. The model has become a key delivery mechanism for both government and private services in rural areas.

One key announcement during the 10th anniversary celebrations of the programme





was the launch of free AI training for 10 lakh individuals, prioritising VLEs, to bring advanced digital skills to rural communities. Integration of Primary Agriculture Credit Societies with CSCs and the participation of over 74,000 women VLEs underline the focus on inclusive digital empowerment.

Women as Rural Entrepreneurs

The growing women presence in the digital and entrepreneurial ecosystem builds on decades of rural empowerment. Since the 73rd Constitutional Amendment of 1992 mandated that at least one-third of Panchayat members and chairpersons be women, their role in rural development has strengthened, evident in their strong participation in MGNREGS and the emergence of women-led SHGs as engines of self-employment and community leadership.

Today, 10 crore women are part of 91 lakh SHGs under DAY-NRLM, forming unmatched social capital. Prime Minister Narendra Modi's vision is to enable 3 crore Lakhpati Didis, who are SHG members earning at least Rs. 1 lakh annually (averaging over Rs. 10,000 per month across four agricultural seasons or business cycles). The strategy focuses on diversified livelihoods, convergence across government departments and private players, timely support in assets, finance,

market, and technology, and robust monitoring. In a June 2025 MoRD–MSDE MoU, the Centre has announced to empower the women of SHGs through structured skilling, entrepreneurship development, and market-aligned livelihood interventions. The highlights of the MoU are customised training in emerging sectors, digital and financial literacy, compliance, and market access; Training of Trainers (ToT) programmes; SHG cadre skilling via JSS, RSETIs, NIESBUD, and NSTIs; formal certification through SIDH; integration of SHG skilling into District Skill Development Plans; and joint outreach such as livelihood fairs and mentorship programmes.

Other initiatives further bolster women's entrepreneurship. The Bima Sakhi programme trains SHG members as insurance facilitators under schemes like PM Jeevan Jyoti Bima Yojana and PM Suraksha Bima Yojana. Supported by an MoU between MoRD and Life Insurance Corporation of India, these women operate at the Gram Panchayat level as community-based agents, assisting with policy access, claim processing, and renewals, thus advancing 'Insurance for All by 2047' while securing their own livelihoods.

The Namo Drone Didi scheme is modernising agriculture by equipping 15,000 women SHGs (2024-26) with drones for spraying fertilisers and pesticides,

with scope for expansion into precision farming. Each SHG receives up to 80 per cent subsidy (capped at Rs. 8 lakh) and low-interest loans at 3 per cent for the remainder. Professional drone pilot training enables women to undertake crop monitoring, soil analysis, and irrigation management, increasing incomes by over Rs. 1 lakh annually while reducing farming costs and environmental impact.

Women's empowerment and community participation remain central to Gramoday 2.0, not just for gender equity but for collective progress. Specialised vocational training in diverse domains, from handicrafts, tailoring, embroidery, food processing, to livestock management and technology, equips women for sustainable livelihoods and leadership in local governance. Empowering women yields dividends in household income, healthcare, education, and social cohesion.

Incentivising Jobs, Securing Futures with ELI

Another cornerstone of Gramoday 2.0 is the Employment Linked Incentive Scheme, approved in July 2025 with a budget of Rs. 99,446 crore to generate over 3.5 crore jobs in two years, nearly 1.92 crore for first-time employees.

Under Part A of this scheme, first-time workers registered with EPFO receive a one-month wage incentive (up to Rs. 15,000) in two instalments, after six months and one year of service, with the second linked to completion of a financial literacy programme. Part B supports employers, especially in manufacturing, with up to Rs. 3,000 per employee per month for two years (extended to four in manufacturing), encouraging recruitment of workers earning up to Rs. 1 lakh a month.

The ELI Scheme ties incentives to sustained employment, promoting job creation, workforce stability, and formalisation, with all disbursements made via Direct Benefit Transfer for transparency.

The new scheme will empower the other rural development schemes of the government for housing, connectivity, and social protection. The Pradhan Mantri Awas Yojana – Gramin (PMAY-G) has delivered over 2.69 crore houses, the Pradhan Mantri Gram Sadak Yojana (PMGSY) has improved rural connectivity, and the National Social Assistance Programme (NSAP) provides financial support to vulnerable households. These gains reach their full potential when combined with skill

development, credit access, and enterprise promotion.

The convergence of DAY-NRLM with the Ministry of Skill Development ensures SHG members gain financial literacy, market-relevant skills, and viable business opportunities. Together, these flagship programmes form a comprehensive strategy for rural transformation, turning villages into vibrant hubs of opportunity and fostering self-reliance.

Financial inclusion has taken centre stage with the nationwide Jan Suraksha Saturation Campaign, a three-month initiative launched by the Ministry of Finance, from 1 July to 30 September 2025. Covering over 14,600 Gram Panchayats in Gujarat alone, the campaign targets 100 per cent enrolment under major financial inclusion and social security schemes.

The drive focuses on account opening under the Pradhan Mantri Jan Dhan Yojana (PMJDY), and enrolments under the Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), the Pradhan Mantri Suraksha Bima Yojana (PMSBY), and the Atal Pension Yojana (APY). It also addresses re-KYC and activation of dormant PMJDY accounts, updating of pending nomination details in deposit accounts, and delivery of intensive financial literacy sessions. It aims at raising awareness on preventing cyber and digital fraud, reclaiming unclaimed deposits transferred to the Reserve Bank of India (RBI), and understanding the role and benefits of the Banking Ombudsman. The schemes offer significant coverage at minimal cost, at just Rs. 20 annually for PMSBY and Rs. 436 annually for PMJJBY with a coverage of Rs. 2 lakh.

As of 30 June, enrolment figures stood at 29 lakh under APY, 92 lakh under PMJJBY (with 55,589 claims settled and paid), 194 lakh under PMSBY (with 4,943 claims settled and paid), and 194 lakh PMJDY accounts opened. By driving financial access and protection, the Jan Suraksha Saturation Campaign fosters inclusive financial empowerment and social security across rural India, helping villages emerge as a major force propelling the country towards *Viksit Bharat*.

India's rural transformation under Gramoday 2.0 is not a set of fragmented efforts but a unified national mission. It merges skills with security, digitisation with dignity, and local enterprise with national growth, turning CSCs into hubs of digital empowerment, SHGs into economic units, and trained youth into catalysts for change. □



Green Technology for Sustainable Rural Jobs

This article explores how green technology is powering rural job creation and shaping sustainable livelihoods. It draws lessons from the Smart Cities Mission, tracks employment growth in renewable energy, and explains how the circular economy is opening new income streams. We will look at the role of green technology in strengthening rural healthcare, the nationwide skill ecosystem driving employment, and how smart manufacturing and MSMEs can boost eco-friendly production. The story also travels through India's tourism hubs to see how eco-conscious travel is creating rural jobs.

Dr. Nimish Kapoor

India is moving towards a cleaner and greener future. From the bustling cities to the quiet villages, green technology is creating new ways of living and working. The renewable energy sector alone employed 1.02 million people in 2023, with jobs in hydropower, solar, wind, biomass, and emerging clean technologies. Major government missions like the National Green Hydrogen Mission, PM-KUSUM, PM Surya Ghar, and Production Linked

Incentive schemes for solar PV modules are leading the way. These programmes are not just reducing carbon emissions, they are also creating livelihoods, especially in rural India.

According to the International Renewable Energy Agency (IRENA), hydropower remains the largest employer, providing work to over 4.5 lakh people, while solar PV employs more than 3 lakh workers in on-grid and off-grid systems. Wind, biofuels, biomass, biogas, and solar heating are adding thousands more jobs

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across the country. India is now ranked among the top five nations in renewable installations, with growing opportunities in the sector.

Today, green technologies are driving the rise of green professionals, from energy auditors to environmental engineers, and training is preparing them for the future. The green transition is more than an environmental goal, it's a people's movement. It's about better jobs, cleaner air, and stronger rural economies. Let's explore how India's villages are turning green dreams into sustainable realities.

Employment Growth and Opportunities in India's Renewable Energy Sector

India's renewable energy sector has become a key factor in both environmental sustainability and employment generation. Recent estimates indicate that the sector employed over 1.1 million people in early 2025, reflecting steady growth aligned with global trends. According to the 2024 Annual Review by the International Renewable Energy Agency (IRENA), the global renewable energy workforce expanded to more than 17 million workers, up from 16.2 million in 2023, with India playing a leading role in this expansion. A joint report by IRENA and the International Labour Organization (ILO) highlights India's growing leadership in the clean energy transition and its focus on creating green jobs that contribute to inclusive economic development.

India ranks fourth globally in renewable energy employment, with 1 million jobs in 2023. The transition

to clean energy is set to create 10.3 million new jobs globally by 2030, driven by a target of 500 GW of non-fossil fuel energy capacity. This shift opens up a world of green skills, from renewable energy technologies to sustainability practices, environmental science, and carbon market expertise.

The growth of renewable energy is not confined to metropolitan or industrial hubs; it also offers transformative opportunities for semi-urban and rural areas through the deployment of green technologies such as solar, wind, small hydro, and biomass energy. Decentralised renewable solutions including solar microgrids, solar-powered irrigation pumps, and bioenergy projects, simultaneously address energy access and local employment challenges. These technologies create jobs across the entire value chain, from manufacturing and installation to operation, maintenance, and supply chain management, while skill development programmes empower local youth and women actively participate in this sector.

Renewable energy-driven employment plays a vital role in reducing migration by providing stable income sources in communities and enhancing climate resilience through low-carbon, sustainable practices. By integrating renewable energy with complementary green technology sectors like energy efficiency and sustainable agriculture, India is nurturing a robust green economy that fosters inclusive and sustainable employment opportunities. This synergy between clean energy deployment and job creation is pivotal to achieving India's climate commitments and socio-economic progress.



A key initiative supporting workforce development is India's National Solar Mission, launched in 2010 by the Ministry of New and Renewable Energy (MNRE). The mission's flagship Suryamitra Skill Development Programme has trained over 51,000 solar PV technicians through an intensive 600-hour residential course covering installation, operation, maintenance, and entrepreneurship. Complementary programmes such as Varunmitra (solar water pumps), Vayumitra (wind energy technicians), and Jal-Urjamitra (small hydro projects) have broadened technical training across



multiple renewable energy domains. Solar employment has surged from approximately 16,800 workers in 2017–18 to nearly 160,000 in 2024–25, underscoring the sector’s rising demand for skilled manpower. These targeted training initiatives empower youth, including women and marginalised communities to build sustainable livelihoods, foster entrepreneurship, and accelerate India’s transition to a clean energy future.

In terms of broader employment impact, analysis by the Natural Resources Defence Council (NRDC) and the Council on Energy, Environment and Water (CEEW) estimates that solar photovoltaic (PV) projects commissioned between 2011 and 2014 created around 24,000 full-time equivalent (FTE) jobs, while the wind energy sector has generated about 45,000 FTE jobs to date. Combined, these sectors have produced nearly 70,000 FTE jobs in India so far. With India’s ambitious targets to install 100 GW of solar capacity and 60 GW of wind capacity by 2025–26, it is projected that over 1 million FTE jobs could be created in solar energy and approximately 183,500 FTE jobs in wind energy.

The PM-KUSUM Scheme is another important driver of employment within the renewable sector. It allows inter-se transfer of quantities between its components, with all three aiming to add about 34,800 MW of solar capacity by March 2026, backed by Rs. 34,422 crore in central financial support. This expansion is not only enhancing clean energy access but also generating significant employment. Studies indicate that around 24.50 job-years are created per MW of small capacity solar installation, translating to approximately 7.55 lakh

job-years for both skilled and unskilled workers.

To strengthen the domestic manufacturing base and reduce import dependency, the Production Linked Incentive Scheme for the National Programme on High Efficiency Solar PV Modules is fostering gigawatt-scale production capacity with an investment of Rs. 24,000 crore. This initiative, paired with transparent selection processes and five-year performance-based incentives, is expected to create jobs in manufacturing, R&D, quality testing, logistics, and downstream solar deployment.

Skill development remains central to sustaining employment growth. The Human Resource Development (HRD) scheme for the renewable energy sector (2021–2026) is building long-term capacity through short-term training, research fellowships, infrastructure enhancement, establishment of Renewable Energy Chairs in academic institutions, and the National Renewable Energy Internship Programme. These efforts ensure a steady pipeline of skilled professionals ready to meet the sector’s evolving demands.

With an estimated 1.1 million jobs in 2025 and rising, India’s renewable energy sector is proving that clean technology adoption can deliver large-scale, sustainable employment. Flagship initiatives such as the National Green Hydrogen Mission, PM-KUSUM, PM Surya Ghar, and the PLI Scheme are expanding the technological base while creating diverse career opportunities. This integrated approach linking renewable energy deployment with robust job creation, positions India as a global leader in both climate action and sustainable economic growth, paving the way for a cleaner, greener, and more prosperous future.

Lessons from the Smart Cities Mission

India’s development vision increasingly integrates environmental responsibility with economic growth, and the Smart Cities Mission (SCM) serves as a strong example of how targeted initiatives can create sustainable livelihoods. Launched on June 25, 2015 by Prime Minister Shri Narendra Modi, the SCM aims to enhance the quality of life in 100 cities through smart and sustainable solutions, with a focus on economic vibrancy, inclusivity, and environmental stewardship. By improving infrastructure, governance, and social development, the Mission also opens avenues for green jobs in sectors like renewable energy, energy efficiency, sustainable agriculture, and environmental conservation.

As of May 9, 2025, the Mission has completed 7,555 projects (94 per cent of the planned 8,067) worth Rs. 1,51,361 crore, with an additional 512 projects worth Rs. 13,043 crore in advanced stages. These projects span housing, transport, education, healthcare, and recreational facilities, often integrating green technologies such as solar power, energy-efficient lighting, rainwater harvesting, waste-to-energy plants, and urban farming models that can be adapted to rural contexts.

The SCM's adaptive approach to emerging needs shows how environmental and social objectives can be aligned. For instance, in response to the COVID-19 pandemic, initiatives like Cycles4Change and Streets4People promoted healthier, open public spaces, while the Placemaking Marathons and Nurturing Neighbourhoods Challenge ensured access for vulnerable groups. Other campaigns, such as Transport4All and Eat Smart Cities, focused on sustainable mobility and improved food safety, both of which offer lessons for rural development through green entrepreneurship.

Mission LiFE: Circular Economy and Green Technology for Rural Livelihoods

Under Mission LiFE (Lifestyle for Environment), India is promoting circular economy practices—reduce, reuse, repair, and recycle, to turn environmental challenges into economic opportunities. With waste generation expected to rise sharply by 2030 and 2050, there is a huge potential to transform waste from an environmental problem

into an economic asset using green technologies. The government has identified 11 priority waste streams for circular economy initiatives: solid waste, plastic, e-waste, battery waste, liquid waste, used oil, tyres, end-of-life vehicles, metal scrap, construction and demolition waste, and hazardous waste.

Advanced green technologies such as waste-to-energy plants, bio-methanation, plastic-to-fuel conversion, e-waste recycling, and solar-powered compactors can be adapted for rural areas. These solutions can create decentralised waste management systems and generate micro-enterprises in villages, such as plastic granules production, compost making, or refurbishing electronic goods, providing sustainable income opportunities.

According to the Ministry of Environment, Forest and Climate Change (MoEF&CC), adopting a circular economy could create an additional 33 lakh jobs in the coming years, on top of the existing 50 lakh, across all skill levels from waste collection and segregation to advanced recycling operations. These opportunities span formal and informal sectors, supporting self-employment, women-led businesses, and youth startups. While training and skilling programmes are growing, challenges remain in scaling infrastructure, attracting investment, integrating modern technologies, and formalising the informal waste sector.

For rural India, combining circular economy principles with green technologies can achieve three main goals: environmental protection, efficient resource use, and

sustainable job creation. To support this, MoEF&CC has implemented regulations under the Extended Producer Responsibility (EPR) framework, covering plastic packaging, batteries, e-waste, tyres, used oil, end-of-life vehicles, construction and demolition waste, and non-ferrous metal scrap. This market-based approach encourages proper waste management, generates additional income, and helps integrate informal recycling into the formal economy.





Moreover, investment in rural healthcare can generate a triple return: improved health outcomes, enhanced economic growth, and strengthened health security. That's because spending on health creates direct jobs like doctors, nurses, support staff, indirect jobs as suppliers, ancillary services, and productivity gains. According to WHO-aligned studies, expanding the health workforce could produce 5.4 million additional jobs in India during 2021–2025 and contribute Rs. 3,429 billion annually to the national income.

Strengthening Rural Healthcare: A Green-Tech Path to Sustainable Employment

Healthcare accounts for about 10 per cent of global GDP, with India's sector growing at an impressive 7–10 per cent annually. As the world faces an estimated shortage of 18 million healthcare workers by 2030, India alone must address a gap of 2.7 million professionals. To bridge this, public health expenditure (or Government Health Expenditure - GHE) needs to rise to 2.5–3 per cent of GDP, up from current levels, while also spurring job creation through upskilling in digital health, developing medical cities, and strengthening rural healthcare infrastructure.

In rural India, healthcare through green technology, such as telemedicine, solar-powered health centers, mobile clinics, and digital diagnostic tools can significantly expand access to care. These technologies not only reduce carbon footprints but also create meaningful employment opportunities. From training local youth as telehealth operators to employing technicians in maintaining solar-powered clinics, they open diverse roles across skill levels.

The government's push to raise GHE and foster medical tourism via medi-cities can further urban–rural linkages. As specialised healthcare hubs grow, they create demand for supporting roles—administration, logistics, translators, and hospitality services—that can draw workers from nearby rural areas, stimulating local jobs and reducing migration.

Technology-driven healthcare such as community health apps, AI diagnostics, mobile health units powered by solar energy, and e-health platforms can transform rural health delivery. These innovations enhance service reach and offer job opportunities for trained local professionals and entrepreneurs. They also align with global trends in telemedicine and digital health, which are reshaping healthcare access and employment.

Nationwide Skill Ecosystem Fueling Green Employment

Across India, states and Union Territories are actively engaging universities and institutes to deliver skill training aligned with regional needs. More than 30 Sector Skill Councils (SSCs) are at the forefront of this mission, designing need-based training programs across industries. Notably, the Skill Council for Green Jobs (SCGJ) stands out in the green technology domain playing a pivotal role in cultivating a skilled workforce for India's low-carbon transition.

SCGJ is driving transformation through a comprehensive approach—conducting skill gap



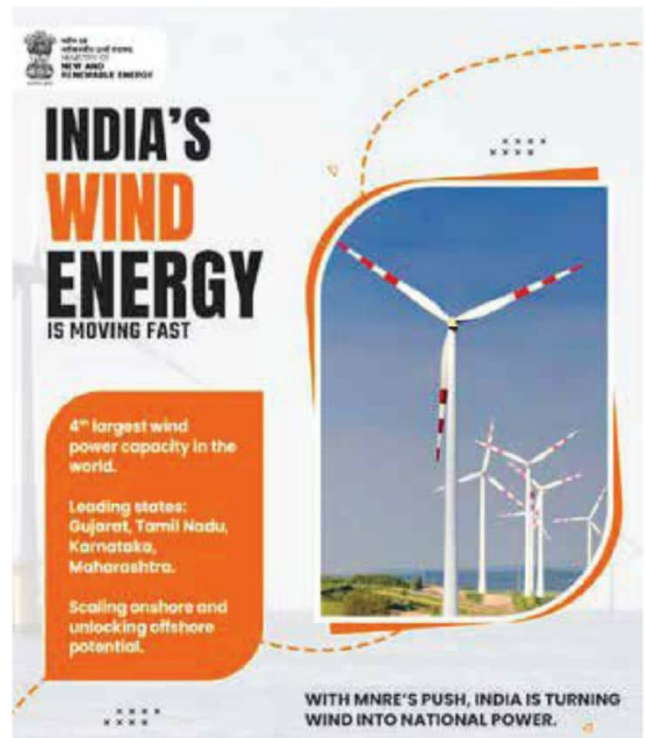
analyses, developing industry-aligned qualification packs, affiliating with training partners, creating centres of excellence, and delivering candidate certification. To date, it has developed around 44 nationally approved qualifications spanning renewable energy, waste management, green hydrogen, e-waste, and more. Through its extensive network—comprising over 400 affiliated institutions, more than 4,000 certified trainers and assessors across India—SCGJ has trained over 500,000 candidates, including over 100,000 in solar and other renewable energy domains.

This skill ecosystem ensures that green technology roles, from solar PV installation (Suryamitra) and agrivoltaics to waste management and clean mobility—are accessible to rural youth. Moreover, the SCGJ's Green India Portal streamlines the training and certification process for candidates, trainers, and assessors nationwide. The SCGJ's CEO emphasises new initiatives in emerging areas such as green hydrogen and household solar through the Pradhan Mantri Surya Ghar Yojana, underscoring the expanding green skills landscape.

Beyond SCGJ's national efforts, impactful collaborations are emerging at the state level. For instance, Andhra Pradesh has partnered with Schneider Electric to establish 20 advanced training labs across ITIs and polytechnics, delivering training in solar energy systems, automation, and industrial technologies for about 9,000 youth. Similarly, Maharashtra is upgrading its ITIs under public-private partnerships. These refurbished centers will introduce electives like solar panel installation, AI, and machine learning, empowering rural students with contemporary, employer-ready skills.

Smart Manufacturing and Recycling: Driving Green Growth Through MSMEs

India's ambitious goal of becoming a \$7.5 trillion economy hinges substantially on making manufacturing a powerhouse—targeting 25 per cent of GDP and aspiring to become the world's second-largest manufacturing hub. At the heart of this transformation are MSMEs, which constitute around 90 per cent of the sector, making their competitiveness and innovation critical for generating over 100 million high-skilled jobs, integrating India into global value chains, and powering sustainable industrial growth.



Central to this shift is smart manufacturing, the integration of analytics, automation, data-driven decision-making, and eco-conscious processes. The 2025 Union Budget reinforces this by launching a National Manufacturing Mission with a clear emphasis on clean-tech production, including solar PV cells, EV batteries, wind turbines, electrolyzers, and grid-scale energy storage solutions, aimed at deepening domestic value addition and aggregate green GDP growth.

Yet, technology alone isn't enough, skilling and upskilling programmes are essential to prepare the MSME workforce for an analytics-driven, technologically sophisticated future. Initiatives such as the Skill India Digital Hub (SIDH), the National Apprenticeship Promotion Scheme (NAPS), and skill centers of excellence in AI and robotics are playing a key role in equipping workers for modern manufacturing and clean-tech roles.

Furthermore, the National Skill Development Corporation (NSDC) and World Resources Institute India (WRI India) collaboration is building the green skilling ecosystem by mapping skill gaps and shaping upskilling efforts, particularly for MSMEs across sectors like manufacturing and services. At the same time, Tamil Nadu's Coimbatore technology center, backed by the MSME Ministry, exemplifies how PPP models can deliver high-tech training in automation, robotics,



and digital manufacturing, making rural MSMEs future-ready.

India's future-ready manufacturing vision rests on intertwining smart technologies, robust skilling programs, and sustainability, especially within the MSME ecosystem. Empowering MSMEs with access to clean-tech tools, digital infrastructure, skilled talent, and financial support will unlock green job creation in sustainable production, recycling, and clean-tech development, propelling India toward a resilient, inclusive, and climate-conscious industrial future.

In addition to high-tech manufacturing, new markets are emerging in repair, refurbishment, and recycling, sectors that offer a wide range of job opportunities across skill levels. These activities provide minimally skilled roles in waste collection, semi-skilled jobs in repair and refurbishment, and highly skilled positions in design and re-engineering. Notably, recycling every 10,000 tonnes of waste generates approximately 115 jobs, demonstrating the significant employment potential of circular economy practices, as reported by MoEFCC. Supporting MSMEs to tap into these green markets through training, technology access, and financial incentives can further enhance sustainable job creation. This holistic approach ensures that India's manufacturing growth not only embraces cutting-edge clean technologies but also promotes resource

efficiency and inclusive employment across the value chain.

Eco-Conscious Tourism: A Green Employment Engine in Rural India

India's tourism sector is experiencing a robust post-pandemic recovery, especially in destinations like Goa, Himachal Pradesh, and Kerala, where traveller footfall is surging. In Himachal, domestic visitors reached 18 million in 2024, supported by natural attractions and improved infrastructure. Kerala, recognised globally for its eco-tourism, continues to draw millions annually to its backwaters, hill stations, and cultural heritage sites.

The sector is now pivoting toward emerging trends such as spiritual, rural, and wellness tourism, aligning with the Viksit Bharat vision to grow the economy to \$3 trillion by 2047. This ambition carries significant implications for rural employment—generating both direct and indirect job opportunities in hospitality, guiding, wellness services, homestays, and local handicrafts.

Industry leaders argue that hospitality and tourism should be granted 'Industry Status', which would lower borrowing costs, simplify infrastructure approvals, and unlock financing for new destinations and rural economies. Recognising the sector as infrastructure could catalyze investment and catalyze job creation

across rural India. Importantly, the skills developed in tourism, such as customer service, digital marketing, language proficiency, and hospitality management are highly transferable. These skills can support broader employment pathways in retail, BPO, or wellness sectors, expanding opportunity beyond direct tourism roles.

Eco-conscious travel options like eco-tents at Araku Valley's 'Jungle Bells' project using durable, weather-resistant German tents demonstrate how sustainable tourism can revitalise local economies while preserving nature. Similarly, rural homestays and conservation-based experiences in states like Madhya Pradesh are enhancing incomes for host families and local guides by offering immersive cultural experiences.

Building a Green Workforce: Skills, Professions, and Training for India's Sustainability Transition

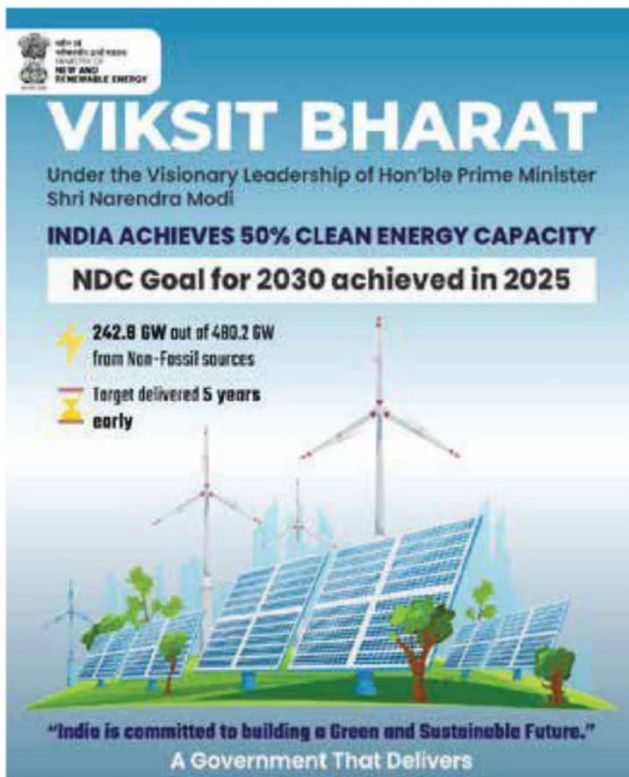
India's climate-smart initiatives, such as the National Action Plan on Climate Change (NAPCC) and large-scale skill development programs, are creating a growing group of green professionals. Ambitious goals, like achieving 500 GW of non-fossil fuel energy by 2030, are increasing demand for expertise in renewable energy, sustainability, and related sectors. Industries such as energy, construction, agriculture, and manufacturing are adopting greener practices, creating

new jobs in areas like energy efficiency, waste reduction, and sustainable infrastructure. Key roles include energy auditors, renewable energy technicians, environmental engineers, ecologists, and green entrepreneurs.

These jobs need not only technical knowledge but also soft skills like problem-solving, adaptability, and communication for working in teams. To meet this demand, many training and certification programs have emerged in renewable energy, environmental science, and green business. Leading institutions like the IITs and TERI School of Advanced Studies, along with international platforms, offer these courses. Certifications such as LEED (Leadership in Energy and Environmental Design) and ISO 14001 (Environmental Management Systems), as well as specialised training in energy efficiency, carbon footprint reduction, and sustainable agriculture, are becoming highly valued. This growth in green skills reflects India's commitment to environmental protection and long-term sustainable development.

The evolving landscape of green jobs in India presents both significant challenges and immense opportunities. While skill gaps, limited financing, and regulatory complexities remain hurdles, the country's momentum toward sustainable development is undeniable. Green employment is no longer limited to niche sectors—it is rapidly expanding across renewable energy, sustainable agriculture, waste management, eco-friendly transport, water conservation, forestry, green buildings, environmental consulting, and eco-tourism. This diversification reflects a nationwide shift toward sustainability, driven by forward-looking government policies, growing public awareness, and ambitious targets.

India's ambitious sustainability agenda, supported by investments in infrastructure, technology, and policy reforms, such as the promotion of electric vehicles and green public transportation is fostering innovation and opening new avenues for skill development. These initiatives are creating roles that not only drive economic growth but also safeguard the environment. By continuing to invest in green technologies, strengthen skill-building programs, and promote eco-conscious industries, India can fully harness the potential of its green workforce. This approach will secure livelihoods, spur innovation, and pave the way for a resilient, inclusive, and sustainable future. □



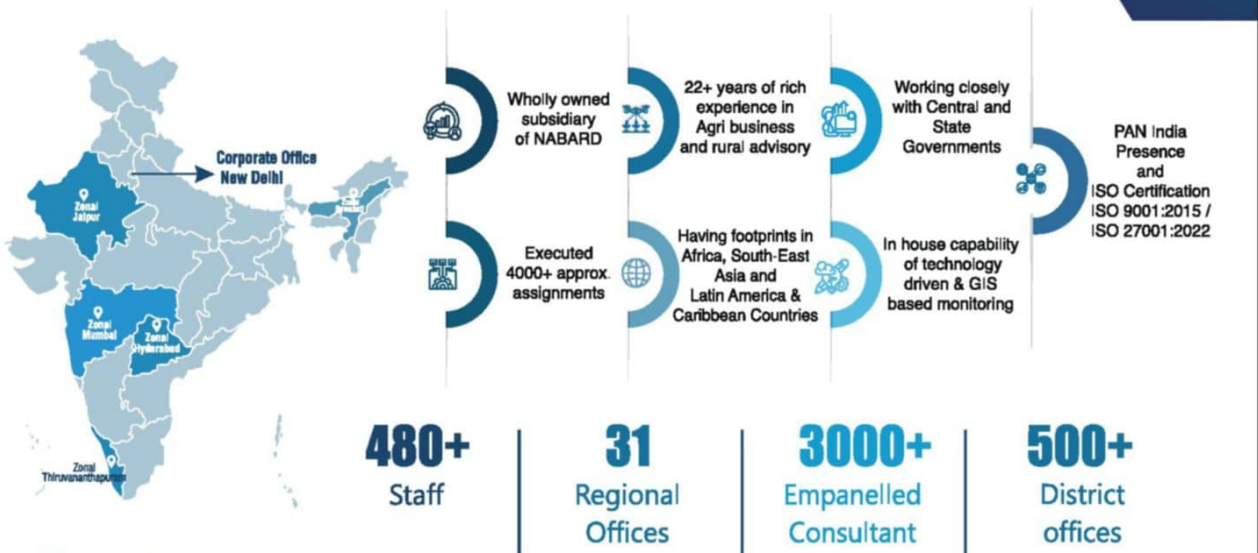


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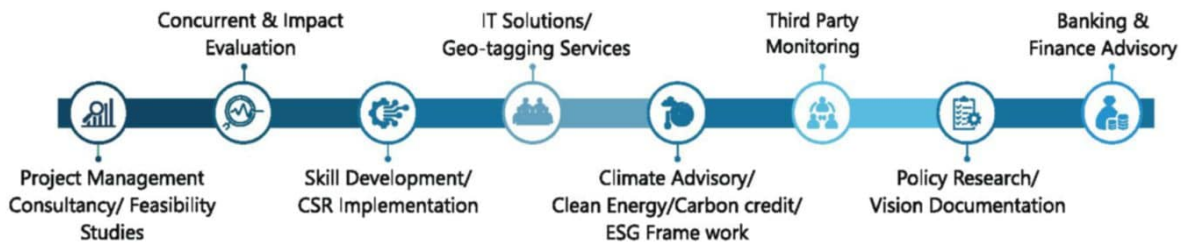
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The Success of 'Digital India' in Rural India

Digital India has transformed rural India considerably. Now connectivity in villages has improved, innovation has been promoted, the condition of skill development and education has improved, new employment opportunities have opened up and entrepreneurship has also been promoted. These changes are clearly visible in large infrastructure projects, targeted skill development programmes and digital platforms, which are empowering rural citizens and businesses



Balendu Sharma Dadhich

The changes that have taken place in the field of information and communication technologies in India are now globally accepted. The amazing work that has been done in India to connect the daily lives of citizens who believed in traditional methods for decades, with modern digital methods is considered transformative. India's successes in everything from financial transactions to startup culture, digital government to indigenous Artificial Intelligence (AI) development and mobile manufacturing to technical education in Indian languages have been impressive. But the one main element that has played a role behind all this is the digital connectivity - which often remains unnoticed by people.

Usually, when we talk about India's technological transformation, three revolutions are mentioned- Aadhaar revolution, communication (Reliance Jio inspired) revolution and infrastructure revolution. But if one wants to understand the essence behind all this, then one needs to understand the comment of Prime Minister Shri Narendra Modi, which tells the story of our digital transformation in every village and city. This comment explains how India's perception about technology changed by starting a series of nationwide changes. In July 2015, while launching the 'Digital India' programme, Prime Minister Shri Narendra Modi said, "I dream of a Digital India where high-speed digital highways unite the country, 1.3 billion connected Indians are engaged in innovation, and technology



ensures that the medium of communication between citizens and government cannot be corrupted.”

The above comment of the Prime Minister clarifies the thinking of today’s India in a more holistic way. He talks about Digital India which aims to create a wide IT eco-system in the country. He then talks about digital highways, a part of which may be Reliance Jio but it also points to broadband in every village, 4G-5G, spread of mobile connections, network of telecom satellites, presence of capable internet and telecom service providers etc. His remarks also mention 1.3 billion connected Indians, i.e., establishing the necessary mechanisms so that advantages of technology should reach everyone. And such a nationwide transformation would not have been possible without transforming rural India.

During the ten years of Digital India, we have moved in that direction. Today, the number of internet users in India has reached 90 crore and the number of mobile connections has reached 117 crore. According to a Press Information Bureau report, internet connectivity is now available in more than 95 percent of India’s

villages. Hardly any other facility has reached the common Indians on such a large scale. Perhaps not even the electricity.

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Expanding Connectivity

The BharatNet project is the backbone of rural connectivity. As of January 2025, it has connected 2,18,000 Gram Panchayats to high-speed internet using about 6,92,000 km of optical fibre cable. 4G and 5G networks have expanded rapidly. Today, 4.74 lakh 5G towers cover 99.6 per cent of our country’s districts, making mobile internet affordable and accessible to 1.16 billion people across the country. As per 2024 data, 55 per cent of India’s 886 million active internet users come from rural India. In fact, the growth rate of rural internet connectivity is now faster than the growth rate in urban areas. Telecom companies are expanding coverage in remote areas using technologies like fixed wireless access and satellite services.

The Digital India programme is further accelerating this pace. Wi-Fi hotspots are being installed in villages, existing networks are being upgraded to ring architecture to make networks more reliable, and National Broadband Mission 2.0 has been launched to bring high-speed broadband internet to even the most remote villages. Partnerships with state governments, NGOs and telecom operators are creating a technology-friendly environment where internet is no longer a luxury but a basic necessity. Though tele-density (telephone connections per thousand people) in rural areas still lags behind urban areas, the gap is also closing rapidly as telecom operators priorities expansion in villages and new technologies such as fixed wireless and satellite internet have become commonplace.

A Climate of Innovation

Digital India has spurred technological innovation in villages as well as cities, especially in the field of startups and research. Research in areas such as Artificial Intelligence, Blockchain and IoT is no longer unfamiliar to villages today. The government is working with academic institutions and the IT industry to find solutions to rural India's challenges. Digital agriculture platforms have come up, and solutions such as telemedicine and e-governance tools are being developed. For example, the Government of India's UMANG app allows villagers to access more than 1,200 government services on their mobile phones. Andhra Pradesh's e-Panta app allows farmers to instantly register their crops, get them insured, and seek help to prevent diseases.

Now about 60 per cent of the content on the Internet in India is in regional languages and using this the apps and platforms for working in Indian languages are being developed. Such digital tools have become accessible even to non-English speakers. Rural people are able to get agricultural advice from WhatsApp helplines, get weather and market information from digital agriculture tools, and participate in public and private sector hackathons and innovation challenges. Education technology and medical startups are pursuing digital solutions based on local needs. Many of these

startups originate from startup accelerators created to benefit the rural population.

There are many concrete examples of digital innovation in villages. Yakten village in Sikkim has become the country's first digital nomad village, where villagers use high-speed Wi-Fi and do farming in a hi-tech way. The youth here themselves started the Wi-Fi facility in their village, which brought internet to every home and provided digital education to the students. Akodara village in Sabarkantha district of Gujarat became India's first digital village, where 100 per cent of transactions are now done digitally with the help of a Bank. The village has facilities like mobile banking, digital payments, and even audio-visual education equipment and CCTVs in schools. Harisal village in Amravati district of Maharashtra became the country's first smart village, where Microsoft and the state government have jointly provided internet through 'White-Fi' technology. Karnataka government's e-Sahmati app is helping farmers to send their crop information directly to retailers, so that they can sell their produce at better prices.

Better Skills, Holistic Education

The Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) has trained 6.39 crore rural people in digital literacy, thanks to which every rural household has at least one digitally literate person. Digital learning platforms and ed-tech based platforms have made education more accessible. As mentioned earlier, today about 60 per cent of the content on the Internet in India is in regional languages. Online courses provided by Common Service Centres, registration for examinations and digital access to government services have benefitted rural students. Due to these, the condition of education in remote areas is improving.

The new version of PMGDISHA also covers farmers, artisans and self-help groups (SHGs). Here they are given digital education and for this, the help of local learning centers as well as mobile apps is taken. The reach of mobile phones in rural households has now increased to 94.2 per cent, so that everyone can take advantage of online education and skill development



services. Common Service Centres are now turning into a kind of community centers where digital literacy as well as vocational training, financial literacy and information about government schemes are being disseminated. At the same time, the development of rural human resources is gaining momentum.

Schemes like SWAYAM platform, National Digital Library and PM e-Vidya have given millions of children the opportunity to study online. Digital platforms have kept children studying when schools were closed during COVID-19. Schemes like Digital India 'Bhashini' are providing voice-based services in different Indian languages so that people can access government digital services even if they cannot type. All this will not happen overnight because it is not just about providing services but aspects like the mindset, preparation, skills, awareness, education and willpower of the service takers also play a role in their success. The spread of such cutting-edge services will be slow at present but it should be expected that eventually they will reach every home in the same way as social media has reached. It is important that they are easy to use and give concrete results.

Employment Opportunities

Now-a-days it is not surprising that a customer service centre or business process outsourcing (BPO) centre is running in a village or town. Digital

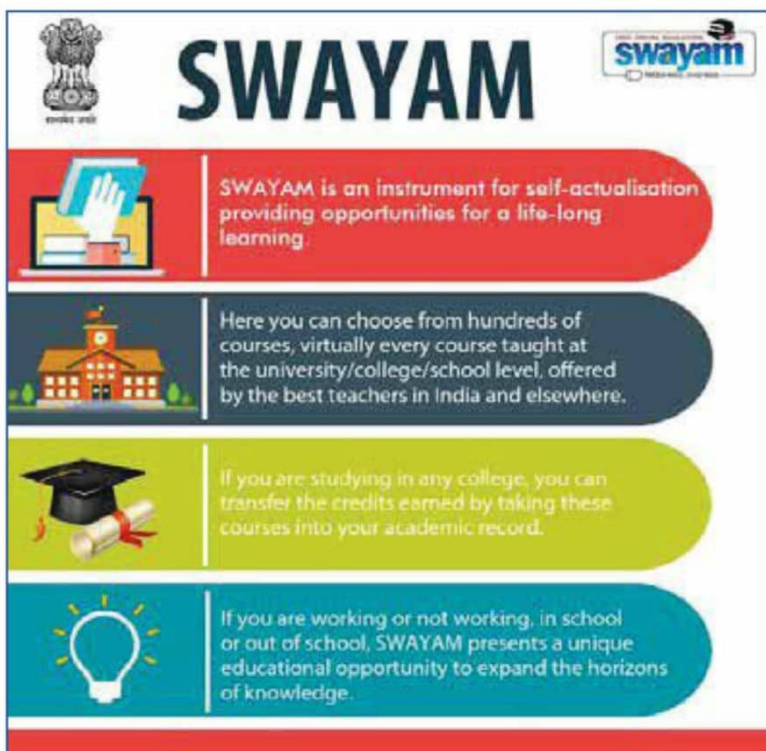
India and reliable internet available through mobile connectivity have made such examples common. Digital India has opened up new employment opportunities such as IT support, data entry, content creation and online sales, which has reduced the pace of migration from villages to cities. Meanwhile, the trend of digital payments has increased in rural India. At the national level, the number of monthly transactions through UPI has exceeded 10 billion in 2025. A new record was registered in the case of UPI transactions on 2 August 2025 when 70 crore and 70 lakh UPI transactions were registered in a single day. This facility has made financial inclusion possible and provided convenience to small traders. The government has increased the demand for professionals like technicians, network operators and digital service providers in rural areas by expanding digital infrastructure.

Gender inequality in the use of internet is also decreasing. Today, 47 per cent of its users are women, which has brought the gap between men and women to just six percent. This change is also increasing opportunities for women among digital workers and rural women have also benefited from it.

Due to cheap internet and mobile, today millions of people in India are creating their own content on YouTube, Instagram, and other social media platforms.

People from small towns and villages are also making their mark on digital platforms. Government schemes like Startup India, Make in India, and Production Linked Incentive have given a boost to new businesses.

The demand for good professionals in the IT sector will remain intact. Good internet and mobile connectivity in the country is also important for preparing such trained professionals. Gig economy (small informal jobs through digital means) is also flourishing in the country. Youth are getting opportunities to learn and find jobs in new areas like Cloud computing, Artificial intelligence and cyber security. Government's digital literacy schemes and campaigns (like Pradhan Mantri Gramin Digital Saksharta Abhiyan) have provided digital education to crores of people which includes the use of computers and internet.



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Network of Common Service Centres

These days Common Service Centres are opened in every village of India, where people can avail government services like birth certificate, pension, banking and electricity bill online. Facilities like DigiLocker, Aadhaar, and UPI are available to each one of us. Hundreds of government services have been digitised and are available online. People can download government documents, send money, avail government schemes, file income tax and GST returns from home. Such things increase transparency in government functioning and help in curbing corruption.

According to the data of June 2025, out of the total 5,60,314 functioning Common Service Centers (CSCs) in the country, 4,36,208 CSCs are in villages, which is about 78 per cent.

With the increase in the number of these CSCs and digital kiosks, local youth are getting employment as operators, trainers and digital service agents. The facility of financial technology at the rural level, mobile banking kiosks and micro-ATMs etc. have created employment opportunities for members of self-help groups and small vendors. On the other hand, digital agriculture tools and agriculture apps have opened up new employment opportunities in agri-tech advisory services and agriculture support services that did not exist earlier.

Promoting Rural Entrepreneurship

Digital platforms have enabled rural entrepreneurs to access markets, leverage e-commerce and business networking. The reach of Wi-Fi, digital payments and e-commerce platforms at the village level has enabled rural artisans, farmers and self-help groups to sell their products to customers across the country, reducing dependence on traditional intermediaries. Government's rural financial technology and digital marketing support has given small businesses access to credit, inventory management and participation in online marketplaces. Success stories are emerging from different parts of India, such as rural women selling household goods through WhatsApp and Facebook, or farmers reaching out to new buyers through agri-apps. This shows that digital

entrepreneurship is transforming the rural economy and driving inclusive growth.

NASSCOM Foundation's Women Entrepreneurship Programme has trained over 1 lakh rural women in digital and financial skills, enabling them to start or expand businesses in sectors such as agriculture, handicrafts and retail. 83 per cent of women-led rural enterprises are now independent. Women equipped with digital skills are reaching out to new customers and managing finances better. Tourism-based startups have also emerged in some villages, which promote the culture and natural beauty of the village through digital means.

Some Examples of Digital Expansion

- BharatNet: High-speed internet was brought to villages by connecting 2,18,000 gram panchayats.
- Connectivity: About 6,92,000 km of optical fibre cable has been used in the country.
- Communication: Today, 4.74 lakh 5G towers connected to 4G and 5G networks have now reached 99.6 per cent of the districts.

The infographic features a young girl in a school uniform sitting and using a smartphone. The background is white with blue and green circuit-like patterns. At the top left is the '11 SAAL' logo, and at the top right is the 'myGov' logo. The main title reads 'One of World's Largest Digital Literacy Program' followed by 'PM GRAMIN DIGITAL SAKSHARTA ABHIYAN' in large, bold, blue letters. Below this, a dark blue banner states 'OVER 7.35 CRORE CANDIDATES REGISTERED'. To the right of the girl, text indicates 'Over 6.3 crore candidates trained' and 'Target achieved ahead of schedule'.



- PMGDISHA: So far, more than 6.39 crore villagers have received digital literacy training.
- UPI: In April 2025, 1,867.7 crore transactions were done, with a total value of Rs. 24.77 lakh crore. On August 2, 70 crore 70 lakh UPI transactions were done in a single day.
- Common Service Center: Out of the total 5,60,314 working Common Service Centers in the country, 4,36,208 Common Service Centers are in villages.
- Business-friendly environment: UPI has supported 6.5 crore merchants.

Clear Policies and Direction

The Digital India programme, which aims to provide digital facilities to every citizen, deliver government services online and make the country a knowledge-based society, has shown good results to a large extent. The way technology has affected the lives of common people is no less than a revolution. We have been successful in taking the Internet and other means of communication to every village. Through these, digital facilities have reached there, but challenges remain as skill development required to enable common people to take full advantage of these facilities. The challenge of digital divide has shrunk as compared to earlier, but it is still a reality. We will have to continue our efforts in the coming years and decades to establish a knowledge society.

In 2015, when the Digital India programme was launched, only 19 per cent of the population in the country was connected to the internet and 15 per cent

had a mobile phone. Today, two-thirds of our population is connected to the internet while more than 78 per cent of the people have a mobile phone.

The Indian government has formulated policies for areas such as digital technology, telecommunications, cyber security and artificial intelligence. Policies such as the Digital Personal Data Protection Act, the National AI Mission and the Digital India Act are noteworthy. Countries such as Estonia, Singapore and South Korea are often named for their digital progress, but India's success lies in the fact that it has digitised such a huge population. Our online financial payment systems are the best example in the world.

It is not that we have achieved everything and there are no challenges left. But Digital India has proved that in a country like ours, despite so many diversities and inequalities, concrete achievements can be made even in the digital world. Digital India's role is and will remain important in our quest to transform the country into a self-reliant, inclusive and knowledge-based society.

A small part of India's IT revolution has already taken place, while the big revolution is yet to happen. The government has named the current decade as Tech Decade and we are assuming IT to contribute to one trillion dollars in our immediate target of becoming a five trillion dollar economy. The chances of this are also high because the current government seems more alert and prepared towards new opportunities than before. The share of IT and IT based services in India's GDP is estimated to reach 10 percent in 2025, which was only 1.2 per cent in 1998. If it can be increased to 15 percent in the current decade, it will be a great success.

Favourable and visionary environment in IT and telecom sectors, increasing public-private investment, successful network of startups, huge number of skilled youth, fast-growing economy, presence of mature digital system, such factors can make India a global IT superpower. Just as China transformed itself into the world's manufacturing factory, we can transform ourselves into an IT hub. If everything goes well, the current Tech Decade can prove to be the take-off of our global journey. The most important thing in achieving big results will be the comprehensiveness of these efforts, that is, the participation of our villages and rural population in the digital development journey. Digital India can become the pillar of this participation. □



India-UK FTA: From Farm Gate to Premium Shelves

The FTA represents a landmark moment for India's rural economy, especially the farm sector. With duty-free access, streamlined trade protocols, and protection for India's unique agri-heritage, this agreement sets the stage for a quantum leap in agri-exports, value-added products, and rural prosperity. The outcome of the fact will be more income at the farm gate, with greater incentives for quality, packaging, and certification. The deal promotes job creation and rural prosperity, from farms to fisheries to food processing units to textile and leather units.

BS Purkyastha

India and the United Kingdom signed a free trade agreement – officially called a Comprehensive Economic and Trade Agreement or CETA – on July 24, 2025. The trade deal has been hailed as a significant milestone in India's engagement with major developed economies and reflects a shared commitment to strengthening economic integration. After three years of intense negotiations, the deal was finalised by the two countries – this is India's first major trade deal after a decade and

the UK's fourth since it exited the European Union in 2020. As the world's fourth and sixth largest economies respectively, India and the UK's bilateral engagement holds global economic significance. Prime Minister Narendra Modi and UK Prime Minister Keir Starmer had finalised the India-UK trade deal on May 6, 2025, after the last round of talks in London.

Making Bilateral Trade More Inclusive

Bilateral trade between the two countries stands at nearly \$56 billion, with a joint goal to double this figure

by 2030. CETA secures unprecedented duty-free access for 99 per cent of India's exports to the UK, covering nearly the entire trade basket. This is expected to open new opportunities for labour-intensive industries such as textiles, marine products, leather, footwear, sports goods, toys, and gems and jewellery, alongside fast-growing sectors like engineering goods, auto components, and organic chemicals. The agreement has been designed to make trade more inclusive. Women and youth entrepreneurs, farmers, fishermen, startups, and MSMEs will gain new access to global value chains, supported by provisions that encourage innovation, promote sustainable practices, and reduce non-tariff barriers. This FTA will serve as a catalyst for inclusive growth, benefitting farmers, artisans, workers, MSMEs, startups, and innovators while safeguarding India's core interests and accelerating our journey towards becoming a global economic powerhouse.

Transition of Farm Sector from Volume to Value

The trade pact has the potential to help Indian agriculture transition from volume to value, and from local to global, giving a fillip to the rural economy. The agriculture sector accounts for 1,437 tariff lines, which constitutes 14.8 per cent of all product tariff lines. This indicates a significant presence of agriculture in the trade structure, reflecting the diversity and importance of agri-based goods in tariff regulation. Processed food accounts for 985 tariff lines, the sector holding a

10.1 per cent share. India's exports of agricultural and processed food products to the UK are expected to get a significant boost with elimination of tariffs on over 95 per cent of these items under the India-UK CETA. It is expected to help boost shipment of agricultural and processed food products from India by over 50 per cent in the next three years following the announcement of elimination of tariffs on over 95 per cent of agricultural items. Commodities such as grapes, shrimps, semi-milled white rice, onions, honey, processed food preparations and sauces top the list of agri-products likely to get a boost from the deal.

The pact would provide farmers with small land holdings – virtually the majority of Indian farmers – preferential access to the UK's \$63 billion agricultural market. India exports agricultural products worth \$36.63 billion globally. The UK imports agricultural products worth \$37.52 billion every year; however, of this, only around \$811 million worth of produce comes from India. India exports \$14.07 billion worth of processed food products globally, while the UK imports \$50.68 billion, but Indian products make up just \$309.5 million. That indicates a big window of opportunity for India and its farmers, especially for high-quality, high-value agri-products.

Niche Indian agri-products such as tea, mangoes, grapes, spices, and marine products have a ready market in the UK. Post the deal, Indian products such as coffee, tea, spices, and beverages are set to gain a foothold in the UK market. Spices such as turmeric, pepper, cardamom, and processed goods like mango pulp, pickles, and pulses will enjoy duty-free access which would enable better margins and wider reach amongst the UK's consumers. Market access for new products such as jackfruit, millets, vegetables, and organic herbs to the UK is also expected to increase, thus helping small and marginal farmers to diversify their product range while helping them defend themselves against domestic price volatility. Farmers from states such as Maharashtra, Gujarat, Punjab, Haryana, Kerala, Karnataka, Uttar Pradesh and north-eastern states would benefit from the expected surge in shipment of grapes, onions, groundnut, cotton, basmati rice, spices and other horticultural products.

The FTA eliminates around 95 per cent of agricultural and processed food from tariff lines, opening up premium UK markets for Indian produce.





Significant Market Benefits: The India-UK FTA will deliver a seismic shift bringing Indian products at parity with major agri exporters such as EU, South Africa, Turkey, Canada, Peru, Vietnam which currently enjoy zero/concessional duty access.

India's Competitive Edge Sharpened: The FTA will strategically position India to outcompete major global players in crucial segments:

- Fresh Grapes: Outmanoeuvring Brazil and matching top exporters like Egypt and South Africa.
- Processed Food Preparations: Gaining ground over the US, China, and Thailand.
- Bakery Items: Becoming more competitive than the US, China, Thailand, and Vietnam.
- Preserved Vegetables, Fruits, and Nuts: Advancing against Turkey, Pakistan, South Africa, and China.
- Fresh/Chilled Vegetables (NES): Outperforming the US, Brazil, Thailand, and China.
- Sauces and Prepared Sauces: Better positioned against the US, Japan, Thailand, China, and Malaysia.

States like Maharashtra (grapes, onions), Gujarat (groundnut, cotton), Kerala (spices), and NE states (horticulture) stand to benefit. State-specific agri-export

plans (APEDA) already align with FTA goals, ensuring equitable regional benefits from enhanced UK market access.

Fishermen to Flourish

India exported marine products worth \$8.09 billion in 2022–23, with fish, shrimp, and cuttlefish among the top categories. The UK is a high-value consumer of Indian frozen seafood, especially shrimp and white fish, due to the large Indian diaspora and demand for processed seafood. The CETA eliminates UK tariffs, improving the price realization for Indian exporters, benefits that flow down to coastal fisherfolk through higher procurement rates. According to MPEDA, seafood processing plants employ thousands of women workers, and increasing UK market access can double capacity utilization.

Untapped Export Opportunity: Despite the UK's \$5.4 billion marine import market, India's share remains at just 2.25 per cent, underscoring a significant untapped export opportunity.

FTA as a Growth Catalyst: With existing UK tariffs on Indian shrimp ranging between 4.2 per cent and 8.5 per cent, the FTA's tariff elimination are expected to unlock rapid growth, particularly in shrimp, tuna, fishmeal, and feeds.

Momentum in Value-Added Exports: Exports under Chapters 03 and 16 (value-added seafood) rose





by 3.5 per cent in FY 2024–25. The FTA incentivises higher-value processing and product diversification.

Plantations Sector

Exponential Growth Potential: UK already represents a significant market for India, absorbing 1.7 per cent of coffee, 5.6 per cent of tea, and 2.9 per cent of spice exports – now primed for exponential growth with duty free access on these products.

Level Playing Field: Duty-free access on instant coffee from the earlier rate of 3.1 per cent, will boost Indian instant coffee exports and help Indian businesses compete with other European suppliers of instant/value added coffee such as Germany, Spain, Netherlands.

Strong Opportunity for Value Added Products: FTA will create a powerful springboard for boosting exports of value-added coffee products particularly Indian instant coffee to the UK.

Oilseeds and Produce

Potential for Market Expansion: UK market can provide a new avenue for Indian oilseed exporters to reach a broader consumer base and expand their market share.

Enhanced Competitiveness: With reduced tariffs and streamlined procedures, Indian oilseed exporters

can become more competitive in the UK market, potentially leading to higher exports.

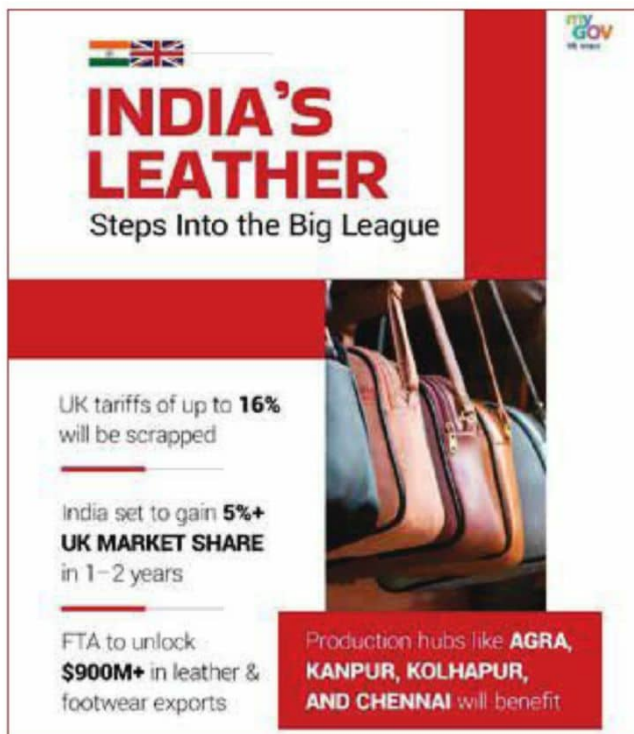
Safeguarding Key Products

Meanwhile, India has ensure careful calibration of market access, with the focus of liberalisation on processed agri-products avoiding direct competition with staple or raw produce. In processed foods such as preserved cherries, mango slices in brine, dried apricots, prunes and dried apples, concession at 50 per cent to 100 per cent is to be completed in a phased manner such as in 5 or 10 years.

To protect the interest of small farmers, sensitive items such as dairy products (Milk, Cheese, Butter, Dairy spreads, Ghee), fruits (apples, pineapples, oranges, pomegranates), cereals (wheat, rice, maize, millets), vegetables (Tomato fresh/chilled, Onions, Garlic, Cauliflower, Cabbage, radish, peas, beans, pumpkin, bitter gourd, bottle gourd, lady finger, potatoes, mixtures of vegetable), edible oils (soybean oil, palm oil, mustard oil, groundnut oil) and oilseeds (soyabean, groundnut, mustard) have been kept out of India's tariff relief offer. No tariff reduction is offered by India for sugar, milled rice, pork, chicken and eggs also.

Indian farmers, comprising nearly 44 per cent of the country's population, thus can be the biggest winners





in this FTA if food producer organisations (FPOs), food processing units, agricultural scientists, exporters of fresh produce and processed food as well as niche food brands seize this opportunity. The Agricultural & Processed Foods Export Development Authority (APEDA), Marine Products Export Development Authority (MPEDA), Spices Board, Coffee Board and other product associations have a stellar role to play here by linking farmers with export houses and buyers.

The FTA's Sanitary and Phytosanitary (SPS) Measures help Indian exporters meet UK standards with ease, reducing rejections and strengthening trust. The agreement simplifies compliance by allowing exporters to self-certify the origin of products, reducing time and paperwork. UK importers can also rely on importers' knowledge for certification, further easing trade. For small consignments under £1,000, there is no requirement for origin documentation, which supports e-commerce and small businesses. Product Specific Rules of Origin (PSRs) align with India's current supply chains for key sectors such as textiles, machinery, pharmaceuticals, and processed food.

Other Key Sectors – Textiles, Leather, Gems and Jewellery

Along with the farm sector, crucial segments of the rural economy involved in the making of textiles, apparel and leather products, gems and jewellery also stand to benefit from the trade deal. These are segments where

a large section of the rural people is employed.

Prior to the FTA, Indian textile exports to the UK were subject to import duties of 8-12 per cent, depending on the product type and country of origin. Key textile products for exports are handmade carpets (excluding silk), coir and coir products, cotton fabrics and made-ups, raw cotton, including textile waste, cotton yarn, jute-based floor coverings, handicrafts (excluding handmade carpets), jute hessian, raw jute, jute yarn, manmade staple fibres, manmade yarn, fabrics, and made-ups, silk yarns, fabrics, and made-ups, other textile yarns, fabrics, and made-ups, ready-made garments (RMG) of cotton, including accessories, RMG made from manmade fibres, other textile materials as well as from silk and wool. The trade agreement now eliminates tariffs on almost all Indian textile and apparel categories, creating a cost advantage for Indian exporters. Tariff elimination in these segments will make products shipped from India much cheaper than that from other countries such as Bangladesh, Vietnam and China. This strategic shift not only boosts India's export potential to the UK but also ensures a more favourable position in global supply chains.

Leather products and footwear, which earlier faced duties of up to 16 per cent in the UK, now stand to benefit with import duty brought down to zero. This marks a significant win for exporters, especially in states like Uttar Pradesh and Tamil Nadu, which have several leather producing clusters. Similarly, gems & jewellery, furniture, and sports goods, which previously attracted duties of up to 4 per cent, will find easier to penetrate the UK market as they stand to benefit from full duty elimination and boost exports of handcrafted, artisanal, and design-intensive products.

Conclusion

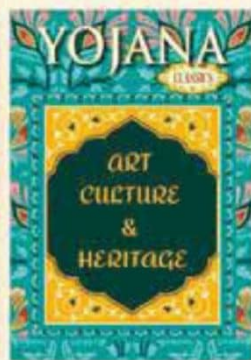
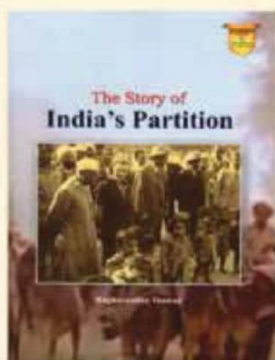
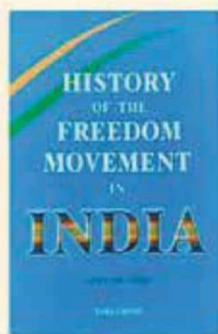
The FTA represents a landmark moment for India's rural economy, especially the farm sector. With duty-free access, streamlined trade protocols, and protection for India's unique agri-heritage, this agreement sets the stage for a quantum leap in agri-exports, value-added products, and rural prosperity. It recognises and respects India's agrarian character, by promoting value addition and global competitiveness while ensuring inclusive benefits reach rural and marginal farmers. Textiles, apparel, gems and jewellery, leather – every sector that employs people from rural India – stand to gain from the trade pact. □



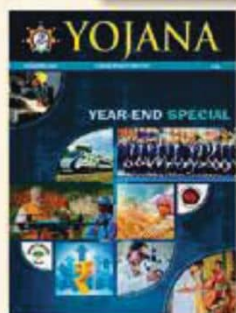
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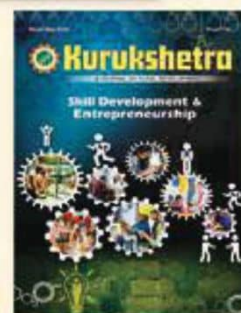
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AI-Enabled Digital Skilling for Rural India

Digital skills, especially those powered by artificial intelligence, are more than just technical know-how—they are a gateway to real empowerment for rural communities. When communities gain access to skills, they also gain bargaining power, financial stability, and the ability to secure their own futures. Yet, the journey ahead requires sustained investment in affordable internet infrastructure, local language AI tools, and inclusive policy frameworks. Without bridging the digital divide, AI will remain a privilege for the connected few.

***Dr. Arti**

****Sayantan De**

Rural India is at a pivotal juncture, where its vast demographic potential, rising economic ambitions, and rapid technological change intersect. While recent years have brought notable improvements in infrastructure and digital connectivity, deep-rooted challenges remain. Skill development, access to social security, and economic empowerment

still lag behind. Conventional skilling programs often fail to match local capabilities with the changing demands of the labour market. Fragmented social protection systems leave large sections of the rural workforce vulnerable to economic shocks.

These challenges are not just statistics—they affect real lives. In a small village in West Bengal, 22-year-old Asha once struggled to find steady work. Her situation

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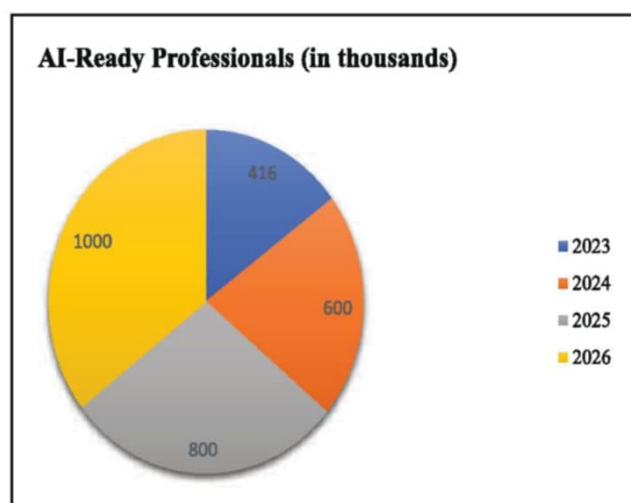
changed when she joined a government-backed digital skilling program. The course introduced her to the basics of artificial intelligence and online business skills. Today, Asha runs a thriving online handicraft store, earns a stable income, and supports her family. She is also enrolled in health and pension schemes, giving her security she never had before. For her, technology has opened the door to a better future.

Asha's story is a vivid example of the broader transformation unfolding across rural India. Over the past decade, social security coverage in India has soared from just 19% in 2015 to over 64% in 2025 (PIB, 2025), which is largely due to digital identity platforms like Aadhaar and efficient Direct Benefit Transfer systems that reach deep into rural areas. Nearly half of all internet users now reside in rural India, creating fertile ground for AI-enabled digital learning and skill development targeted precisely at youth and women like Asha.

The Ministry of Skill Development and Entrepreneurship, through initiatives such as the Skill India Digital Hub, is spearheading efforts to connect rural learners to AI-powered personalised education, often delivered in regional languages to overcome access barriers. Supported by ongoing improvements in rural connectivity via schemes like Digital India and Bharat Net, these efforts are bridging the urban-rural digital divide.

These initiatives have driven meaningful employment gains: sectors like manufacturing, services, and construction have witnessed growths of 15%, 20%, and 25% respectively as skill development intensifies. Furthermore, India's AI-ready workforce is rapidly growing, with professionals increasing from around 416,000 in 2023 and projected to reach nearly 1 million by 2026.

Figure1: AI-Ready Professional Over time



Source: (Dwivedi et al., 2025)

This tech talent surge is creating new economic opportunities that empower vulnerable rural populations, enhance livelihood stability, and strengthen social security inclusion.

Linkage Between Skills, Empowerment, and Social Security

Digital skills, especially those powered by artificial intelligence, are more than just technical know-how—they are a gateway to real empowerment for rural communities. When people like Asha acquire AI-enabled skills, they open doors to a range of livelihood opportunities beyond traditional agriculture and informal labour. These skills prepare them for formal jobs, self-employment, and entrepreneurial ventures that bring steady income and dignity.

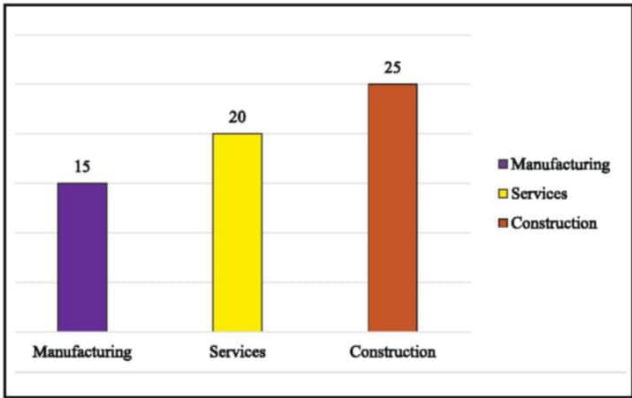
Moreover, digital skills enable easier access to social security benefits. Formal jobs often come with health insurance, pension schemes, and workers’ rights that were previously out of reach for most rural workers. Even for those who start their own enterprises or work in informal sectors, digital platforms facilitate enrolment in government schemes such as the Pradhan Mantri Jan Dhan Yojana for financial inclusion, Atal Pension Yojana for retirement security, and e-Shram for better protection of unorganised workers.

The connection between skill-building and social security is crucial because it transforms vulnerability into resilience. Equipped with digital skills, rural individuals can navigate government services online, apply for benefits efficiently, and even innovate local solutions using AI tools to address community challenges. This fosters social and economic inclusion, reducing inequalities and paving the way for sustainable rural development

India’s government recognises this synergy and is actively integrating skill development with social security frameworks. Initiatives like the Skill India Digital Hub emphasise not just training but also linking learners to formal employment and protection schemes. Post-training data shows positive trends—employment in manufacturing, services, and construction grew by 15%, 20%, and 25% respectively after skill development drives.

These outcomes underline the importance of not only expanding skilling initiatives but also aligning them with the sectors driving India’s future economic growth. Policy integration between skill development and social security ensures that workers are not only employable today but are also protected as they transition into emerging industries. In this context, the rapid expansion of India’s AI-ready workforce presents a strategic opportunity—by equipping rural populations with digital and AI competencies, Skill India can channel trained individuals into high-demand sectors while guaranteeing their access to formal employment benefits and social protection. India’s AI-ready workforce is also on a steep upward trajectory, from about 416,000 professionals in 2023 to a projection of nearly 1 million by 2026 discussed above. As this talent pool grows, rural communities can increasingly tap into digital and tech-based livelihoods, securing both income and access to social security.

Table 1: Employment Growth in Key Sectors Post-Skilling (2021–2025)



Source: Joy, 2025

Government Initiatives Driving Change

India’s progress in digital skilling and social security empowerment reflects a strong policy push to prepare rural youth and women for a technology-driven future. The Ministry of Skill Development and Entrepreneurship (MSDE) leads this effort through integrated programmes

Table 3: Government initiatives and focus areas

Name of the Initiative	Target Beneficiaries (in Lakhs)	Focus Area
PMGDISHA	639	Digital Literacy
Common Service Centres (CSCs)	560	Digital services & AI training
AI Pragya (Uttar Pradesh)	10	AI & Data Analytics Training
India AI Mission	5.6	AI Skilling for CSC workforce



emphasising artificial intelligence (AI) and digital literacy.

One flagship effort is the Skill India Mission, celebrating over a decade of success. It offers extensive skill training, including the revamped Pradhan Mantri Kaushal Vikas Yojana (PMKVY 4.0), running until 2026, with a strong focus on emerging technologies like AI, cybersecurity, and digital marketing. PMKVY 4.0 provides free short-term training and monetary awards linked to certifications and employment outcomes. This mission, now restructured and expanded under the Skill India Programme, combines key schemes such as PMKVY 4.0, National Apprenticeship Promotion Scheme (NAPS), and Jan Shikshan Sansthan (JSS), ensuring inclusive outreach with more than 2.27 crore beneficiaries so far, many from rural and marginalised communities.

The SOAR (Skiilling for AI Readiness) program represents a pioneering step toward embedding foundational AI literacy among school students (Classes 6–12) and training educators to narrow digital divides across regions. SOAR’s modular learning—covering AI basics, ethics, cybersecurity, and career guidance—aims for equitable access to AI education in rural and urban areas alike.

To streamline skill regulation and certification, the National Council for Vocational Education and Training (NCVT) has introduced the KaushalVerse Digital Enterprise Portal, enhancing transparency and efficiency. Public-private partnerships with tech industry leaders like Microsoft help deliver specialised programs, including women-focused AI training initiatives.

Additionally, the establishment of Indian Institutes of Skills (IIS) focuses on Industry 4.0 training aligned with the digital economy’s demands. Corporate Social Responsibility (CSR) funds further support innovative projects under the National Skill Development Fund, creating a robust ecosystem for lifelong learning and upskilling.

A draft National Policy for Skill Development and Entrepreneurship 2025 envisions a future-ready workforce through industry linkages, digital skills integration, and broader equity efforts, particularly targeting rural and

marginalised populations.

Bridging the Digital Divide Through AI Skiilling

Rural India’s path to economic empowerment is inseparable from digital literacy. Yet, the reality is sobering—only 25 per cent of rural households are digitally literate, compared to 61 per cent in urban areas (ideasforindia.in). This gap means millions risk being excluded from the AI-driven economy.

The Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) has already trained 6.39 crore rural citizens by March 2024 ([government.economictimes.indiatimes.com](https://economictimes.indiatimes.com)). Complementing this, Common Service Centres (CSCs)—over 5.6 lakh across India—are becoming hubs for AI-enabled training under the India AI Mission (economictimes.indiatimes.com). State-led programs are adding momentum. AI Pragya in Uttar Pradesh plans to train 10 lakh citizens—including farmers, teachers, and women entrepreneurs—in AI, machine learning, and data analytics.

However, a recent Google.org–ADB report warns that only 1 in 5 Indian youth have participated in AI skilling programs, revealing a significant opportunity gap.

Women at the Forefront of Digital Empowerment

For rural women, access to digital skills is not just about learning technology — it's a gateway to independence, entrepreneurship, and social mobility. Yet, the GSMA Mobile Gender Gap Report 2023 reveals a stubborn divide: rural women in India are 11 per cent less likely to own a smartphone and 40 per cent less likely to use mobile internet compared to men (GSMA, 2023). This digital gap mirrors — and often deepens — the economic and social gaps women already face.

AI-enabled digital skilling is opening pathways for rural women to move beyond wage-based roles into entrepreneurship, especially in domains like digital services, AI-enabled agriculture, and online retail. Studies suggest that closing the gender gap in digital access could add \$700 billion to India's GDP by 2025 (McKinsey Global Institute, 2018). Government and private programs are already showing impact. For instance, PMGDISHA and Common Service Centres (CSCs) are training rural women in basic digital literacy and AI applications. Women entrepreneurs running CSCs are now delivering AI-enabled agricultural advisories, digital financial services, and telemedicine to their communities.

Digital skilling also addresses mobility restrictions and social barriers by enabling women to work from home or local hubs. The GSMA (2023) report highlights that targeted interventions, such as AI-based language learning tools, help women overcome literacy barriers, while cloud platforms allow them to manage e-commerce businesses remotely.

The impact is visible in states like Jharkhand, where rural women trained under AI Pragya are developing

low-cost AI models for crop disease detection, both creating income and enhancing local food security (The Times of India, 2024). This shift from being passive beneficiaries to active innovators marks a significant leap in social security and empowerment.

AI-Driven Agricultural Advisory Systems: Securing Livelihoods and Social Protection

AI-powered agricultural advisory platforms are rapidly becoming a lifeline for rural communities, offering timely, location-specific guidance on crop selection, pest control, and climate adaptation. These systems not only boost farm productivity but also act as an informal form of social protection by safeguarding farmers' incomes against unpredictable weather and market shocks (FAO, 2023). Initiatives like Digital Green's AI chatbot and Krishi AI leverage machine learning to provide smallholder farmers—many of whom are women—with low-data, voice-enabled advisories in local languages (NITI Aayog, 2023). For example, AI models can now predict pest infestations weeks in advance, enabling farmers to take preventive measures and reduce crop loss by up to 30 per cent (World Bank, 2024). This AI-driven knowledge access also reduces the reliance on costly middlemen, allowing farmers to directly connect with markets through e-NAM and other digital platforms.

Conclusion

AI-enabled digital skilling is more than a technical upgrade; it is a social transformation tool. When communities gain access to skills, they also gain bargaining power, financial stability, and the ability to secure their own futures. Yet, the journey ahead requires sustained investment in affordable internet

infrastructure, local language AI tools, and inclusive policy frameworks. Without bridging the digital divide, AI will remain a privilege for the connected few. But with the right partnerships between government, private sector, and civil society, every Asha can be an entrepreneur, a leader, and a change-maker in her community. The future of social security and economic empowerment in rural India lies not in charity, but in equipping people with the tools to thrive. AI is one such tool—and its true success will be measured not in terabytes or algorithms, but in the number of lives it uplifts. □





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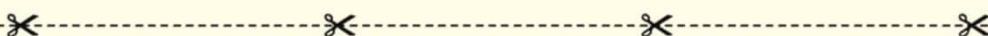
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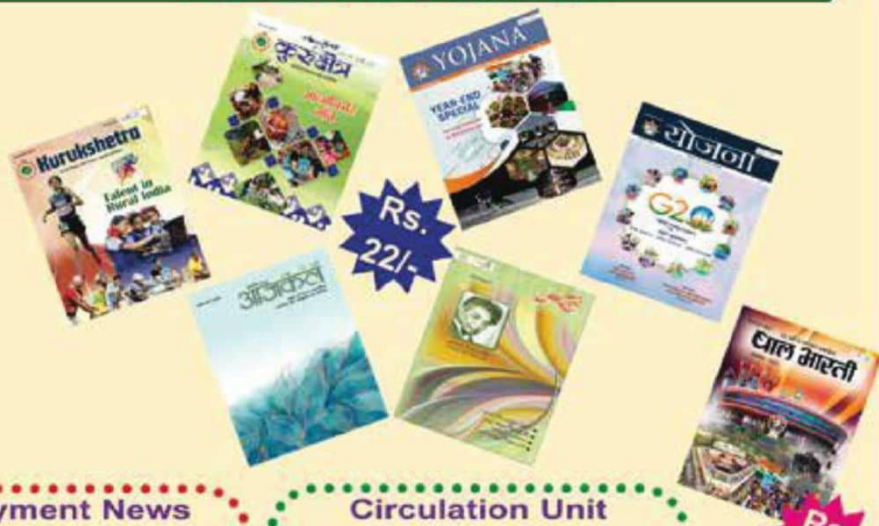
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