

TOWARDS MAKING VILLAGES SELF-RELIANT: ROLE OF MINISTRY OF PANCHAYATI RAJ

The PM Modi aims for self-sufficient villages to fortify the nation. With 68% in rural India and 51% in agrarian jobs, empowering villages is pivotal. The Ministry of Panchayati Raj is contributing meaningfully towards the creation of self-reliant villages in various ways, like empowering them financially, re-orienting their capacities to generate their own resources, making them digitally friendly, environmentally conscious, preparing them for the future to combat climate change for a sustainable future etc. The schemes/works/ initiatives/activities of the Ministry of Panchayati Raj are discussed next, which are helping the Panchayats become self-reliant.

Empowerment with Funds from Central Finance Commission

Indian Government channels substantial funds via the XV FC, granting Rs. 2,36,805 crores for FY 2021-26 to Panchayats and local bodies in 28 States. These grants, divided into un-tied and Tied funds, cater to diverse developmental needs, notably enhancing basic services and infrastructure. The per capita per annum allocation of Central Finance Commission grants increased from Rs. 54 in 12th Finance Commission (2005-2010) to Rs. 674 in 15th Finance Commission (2021-2026).

Localisation of Sustainable Development Goals (LSDG)

- India, aligned with the 2030 Agenda, commits to 17 Sustainable Development Goals. The Ministry of Panchayati Raj integrates these goals into nine areas, aiding Panchayats to achieve sustainable development via targeted plans.
- By localising the SDGs, approximately 2.5 lakh Panchayats have resolved to saturate their villages with local-level determined activities, and the Ministry of Panchayati Raj is re-orienting their capacities to this end by imparting training to them under the ***Rashtriya Gram Swaraj Abhiyan (RGSA) Scheme***.
- This campaign to achieve Sustainable Development Goals by localising them is an important step in building a self-reliant India.

Making Panchayats Financially Self-reliant

- Own Source Revenue (OSR) is critically important for Panchayats as they have to undertake various activities as an institution of self-government and ensure economic development and social justice, and implement schemes of central and state governments. Thus, strengthening OSR plays a crucial role in empowering PRIs to make independent decisions.
- It involves initiatives to increase revenue generation from local sources like property taxes, fees, fines, and other levies; improve tax compliance; and boost economic activities.
- Presently, the OSR generated by States and UTs constituted an average of only 6-7% of the overall allocated revenue (including Central Finance Commission and State Finance Commission funds) to Panchayats during the period from 2017-18 to 2021-22. This reveals a substantial potential for significantly enhancing OSR in rural India.
- The Ministry of Panchayati Raj has constituted an expert committee on the creation of OSR of local rural bodies, which has already released its report. The recommendations of the Committee will be guiding the Panchayats in this direction.

Leveraging Digital Technology in Panchayats

Digitisation and Information Technology has reshaped the 'Global Village' and Panchayats are not far behind in integrating themselves with the mainstream decision-making channels. This has scripted ambitious chapters to the self-reliant Panchayat stories. There are multiple e-Governance initiatives launched by the Ministry to make the Panchayats self-reliant -

- Under the *National e-Governance Plan (NEGP)*, **e-Panchayat** is a meaningful and far-reaching mission made to develop more transparent, accountable, and effective self-governance with greater public participation through technology in Panchayati Raj Institutions (PRIs). The objective of this project is to automate the internal work processes of more than 2.5 lakh Panchayats across the country.
- **Gram Manchitra** was launched in 2019. The application is being integrated with spatial and non-spatial data from various Ministries viz., district hospitals, CSCs, PSCs, banking amenities like bank branches, ATM, banking correspondence, etc. This application is also linked with Socio-Economic Caste Census (SECC) report, Mission Antyodaya (MA), and MA gap analysis and Resource Envelope allocated to the Gram Panchayat.
 - All these informations are available in one window, which will assist the Gram Panchayat user in better visualisation of works for integrated developmental planning.
- **e-Gram SWARAJ (eGS)**, a work-based accounting software for PRIs, was launched in 2020. Integration of accounting module of **eGS-PFMS Interface (eGSPI)** was carried out to provide an interface for the Panchayats to make real time payments to vendors/service providers. As on date, 2,63,043 PRIs have on boarded eGSPI; 2,33,433 PRIs have done online payments worth a cumulative of more than Rs. 1,59,000 crores (includes all the onboarded schemes).
 - In order to bring transparency to Panchayat procurement, e-Gram SWARAJ has been integrated with Government e-Market Place (eGS-GeM). The e-Gram Swaraj-GeM interface will enable the Panchayats to procure their goods and services through GeM, leveraging the e-Gram SWARAJ platform.
 - The eGS-GeM integration will allow local producers/cooperatives/artisans/ Self Help Groups, etc. to sell their product directly to government entities thereby promoting the spirit of 'Vocal for Local'. This is a step towards not only for promoting 'Vocal for Local' but also a step towards social inclusion in economic development efforts, which strengthen the self-reliance goals.

Initiatives Towards Gram Urja Swaraj

- Self-reliance in the field of energy is the need of the hour. Keeping in view the huge potential of renewable energy in India, the Ministry of Panchayati Raj has made efforts to promote the vision of 'Gram Urja Swaraj' in the rural areas of the country.
 - This vision of 'Gram Urja Swaraj' is an attempt to accommodate and address the social, economic, environmental, and health concerns of the rural population, along with promoting renewable energy.
- The Ministry of Panchayati Raj has also taken initiatives towards achieving the **goal of zero carbon emissions**. The Ministry will facilitate the preparation of local climate action plans for Panchayats by coordinating with various stakeholders at the central and state level.
- Under the Gram Urja Swaraj, GPs have developed their own implementation models with the support of renewable energy development agencies in the States. For example, Odanthurai Panchayat in Tamil Nadu has its own windmill, Thikekarwadi GP in Maharashtra has established Biogas plant in PPP mode and Meenvallam, project of Palakkad district Panchayat, is the first initiative of a Panchayat under micro hydel.
- Many panchayats have taken up solar energy models such as solar roof top models, solar kitchens, solar street lighting, and solar high mast light owned by the panchayats. This will help Panchayats in not only meeting their own requirements but earn revenue out of surplus energy production.

SVAMITVA Scheme Conferring Property Rights- A Way to Monetise the Assets

- The SVAMITVA scheme, launched in April 2020, will bring a new level of self-confidence and self-reliance to rural India. It aims to provide the '**record of rights**' to village household owners possessing houses in

inhabited rural areas and *issuance of property cards* to the property owners that are backed by State Revenue or Panchayati Raj Acts.

- This would facilitate monetisation of rural residential assets for credit and other financial services. Many rural youths of the country have started their own employment by taking loan from the bank on the basis of property card. Along with this, the value of rural property is also increasing, which is also leading to economic empowerment.
- The high-resolution maps (5 cm accuracy) generated through drone survey and CORS technology under the SVAMITVA scheme are of immense value to Panchayats because they can be used to update property registers and get accurate and up-to-date information of properties thereby, providing **a faster and accurate way to assess property tax potential** by Panchayats. Thus, Panchayats can become self-sufficient through property tax collection, which is the most effective own source of revenue for them.
- **Well-planned village development** has also been made possible via the SVAMITVA initiative. Panchayats are using the maps of the SVAMITVA in making their Gram Panchayat Development Plan (GPDP).
- So far, 1.61 crore property cards have been generated for more than one lakh villages in the country, and drone flying work has been completed in 2.87 lakh villages.

The Hon'ble Prime Minister, Shri Narendra Modi, has given the clarion call to make India a Developed Nation during the AMRIT KAAL period by the completion of 100 years of our independence in 2047. This noble goal of becoming Viksit Bharat expects the villages to become self-reliant, for which the contribution of Panchayats is commendable.

ASPIRATIONAL DISTRICTS AND BLOCKS PROGRAMMES

A MODEL FOR SOCIO-ECONOMIC TRANSFORMATION THROUGH GRASSROOTS EMPOWERMENT

India, a vast multicultural nation, celebrates diverse languages and lifestyles. Yet, this diversity sparks socioeconomic gaps. Some areas surge in development, while others grapple with backwardness due to terrain, resource scarcity, historical injustices, governance inefficiencies, and civil unrest. The Aspirational Districts Programme (ADP), initiated in 2018, aims to foster equitable growth by enhancing grassroots governance, addressing these disparities across regions and society.

Nestled in the Himalayas, Chamba, a Himachal Pradesh district, grapples with terrain and climate challenges despite its natural splendor. With a populace of 5 lakhs, mostly rural, providing services in remote areas with low density was a hurdle. Yet, progress in healthcare, like Mobile Medical Units, boosted prenatal care to 90% and doubled institutional deliveries to 80%, impacting regional health positively. Converging schemes and CSR funds led to community libraries and mountain slope micro-irrigation facilities, illustrating how districts like Chamba can overcome geographic and demographic hurdles for development.

Origin and Outcomes

- ADP's origins lie in the Prime Minister's vision of rapidly transforming **over 100 districts** like Chamba to boost India's development. To achieve this, NITI Aayog formulated the Aspirational Districts Framework, which was an intricate and scientifically designed process to identify under-developed districts (named Aspirational Districts) across States and UTs while also ensuring balanced regional representation.
- Extensive field visits provided contextual, ground-level data to supplement secondary statistics. This rigorous selection led to one of the most ambitious decentralised development interventions by the Government of India. Over the subsequent five years, the programme that was implemented as a mass movement (Jan

Andolan) across 112 districts led to significant grass- roots improvement across socioeconomic parameters by following the guiding **3C Principles** of **Convergence** (of schemes), **Collaboration** (between all stakeholders), and **Competition** (among districts on key indicators).

Innovative and Collaborative Approach

- The ADP introduced '**competitive cooperative federalism**,' emphasizing governance for holistic human development. Shifting from fragmented schemes to outcome-oriented evaluations, it engaged states, districts, and grassroots efforts.
- Anchored by NITI Aayog, it empowered districts to create local action plans, set clear benchmarks, and extensively used technology for real-time tracking of 49 indicators. This data-driven approach fostered healthy competition and **evidence-based policy interventions** for inclusive growth.
- Building on the previous initiatives that have supported these regions with funds, the Programme's primary focus has been to build capacity at the level of the district administration to ensure saturation of government service delivery to the last mile.
- It has focused on provision of basic services such as pucca houses, all weather roads, electricity, tap water connections, resilient health infrastructure, financial inclusion, provision of quality education, and enabling skill development to support income generation.
- The Programme has led to significant progress in multiple key performance indicators across districts and has had a major impact on India's progress in localising the Sustainable Development Goals (SDGs).
- Some indicators, such as household electricity connections and individual toilets, have reached near-saturation levels across most Aspirational Districts (ADs).
- The flagship Indian schemes such as Pradhan Mantri Gram Sadak Yojana, Pradhan Mantri Awas Yojana, Mission Indradhanush, Swachh Bharat Mission, Poshan Abhiyan, Samagra Shiksha Abhiyan, Pradhan Mantri Kisan Samman Nidhi, among many others, formed a strong base that catalysed the rapid transformation under ADP and enabled a visible expansion of socioeconomic wellbeing in India's hinterland.

Critical Success Factors

The core strategy of ADP is based on process reengineering and innovations to improve grass roots governance. Some of the critical success factors include:

- 1. Positive Nomenclature:** The selected districts are called 'Aspirational' instead of 'Backward', as they aspire to first become the best in their State and thereafter, in the country. The idea is to infuse a sense of positivity in the district administration and the people of these districts so that they can become an inspiration for the rest of India.
- 2. Theory of Prioritisation:** The programme adopts the theory of prioritisation that identifies geographies, sectors, and communities. The ADs have been carefully selected using priority socioeconomic indicators. Similarly, basic social services have been identified for all sections of the society that can be saturated.
- 3. Innovation in Governance:** The ADs have adopted innovative solutions to tackle traditional challenges. Commitment from top leadership at all levels has also been a motivating factor in this progress.
- 4. Competitive and Cooperative Federalism:** Robust monitoring and data-driven governance has been a focal strategy under the programme. The 49 socioeconomic indicators are a mix of input, process, output, and outcome indicators that are relevant for achieving SDGs. The ADs are ranked periodically based on improvement made in the indicators, instilling a sense of healthy competition and benchmarking with more developed districts.

5. Horizontal Convergence and Collaboration: Collaboration between district departments to achieve common goals is encouraged. Convergence with civil society organisations and development partners has also been an effective implementation strategy.

6. Vertical Collaboration: This focuses on collaboration between Central Ministries, State Departments, and the District Administration. Senior-level Central Prabhari Officers have been appointed for every AD to mentor them and act as a bridge between the administrative levels.

7. Peer Learning and Behaviour Change: The community of ADs benefit from each other through sharing and benchmarking of best practices. Through inter-State workshops, cross-visits and digital masterclasses, laggard districts in similar geographies can learn from and replicate the success and innovations of well-performing peer districts in a competitive spirit.

Thus, ADP has enabled holistic improvement through optimal resource allocation, real-time monitoring, and capacity building of district administration. In its appraisal report of the programme, UNDP mentioned that *"ADP is a very successful model of local area development. It is aligned to the principle of 'leave no one behind' - the vital core of the SDGs. It should serve as a best practice for several other countries where regional disparities in development status persist for many reasons."*

Sub-national Transformation

- The ADP nurtures local excellence, yielding tailored successes. Lohardaga in Jharkhand improved early prenatal care registration. Karauli, Namsai, and Dhalai notably increased institutional deliveries. Darrang, Sheikhupura, and Bhadradi Kothagudem reduced severe acute child malnutrition.
- Sukma saw immunization rates soar from under 50% to above 90%. Goalpara and Chandel achieved over 85% animal vaccinations.
- ADs have also shown significant improvement in the latest NFHS-5 Survey results when compared to NFHS-4, especially in indicators that are also tracked under the programme.
 - In antenatal care registrations, ADs from Uttar Pradesh and Bihar have improved from 36% to 56%, and those from Madhya Pradesh have improved from 47% to 71%.
 - In institutional deliveries, districts from Uttar Pradesh have improved from 53% to 79%, and districts from Bihar from 62% to 74%.
- According to the NAS-2021 survey, Dhaulpur in Rajasthan has been one of the top performing districts in improving learning outcomes across grades and subjects.
- While some ADs have achieved substantial success in specific areas, some others have achieved holistic transformation and rank among top performers on multiple parameters. These include Dahod in Gujarat, YSR (Kadapa) in Andhra Pradesh, Virudhunagar in Tamil Nadu, and Baramulla in the UT of Jammu & Kashmir.
- Context-specific solutions leveraging community participation and resources have enabled most ADs to excel.

Aspirational Blocks Programme

- Within Aspirational Districts (ADs), disparities exist due to their vast size or population. Development Blocks aim to channel more resources to marginalized groups, preventing a uniform approach. Customized strategies address specific regional needs, decentralizing decision-making for greater local impact.
- Hence, to further decentralise development and build on ADP's success, the Aspirational Blocks Programme (ABP) was launched in January 2023 to deepen focus on localised planning for 100% saturation of schemes in the most difficult and underdeveloped blocks of India.

- The selection of blocks in the ABP was made based on various parameters and indicators covering major aspects of human development. The **500 Aspirational Blocks (ABs)** have been selected by an Inter-Ministerial Committee in consultation with States and are located across 329 districts in 31 States and UTs.
- Nearly half of these blocks are in the five States of Uttar Pradesh, Bihar, Madhya Pradesh, Jharkhand, and Odisha. The selection also covers blocks in tribal districts and the Northeast States. Nearly one-third ABs are in 112 ADs and two-thirds are in 217 other districts, thus covering nearly half the districts in the country.

On the lines of ADP, the main strategy under the ABP is to strengthen basic service delivery through improved governance and implementation at the grassroots level for ensuring social development (Samajik Vikas) and regional development (Kshetriya Vikas). This would be achieved through the following approaches:

1. Capacity Building: ABP ensures continuous capacity building of block-level officials (BLOs) to ensure effective and accelerated implementation of schemes. Creation of capacity building modules and master trainers to deliver them has been a central piece of the ABP.

2. Block Development Strategy: The ABP empowers blocks to craft robust Block Development Strategies (BDS). Utilizing SWOT analysis, they maximize strengths, address weaknesses, and identify interventions across 40 Key Performance Indicators (KPIs) in five sectors. This strategy, developed through Chintan Shivirs and consultation with societal stakeholders, aims for service saturation and surpassing State averages. A 'Sankalp Saptaah' held across 20,000 Gram Panchayats in 500 ABs in October 2023 fostered awareness and behavioral change.

3. Knowledge Portal: The Programme includes a knowledge portal for documentation and dissemination of best practices. All States, Districts and Blocks would regularly contribute their grass-roots learnings, innovations, and best practices to the knowledge portal.

4. Institutional Support: An Aspirational Block Fellow along with tech support has been provisioned for every AB to assist the block and district administration in programme implementation. Awards and recognition for innovations in governance for all levels of administration are also envisaged under ABP.

With States as the main drivers, the Programme will focus on the strength of each AB, identify implementable actions for immediate improvement, measure progress, and rank blocks.

Aspirational and Aatmanirbhar Villages

- The transformation enabled by ADP and early gains under ABP underscore that empowered and inspired leadership, hyper-local planning, outcome-focused real-time monitoring, and optimal resource utilisation through convergence can drive development.
- However, community involvement remains the bedrock as districts witnessed dramatic improvements where people were not just beneficiaries but active agents of change. 'Sabka Prayas' is as important as 'Sabka Vikas' for the Programmes' success.
- Mahatma Gandhi believed that the soul of India lives in its villages. By reaching remote grassroots, these initiatives have unlocked the aspirations of all Indians to accomplish the vision of a prosperous and inclusive nation. The journey of the Aspirational Districts and Blocks will culminate in Aspirational and Aatmanirbhar Villages.

LAB TO LAND: EMPOWERING FARMERS TECHNICALLY

UN forecasts India's population to hit 1.64 billion by 2050, posing a challenge due to resource depletion and climate change. Despite vast agricultural R&D, swift tech dissemination is vital for sustainable food production, crucial for small farmers lacking resources.

During the 86th ICAR Foundation Day in July 2014, the Indian PM encouraged scientists to communicate their research findings in accessible language, enabling farmers to comprehend and embrace new products and initiatives. Subsequently, the Government of India, in collaboration with various agencies, has launched several pioneering schemes aimed at efficiently engaging and supporting farmers. The Indian government introduced the 'Lab to Land' initiative in 2014, emphasizing farmers' role in enhancing production to elevate income and cater to local and global food demands.

In fact, the 'Lab to Land' concept emerged in **1979** with the Indian Council of Agricultural Research's program. It encompasses technology transfer to farmers, known academically as '**Agricultural Extension**'. India boasts a strong public sector-led extension system, led by the Union Ministry of Agriculture and Farmers' Welfare, but private sector players are increasingly entering this domain.

Mission and Modes

- The Agriculture Ministry's Extension Division executes the '**Sub-Mission on Agricultural Extension**' (SMAE) to *enhance agricultural tech use and awareness*. It's active in 704 districts across 28 States and 5 UTs, engaging over 6.31 crore farmers and 1.71 crore farm women since 2005-06.
- Over 1.94 farm schools on exceptional farmers' fields exist. The second part, '**Mass Media Support to Agricultural Extension**,' uses Kisan Call Centres, All India Radio, Doordarshan, print, and social media for widespread rural dissemination of updated farming practices.
 - Over 4100 DD telecasts and around 22,700 AIR broadcasts occurred in 2022-23. Kisan Call Centres, launched in 2004, operate in 21 locations, offering toll-free assistance via 1800-180-1551 for farmers' queries, with over 598.21 lakh calls received till December 2022.
- Since April 2022, the **Agri-clinics and Agri-business centres scheme** empowers agriculture graduates, fostering self-employment through specialized training. About 84,000 candidates were trained, who established 36,600 ventures till Dec' 2022. The Extension Division aids capacity building, skill development, and farmer-centric events nationwide, showcasing modern agricultural advancements.

Bridging The Gap Through KVKs

- ICAR, the apex body for agri-research, drives Lab to Land via **731 Krishi Vigyan Kendras (KVK)** nationwide. Introduced in 1974 in Puducherry, KVKs serve as vital district-level knowledge hubs bridging farmers and researchers. The main mandate of the KVKs is technology assessment and demonstration for its application and capacity development.
- Its major and regular activities include (i) on-farm testing to assess the location specificity of agricultural technologies under various farming systems; (ii) conducting frontline demonstrations to establish the production potential of technologies on farmers' fields; (iii) capacity development of farmers and extension personnel to update their technical knowledge and skill; (iv) acting as a knowledge and resource centre of technologies for improving the agricultural economy of the district; and (v) providing farm-advisories to farmers employing various means and modes.
- KVKs' core involves evaluating tech in diverse agro-ecologies, refining based on location specifics. They assess technologies across crops, livestock, enterprises, and women's empowerment, spanning varietal evaluation, resource conservation, and livestock production advancements.
- Over 3.5 lakh rural Common Service Centres connect farmers to KVKs for tech solutions.
- KVKs have been pivotal in promoting farm machinery through demos and training. In 2022-23, they conducted 17,000+ demos, covering 800+ tools, impacting 9,750 hectares. They trained 21.16 lakh

individuals, organized 5.68 lakh extension programs, issued 2.22 lakh Soil Health Cards, and delivered high-quality agri-tech aiding 11.18 lakh farmers.

- National cluster demos showcased a yield advantage of 37.42% in pulses and 38.40% in oilseeds (2022-23), attributed to farmer awareness and tech interventions.
- KVKs also aid specialized 'Lab to Land' initiatives like '**KSHAMTA**' to bolster tribal agricultural output & income.
- KVKs aid '**Jal Shakti Abhiyan**' through farmer-scientist engagements, competitions, and film shows promoting water resource management. They host District Agro-Net Units in 200 KVKs, offering local language agro-met advisories.

Going Extra Miles

- Around 50 agricultural R&D institutions and universities host on-campus **Agricultural Technology Information Centres (ATICs)** as single-window hubs for farmer-centric services, offering tech, info, advisories, and inputs.
- ICAR's '**Mera Gaon, Mera Gaurav**' initiative involves scientists adopting villages to disseminate tech and info directly to farmers, visiting farms and offering advisories via smartphones.
- '**Farmer FIRST**' conducts participatory demos on diverse agri-modules.
- '**ARYA**' aims to create rural job opportunities by training youth in agro-enterprises. KVKs support farmers in adopting 'climate-smart' agriculture through the NICRA project.
- '**Student READY**' (Rural And Entrepreneurship Awareness Development Yojna) exposes agri undergrads to farm realities, fostering independent problem-solving.
- Ministry initiative **links Atal Tinkering Labs with KVKs and ATMAs**, promoting agri innovation among school students, enhancing agricultural awareness among youth.

New Pathways

- Lab-to-Land initiatives incorporate modern tech for speed and cost-effectiveness. Agencies, public and private, offer farmer-centric digital portals, mobile apps, like the versatile **mKISAN** by the Ministry of Agriculture. It empowers farmers with mobile-accessible information, advisories, and databases in their language, using SMS, IVRS, and Pull SMS, aiding over five crore farmers.
- '**Kisan Suvidha**' is an omnibus multi-language mobile app launched by the Ministry of Agriculture. It facilitates dissemination of information to farmers on some critical parameters such as weather, market prices, plant protection, farm machinery, soil health card, cold storage, and veterinary centres.

SUCCESS STORY

Enhancing Farmer's Income via "Strawberry Cultivation": A Case Study from Chittorgarh District of Rajasthan.

Shri Namichand Dhakar, a 32-years-old farmer, having a Post Graduate degree and belonging to Sripura village of Chittorgarh district in Rajasthan, has 6.00 ha cultivable land with two tube wells as well as open well as source of irrigation. After completing post-graduation in the year 2014, he started looking after his family farms, and realised that only growing traditional crops like maize, wheat, mustard, gram, and groundnut is not profitable, and hence some Innovative enterprise is necessary for enhancing his income.

Then, in 2015, he visited KVK Chittorgarh; and subsequently, underwent training on improved cultivation practices of strawberry. He started cultivating strawberry in a small area under the technical guidance of scientists from KVK. After getting encouraging results, he gained confidence, and extended strawberry cultivation to 1.00 ha in the year 2020. He brought mother plants of three varieties (Winter

Down, Sinter Star and Sweet Sensation), imported from California, and planted the same in his field. Afterwards, he was able to produce thousands of plants from runners of mother plants, and planted on raised bed, on mulching sheet, with drip irrigation system. He sold strawberry fruits in the market of Delhi, Jaipur, Ahmedabad, and other metropolitan cities. He earned a net income of Rs. 11.60 lakh per ha with 5.83 Benefit:Cost Ratio. Other than strawberry production, now he has also raised 2.00 lakh plants of strawberry and earned a gross income of Rs.10.00 lakh, by selling of plants to the farmers during 2021. He has branded his strawberry as '**Shiv Shakti**', and started selling with proper modern-day attractive packing.

Adding an innovative enterprise to his farm, he has enormously increased his Income, secured his livelihood, improved his social status, and also has generated employment for his family members. He is being recognised and respected as an innovative young farmer, as he is the first farmer in the hilly area of Chittorgarh district to cultivate strawberry, successfully. Now, more than 15 farmers from Rajasthan and adjoining state of MP have been motivated to start cultivation of strawberry, and they approached him for planting materials and cultivation technology. For strawberry cultivation, several farmers visited his farm, and took technical advices regarding cultivation on large scale, on a sustainable basis.

TOWARDS THE GOAL OF AATMANIRBHAR GAON

India's rich heritage defines its essence, seen in material and non-material cultures—a reflection of unity in diversity. The harmonious coexistence within cultural diversity, especially in villages, embodies India's magnificence and essence. Sir Charles Metcalfe likened Indian villages to '**little republics**,' self-contained yet connected. He attributed Indian happiness, freedom, and independence to these communities. Villages symbolized more than physical entities, forming the backbone of self-sufficiency for over 85% of the population at independence. Mahatma Gandhi stressed village importance and backed supplementary village industries. His vision emphasized self-sufficient, eco-friendly communities. Today, 'Aatmanirbhar Gaon' stands as the solution amid environmental crises, aligning with Gandhian principles.

Paradox of Urbanisation vis-à-vis Village Existence

Rapid urbanization poses an existential threat to villages. By 2021, a third of India lived in cities, with unchecked growth. While urban areas drive GDP, reliance on urbanization risks rural spaces. The idea of self-reliant cities remains conjecture, lacking a realistic model to meet resource demands like food production. Self-reliance hinges on habitats meeting necessities and environmental sustainability. If villages vanish, environmental consequences loom. Healing urbanization's environmental impact internally remains uncertain. The allure of urban life captivates village youth seeking career growth. Yet, many face hardship, living on the edge. Realizing village value often occurs when returning becomes daunting, underscoring the dilemma of urban migration.

Villages hold the potential to be self-reliant units. Past urbanization overlooked their importance. Urban degradation prompts a realization that villages offer sustainable living. Amid COVID-19, mass migration back to villages underscored their significance for survival. Urban centers struggled during the pandemic, unable to support people. Villages stepped in, showcasing environmental revival. The Prime Minister advocated 'Aatmanirbhar Bharat' and 'Aatmanirbhar Gaon.' COVID highlights the village's role in self-reliance and curbing urbanization.

Challenge of Reigning Urbanisation

- Counter-urbanisation, or deurbanization, is defined as a 'demographic and social process whereby people move from urban areas to rural areas. The concept of counter-urbanisation builds itself on the reality of

deprivation of facilities, amenities, and quality of life in especially inner-city areas. Thus, overpopulation is one of the causes of what is referred to as '*shrinking cities*'.

- With India's population projected to reach 1.7 billion by 2050, Aatmanirbhar Bharat's limited food grain area demands increased agro-productivity.
- Thus, strengthening villages fosters sustainable living and cultural pride. Villages offer optimism amid urbanization, but need urban-like amenities and social infrastructure to thrive.
- The recent revolution in access to infrastructure such as electricity, water, and connectivity in Indian villages in the recent past has already laid the foundation for the realisation of Aatmanirbhar Gaon within a reasonable time frame.

Proactive Interventions for Revival of Village Institution

- **Entrepreneurship** is crucial for sustenance and quality of life. Entrepreneurs in villages could curb urbanization, creating human capital and reducing rural-urban migration. Aligning research and development to societal needs is key.
- Under '**Unnat Bharat Abhiyan**,' CSIR commercialized 53 technologies, with more in progress. Focus on agro-produce supply chains can bolster village economies. 'Unnat Bharat Abhiyan' involves 3000 higher education institutions engaging 15,000 villages, aiming to empower vulnerable sections and harness local resources.
- Rural infrastructure deviates from urban development approaches. Architects and planners lack rural training, critical for preserving villages' character. Unplanned growth leads villages to urbanize. Proactive measures, safeguarding land for agro-activities, and planning social and entrepreneurial spaces, are essential to maintain village essence amidst growth.
- Rurbanisation is a globally accepted area of specialisation. The Ministry of Rural Development, Government of India, under the **Shyama Prasad Mukherji Rurban Mission (SPMRM)** envisioned 'Development of a cluster of villages that preserve and nurture the essence of rural community life with a focus on equity and inclusiveness without compromising with the facilities perceived to be essentially urban in nature, thus creating a cluster of 'Rurban Villages'. This initiative to channelise the physical growth of villages would be a significant milestone towards the realisation of 'Aatmanirbhar Gaon'.
- Another challenge would be to **develop competencies in villages** to meet the demand of emerging opportunities in rural India. Considering the diversity of nature of villages in India, it is imperative that the professional education and skilling initiatives break free from the shackles of stereotypes curricula and evolve with hands-on experience.

Engaging Communities for Instilling Conviction

- 'Aatmanirbhar Gaon' is a movement of the people. The success of a people-centric programme can only be expected by engaging with the communities. The current inertia set in by migration out of villages can only be stalled by instilling a sense of confidence amongst the people. In this regard, it is important to factor in the drag due to apprehensions.
- The **role of non-governmental organisations and higher education institutions** in handholding is critical, as they often possess superior community engagement capabilities. Besides, they are also resilient enough to adapt to a variety of operational needs.
- Under the 'Unnat Bharat Abhiyan', the task of providing knowledge and technology support involving higher education institutions was taken up by subject experts with the objective of improving livelihoods. This helped in providing resource support from academic institutions to rural areas and, at the same time, helped

in building institutional capacity in the higher education system. Village adoption was an innovative approach used for experiential learning and community engagement.

- The 73rd Amendment to the Constitution of India empowers village-level institutions through the Panchayati Raj System. Government remains responsible for training and knowledge sharing.
- Traditional knowledge is valuable, but modern scientific, technological, and managerial expertise are crucial. Lack of contemporary experience complicates village development, emphasizing the need for communities to take ownership.

Enabling the Development of Aatmanirbhar Gaon

The realisation of 'Aatmanirbhar Gaon' requires conviction that the revolution of prosperity in India is possible only when villages lead the movement. According to Gandhiji, 'The cities are capable of taking care of themselves. It is the village we must turn to', As Gandhi ji cautioned, 'If the village perishes, India will perish too. It will be no more India's will'; it is time to focus on the villages. Thus, the policies and the actions should be based on the principle that 'Development of India is development of Aatmanirbhar Gaon'.

SUSTAINABLE INDUSTRIES: THE BACKBONE OF SELF-RELIANT VILLAGES

Sustainable industries offer a multifaceted solution, emphasizing longevity and well-being for the economy and environment and empowering local communities as well. Sustainable industries bolster the region's economy, creating jobs, attracting investments, and supporting local income. Whether in eco-tourism, agriculture, or renewable energy, they offer diverse avenues for economic advancement.

In the context of Jammu and Kashmir, where the natural environment is both a source of beauty and a fragile asset, these industries become indispensable. Jammu and Kashmir, famed for its beauty and agrarian-tourism blend, sees self-reliant villages as key amid global shifts. By emphasising sustainability, they ensure the preservation of the region's natural beauty and resources for future generations. The Government prioritizes sustainable rural industries in J&K, empowering locals to control their economic destiny. This approach nurtures local expertise, fostering ownership in resource production and distribution, empowering communities to shape their future.

The Concept of Aatmanirbhar Villages

- Self-reliant villages, often referred to as 'Aatmanirbhar Villages', are a visionary approach to community development. These communities seek to establish self-sustaining local economies. More than just economic self-sufficiency, these villages prioritise sustainable development, emphasising *resource utilisation, skills development, entrepreneurship, infrastructure improvements, cultural preservation, social connectivity, and environmental sustainability*.
- Diversifying from agriculture and tourism ensures stability. Sustainable industries like renewables, handicrafts, and agro-processing offer alternate incomes, reducing vulnerability.
- Job creation is vital in Jammu and Kashmir, combating unemployment. Sustainable industries offer employment, fostering stability and reducing dependency.

To understand the practical application of sustainable industries in Jammu and Kashmir, let's look at some of the growing sectors:

Homestays

- Homestays have surged in popularity due to several factors reshaping the travel and tourism industry.

- One key driver is the increasing desire among travellers for **authentic cultural experiences**. Homestays provide an opportunity for visitors to immerse themselves in the local culture, traditions, and daily life, making their journeys more enriching and memorable.
- Another significant aspect of homestays is their **cost effectiveness and sustainability**. The sustainability aspect of homestays appeals to environmentally conscious travellers, as these accommodations tend to have a smaller ecological footprint than larger, commercial establishments.
- The Government of Jammu and Kashmir is actively promoting homestays as a means to boost tourism and local economies. They provide financial incentives, including grants and low-interest loans, to encourage locals to establish homestays, thereby improving their homes to accommodate tourists. Training programmes equip hosts with hospitality and cultural sensitivity skills.
- Government fosters host networking, integrating homestays into tourism packages. Cultural preservation and safety standards are key, showcasing local heritage.

Pencil Industry

- Kashmiri pencils are renowned for *high-quality cedarwood*, embodying cultural significance. Artisans meticulously craft each pencil, featuring intricate designs inspired by traditional motifs. The labor-intensive process ensures uniqueness, taking hours per pencil.
- Moreover, the local craftsmanship involved in this industry is a source of employment for Kashmiri artisans and contributes significantly to the region's economy.
- They are also cherished as unique souvenirs, attracting tourists and collectors alike due to their artistic and cultural value.
- India's 'pencil village' with 17 units and 4,000 workers aids self-reliance. Recognized in PM Modi's Mann Ki Baat, it reduced wood imports for pencil making, supplying key Indian manufacturers and fostering self-sufficiency.

Saffron Cultivation

- Saffron cultivation in J&K holds promise as a sustainable industry that benefits both the local economy and the environment. For centuries, saffron has been grown in the region, and it is cultivated in a sustainable manner. Its sustainable potential lies in its traditional and low-impact farming methods.
- Saffron is well-suited to the climate of the region, and it requires minimal use of pesticides and fertilisers. This traditional approach minimises the environmental impact, making it an environmentally friendly crop.
- Saffron farming in J&K boosts local economies, offering income to farmers. Its high value in global markets supports rural livelihoods, fostering economic growth through exports and aiding the region's development.
- In 2011, the Government launched the **National Saffron Mission (NSM)**, with an aim to revitalising and promoting the saffron cultivation industry.
 - The NSM's primary objectives included expanding the saffron cultivation area, adopting modern farming practices, and ensuring high-quality saffron production.
 - Sustainable saffron farming practices, environmental conservation, and investment in infrastructure development are integral components of the NSM.
 - The NSM also focused on providing financial assistance, subsidies, and incentives to saffron farmers to reduce the financial burden and encourage investment in saffron cultivation.
 - It also focussed on market linkages, connecting saffron growers with buyers and export opportunities, to ensure fair prices for saffron produce.

- Through these efforts, the mission seeks to rejuvenate the saffron industry, making it economically viable and environmentally sustainable while improving the livelihoods of those engaged in saffron cultivation.

Handicraft and Handloom Industry

- This industry is deeply rooted in the region's heritage and traditions, offering a range of advantages that contribute to its sustainability and growth. At present, J&K is home to more than 3.5 lakh artisans working across different crafts.
- **Cultural preservation** is a paramount benefit of supporting the handicraft and handloom sector in J&K. By promoting these traditional crafts and designs, the region safeguard's its rich cultural heritage, ensuring that age-old skills and practices are preserved and passed down to future generations.
- **Economic growth** is another compelling reason to nurture this industry. By bolstering handicrafts and handlooms, J&K can stimulate income generation, reduce unemployment, and alleviate poverty, thus fostering sustainable economic development.
- Furthermore, the industry often employs eco- friendly practices and locally sourced materials, promoting **environmental sustainability**. By encouraging traditional production methods and sustainable practices, the region reduces its ecological footprint and contributes to a more environmentally conscious approach to economic growth.
- J&K's '**Wool Processing, Handloom and Handicrafts Policy-2020**' acknowledges handicraft and handloom potential. It targets a sustainable, thriving industry, aiming for domestic and global market expansion.
 - The policy has introduced several landmark schemes to support artisans and stakeholders in the handicrafts sector. These include financial assistance to artisan societies, skill upgradation through the Karkhandar Scheme, minimum support prices for certain products, export incentives for GI-certified items, an education scheme to cover school and college dues for artisans' children, and enhanced stipends for trainees.
- Srinagar's recognition as a **UNESCO Creative City Network for Arts and Crafts** has opened doors for showcasing its handicrafts on the global stage.
- The Government has also initiated **Crafts Safaris** to connect buyers with local artisans across the city, aiming to strengthen the handicraft ecosystem and promote the industry.

Cricket Bat Industry

- Kashmir's cricket bat industry is primarily centred in the southern regions of *Pulwama and Anantnag*, where the ideal conditions for cultivating the willow trees exist in the lush, wet highlands nearby. These areas provide the necessary environment for the growth of the specific type of willow wood, which is highly sought after for making high-quality cricket bats.
- These willow groves have become the lifeblood of the local economy in these districts, sustaining numerous families and businesses. Approximately 200 bat manufacturing units are scattered throughout Pulwama and Anantnag, collectively engaging a workforce of approximately 50,000 individuals.

Agro-Processing

- Agro-processing, as a sustainable industry, holds immense significance in Jammu and Kashmir.
- It not only extends the shelf life of perishable agricultural goods like apples, saffron, and walnuts but also adds substantial value to these products.
- Job creation, economic diversification, and market expansion are key benefits, and they promote sustainable practices, benefiting both the environment and the economy.

- Government support and investment in infrastructure are playing a vital role in its growth and offering solutions to the challenges, including infrastructure development, technical expertise, market access, investment requirements, and the regulatory framework.

Conclusion

Sustainable industries are the key to self-reliant villages in Jammu and Kashmir. These industries provide economic diversification, job opportunities, environmental sustainability, and reduced dependence.

However, implementing sustainable industries in Jammu and Kashmir requires addressing challenges related to infrastructure, skill development, financial resources, marketing, and regulatory frameworks. Government intervention, through policy initiatives, is crucial to supporting the growth of these industries and empowering local communities.

EMPOWERING RURAL INDIA: DIGITAL TRANSFORMATION AS A SUSTAINABILITY CATALYST

Predominantly a rural nation, India has about two-thirds of its population residing in approximately 6.49 lakh villages. Smart villages, a novel and high-tech concept, aim to revolutionise underdeveloped villages, making them economically, socially, environmentally, and physically sustainable. Rural challenges—market access, aging populations, and scarce services—affect sustainability. 'Digitalization' emerges as a solution, boosting resource efficiency and rural services, aligning with UN goals to tackle poverty, food security, and climate change.

Digitally Self-Reliant Village and Digital Transformation

- A Digital Self-Sustaining Village serves as a hub for vital rural services, offering high-tech facilities. It combines advanced education with internet access, educational apps, and e-content for improved learning.
- Moreover, it provides e-health services and efficient e-governance, supported by smart infrastructure and robust amenities like roads, healthcare, schools, and more.
- CCTV surveillance bolsters village safety while smart services and infrastructure uplift living standards and spur economic growth.
- Policymakers can utilize digital hubs to promote rural digital engagement, advancing the concept of Digitally Self-Reliant Villages.
- Digital technologies are revolutionising agriculture, enabling the seamless integration of smallholders into a tech-driven agrifood system. This digitalisation transforms every aspect of the agrifood chain, optimising resource management with individualised, intelligent, and real-time solutions.
- Digital agriculture ensures high productivity, adaptability to climate change, and anticipatory capabilities, potentially enhancing food security, profitability, and sustainability for the future.

I. Government Initiatives for Digital Empowerment

The '**Digital India**' program since 2015 aims to extend government services via high-speed internet. The **Bharat Net Project** enhances e-services, e-banking, and education in villages, targeting 100 Mbps connectivity for all Gram Panchayats. The Pradhan Mantri Jan Dhan Yojana (PMJDY) furthers financial inclusion through RuPay debit cards, boosting digital transactions in rural India.

A. AI for All: NITI Aayog's Initiative for Agri Digitalisation

India's agriculture sector requires multi-faceted technological integration and collaboration among stakeholders. Solely relying on the private sector may not be cost-effective or efficient. Thus, government intervention is essential to address challenges. NITI Aayog targets 5 key sectors for AI implementation:

- **Healthcare:** Increased access and affordability of quality healthcare.

- **Agriculture:** Enhanced farmers income, increased farm productivity and reduction of wastage.
- **Education:** Improved access and quality of education.
- **Smart Cities and Infrastructure:** Efficient connectivity for the burgeoning urban population.
- **Smart Mobility and Transportation:** Smarter and safer modes of transportation and better traffic and congestion problems.

B. Self-Reliant India (SRI) Fund Empowering MSMEs for Aatmanirbhar Bharat

The SRI Fund drives MSME empowerment for Aatmanirbhar Bharat, leveraging private sector strength to supply vital growth capital to viable enterprises. Using a Mother Fund-Daughter Fund structure, it ensures sustainable funding through diverse financial instruments, fostering resilience and self-reliance in India's small and medium-sized businesses.

C. Fintech Companies Initiatives for Digital Empowerment

- Fintech companies have emerged as key players in advancing digital accessibility in rural India, recognising its pivotal role in the nation's economic development. Through collaborative efforts with the Government, these companies have propelled India from a cash-reliant society to a digitally empowered nation, where digital payments have become universal.
- These fintech entities are diligently establishing digital infrastructure in rural areas, deploying Kiosks, PoS devices, and Mobile Vans to facilitate digital bill payments (mobile, electricity, DTH, water) in remote villages.
- Fintech firms prioritize tailored products, financial education, and infrastructure. Entities like NABARD extend diverse financial services, fostering rural financial inclusion.

II. Smart Entrepreneurship for a Self-Reliant Smart Village Economy

- Rural areas, blessed with abundant natural resources and a skilled workforce, possess untapped entrepreneurial potential. Entrepreneurial endeavours in villages can catalyse rural economic development, bridge the income gap between rural and urban regions, and generate employment opportunities. To harness this potential and bolster rural livelihoods, the Government has introduced numerous schemes.
- A research team crafted the **Entrepreneurial Funnel Framework**, a process innovation inspired by the NIFTEM village program. This model systematically pinpoints prospective entrepreneurs in smart villages through interlinked activities. With a declining participation rate, roughly 5-8% emerge as fully-prepared entrepreneurs, pivotal for self-reliant rural economies.

Role of Youth Agripreneurs

- Youth Agripreneurs are pivotal in driving agricultural digitalisation. Drawing from generational insights, they create startups focused on assisting farming communities, often rooted in their own backgrounds.
- To succeed, these young innovators require sprint programmes and financial backing, which not only attract investments but also foster collaborations between investors and startups, catalysing progress in the agripreneur market.
- Encouraging digital agripreneurship requires companies to cultivate pools of digitally skilled employees. This entails identifying individuals with the necessary skills, attracting, and retaining them, nurturing talent within the existing workforce, and investing in enhancing digital skills in current roles.

III. E-commerce for Rural Products

'Rural e-commerce' differs from mainstream e-commerce, connecting rural products with urban markets to boost incomes. Government initiatives like 'Make in India,' 'Digital India,' and 'Skill India' promote SME growth

and entry into e-commerce. The ONDC (Open Network For Digital Commerce) initiative, akin to UPI's impact on payments, aims to revolutionize e-commerce, encouraging innovation and removing entry barriers. This initiative creates a technology infrastructure where every Indian, regardless of location, can engage in digital entrepreneurship. ITC Limited's e-choupal initiative has successfully provided farmers with vital information on farming practices, weather conditions, prices, and the freedom to choose buyers, reducing dependency on intermediaries and enhancing rural procurement efficiency.

A) Issues and Challenges Faced

- **Payment-related Issues:** Limited access to online payment solutions and banking services, along with a lack of trust in financial systems.
- **Lack of Digital Infrastructure:** High internet costs among rural populations impedes their engagement with digital platforms such as fibre optic lines, cell towers, internet routers, wireless spectrum.
- **Logistics Challenges** which include inefficient postal services, limited logistics providers, high logistics costs, poor road infrastructure, and inadequate logistics solutions.
- **E-commerce Awareness:** Rural populations, farmers, and entrepreneurs often lack knowledge about e-commerce, requiring training in mobile phone use, mobile banking, and e-commerce platforms.
- **Business Competence:** Rural producers lack knowledge in drafting business and financial plans, branding, packaging, and marketing of their products and knowledge and application of new product technologies.
- **Product Quality:** Rural products may suffer from poor packaging, low quality, and a lack of competitiveness compared to imported goods.
- **Language Barriers:** Many e-commerce websites primarily use English, which poses a language barrier for rural users.
- **Currency Challenges:** Handling international currencies can be a challenge for e-commerce businesses operating within India.

B) International e-commerce Initiatives

Several international initiatives have been instrumental in promoting rural e-commerce:

- a) **China:** China has seen growth in rural e-commerce, primarily led by companies like Alibaba and Jingdong. Alibaba, with its subsidiary Taobao villages, has created e-marketplaces for rural e-tailers while also focusing on infrastructure development and digitisation. Jingdong specialises in logistics, including innovative methods like drone delivery.
- b) **Japan:** Japan's 'One Village One Product (OVOP)' initiative, initially implemented in Oita prefecture, aims to rejuvenate rural communities, and enhance the rural economy following World War II.
- c) **Republic of Korea:** The 'Information Network Village (INVIL) project' in South Korea aims to empower rural communities with high-speed internet access, bridging the digital divide between urban and rural areas; create new sources of revenues from existing industries; and build sustainable local communities (OECD).

IV. Potential Solutions

Examples and impact of the use of digital technologies in agrifood systems

a. Mobile Apps: Mobile apps like *M-Farm in Kenya* have empowered farmers with real-time price information, enabling informed decisions and altering cropping patterns. The FAO's EMA-I App supports early livestock disease reporting, enhancing food security across several African countries.

b. Agrobots and AI Startup Innovations (AgTech):

- These robots are revolutionising farming by assisting with tasks like water management and irrigation optimisation. Agrobots, such as Dino Agrobot, contribute to preserving soil health, addressing concerns about pesticides, and mitigating labour shortages.
- Indian AgTech startups leverage digital advancements in agriculture. Intello Labs uses image recognition for crop monitoring, Aibono employs agri-data science and AI for yield stabilization, Trithi Robotics deploys drones for real-time crop monitoring, and SatSure uses machine learning to predict future yield values from farm images.
- AI-driven solutions employ facial and voice recognition, reducing labour costs and improving efficiency. Using AI, pig farms will reduce pig farmers' labour costs by 30% - 50%, and lower the need for feed.

C. Internet of Things (IoT) in Precision Agriculture: IoT-based Precision Agriculture incorporates guidance systems, Variable Rate Technologies (VRT), and drones. These technologies optimize resource use, reduce costs, and enhance productivity by delivering precise data on planting, fertilisation, and irrigation.

D. Blockchain Technology: ERP software, exemplified by Mycrop, streamlines processes, enabling farms to adapt to environmental challenges, enhance efficiency, and facilitate data-driven decision-making. Additionally, Blockchain ensures food traceability, enhancing transparency, and reinforcing consumer trust. Walmart's adoption of Blockchain exemplifies its ability to detect food quality issues, enabling swift responses and safeguarding consumers.

V. Conclusion

In conclusion, empowering rural areas for digital transformation is not just an opportunity but a necessity for sustainable development. By bridging the digital gap between urban and rural regions, we can unlock the potential of these areas, boost economic growth, improve livelihoods, and help in environmental conservation.

ACCELERATING ECONOMIC GROWTH IN VILLAGES

Sir Charles Metcalfe introduced the Indian *village's self-sufficiency* in 1830. Mahatma Gandhi envisioned '**Gram Swaraj**' as an independent, ideal republic. Future balanced growth must begin here, benefiting primarily the farmers. Villages, home to 65% of India's population, contribute 25-30% to the GDP, serving as the country's lifeline. Agriculture is the main source of rural income and employment as 47 % of the population is dependent on agriculture for livelihood. IFAD, World Bank, and IFPRI studies reveal rapid agricultural growth in developing nations correlates with reduced poverty and hunger. Increased agricultural investment, by 1% annually, yields a 2.7% income boost for the lowest-income deciles. Compared to non-agricultural investment, agricultural investment proves **2.5 to 3 times more effective** in lifting the poor's income. Villages, like Maraung in Shimla, exemplify prosperous development through agriculture. With around 400 residents, its apple farmers yield over 200,000 boxes annually, fetching Rs. 1-2 crore, elevating the village's prominence.

Financial Support in the Rural Areas

- Development in the rural areas should take into consideration the budgetary allocations to 'Rural Economy' by the Union and State Governments which include expenditure under agriculture and allied activities, rural development, fertiliser subsidy, irrigation, health, education, and cooperation.
- In 2023-24, the **Ministry of Rural Development** has been allocated Rs. 1,59,964 crore which implements programmes such as the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Pradhan Mantri Gram Sadak Yojana (PMGSY), and Pradhan Mantri Awas Yojana-Gramin (PMAY-G).

- Allocation for the flagship programme **National Rural Livelihood Mission (NRLM)** has been increased from Rs. 13336 to Rs. 14129 crores in the 2023-24 budget.
- The **Ministry of Agriculture and Farmers Welfare**'s budget allocates Rs. 1.25 lakh crore to agriculture. The Jal Jeevan Mission gets Rs. 70,000 crores, aiming for household water supply. Additionally, Rs. 77,000 crore goes to Swachh Bharat Mission - Rural.
- The Government has given greater impetus for infrastructural development in agriculture through **Agriculture Infrastructure Fund (AIF)** and has supported more than 18,321 projects totalling Rs. 13,681 crores.
- In a bid to support agriculture and rural development activities, **NABARD** has also done an all-time high refinance disbursement of Rs. 2.68 lakh crore during the year 2021-22.
- Because of these efforts, agricultural credit increases by over 11% to Rs. 20 lakh crores, alongside a Rs. 2,516 crore investment in computerizing 63,000 primary agricultural credit societies for seamless credit deployment.

Skill Building in Rural Areas

- Rural economy can receive a boost by ensuring suitable livelihood opportunities during the lean period to the agricultural workers and farmers. Employability is heavily dependent on upskilling to cater to the demands of the evolving, knowledge-intensive economy. Thus, villages require revitalisation with the infusion of skills and technologies to generate meaningful employment so as to make rural areas a better place to live and work.
- Currently, the Central Government is implementing three schemes for employment generation- **MGNREGS**, **Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY)** and Skill development through Rural Self Employment and Training Institutes (**RSETIs**).
 - MGNREGS offers jobs to unskilled workers of all ages, while DDU-GKY focuses on rural youth aged 15-35 from poor families, having trained 14.51 lakh candidates.
 - RSETIs promote self-employment among unemployed rural youth, especially those below the poverty line, providing ongoing skill upgrades. Once trained appropriately, the youth are supported to launch profitable micro-enterprises to enhance their own standards of living and thereby extending help in contributing to the overall national economy. These RSETIs are promoted and managed by banks with active cooperation from the State Government.
- **PMKVY** under Skill India trains rural youth in skill-based programs. **PMEGP** fosters self-employment via micro-enterprises for traditional artisans and unemployed youth. The "Vibrant Villages Programme," with Rs. 4,800 crore allocation, focuses on infrastructure and livelihood enhancement in villages near the northern border.

Need for Micro, Small and Medium Scale Industries for Non-Farm Sector Jobs

- Rural growth hinges on agriculture-based industrialization, gradually shifting to non-farm sectors. Investment in post-harvest activities like agro-processing, packaging, and transport is crucial.
- Linking farm to non-farm sectors boosts income, job creation, market-driven production, reduced transportation costs, better farm prices, and less waste. MSMEs play a critical role in rural industrialization and village economy strengthening

- There are 63.4 million MSMEs units spread across the country, out of which 32.48 million (51.25 per cent) are in rural areas and 30.9 million (48.75 per cent) in the urban areas. They provide employment to about 111 million workers.
- As MSMEs absorb the surplus agricultural labour, they help reduce the problem of disguised unemployment in rural areas and are complementary to large industries as ancillary units and play a significant role in the whole eco-system of the secondary and tertiary sectors.

Special Focus Needed on Forest Fringe Villages

- The Forest Survey of India (2019) notes that about 26% of the 6,50,000 villages are forest fringe villages, relying significantly on forests for socio-cultural and livelihood needs. These villages, housing 22% of India's population, generate 60-70% income for forest dwellers from minor forest produce (MFP).
- Approximately 300 million tribal and local people depend on forests for their livelihoods. India's diverse plant species, estimated at 3,000, provide MFP crucial to tribal and forest communities.
- The Panchayats (Extension of Scheduled Areas) Act, 1996 (PESA 1996) empowers Gram Panchayats and Sabhas in Scheduled Areas, granting ownership of minor forest produce and control over local resources.
- The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, provides these communities with rights to own, access, collect, use, and dispose of minor forest produce.
- The **Van Dhan Yojana** under 'Mechanism for Marketing of Minor Forest Produce (MFP) through Minimum Support Price (MSP) & Development of Value Chain for MFP' has been launched in 2018 with The Tribal Cooperative Marketing Development Federation of India (TRIFED) as the nodal agency at the national level for the socio-economic development of the tribal population of the country.

Promote Villages as Tourism Hubs

- The travel and tourism sector employs 14 million people, and is projected to grow by 2.5% annually till 2027. Opening villages for tourism, with necessary infrastructure, fosters development, jobs, income, and community values.
- Rural tourism transforms villages into self-sustaining units, aiding farmers' market access, contributing to the national economy's robustness. In 2022, 32 destinations from all around the world have been named as '**Best Tourism Villages 2022**' by the World Tourism Organization (UNWTO).
 - The villages were evaluated on a set of criteria covering nine areas comprising of Cultural and Natural Resources, Promotion and conservation of Cultural Resources, Economic Sustainability, Social Sustainability, Environmental Sustainability, Tourism Development and Value Chain Integration, Governance and Prioritisation of Tourism, Infrastructure and Connectivity and Health, Safety, and Security.
- India has initiated a similar program, exemplified by Chitkul in Himachal's Kinnaur district, named India's best 'tourism village'. Nestled in Kinnaur Valley with Kinner Kailash, Baspa River, and snow-capped mountains, Chitkul attracts tourists and trekkers, calling for infrastructure to enhance visitor experiences in such picturesque villages across India.

Smart Villages

- Villages' agricultural sector requires a tech overhaul for economic strength. Startups drive technology, employing AI, IoT, Big Data, drones, ICT, and weather forecasting. Agri-tech startups innovate precision farming, supply chains, and market connections.
- These technologies can help improve productivity, reduce costs, and increase the income of farmers.

- **'Villages of Tomorrow'** is one such initiative which is designed by the United Nations Development Programme (UNDP) with Trendyol- an e-commerce platform based in Turkey to reduce inequalities and develop gender-sensitive digitalisation in the rural area. The project focuses on enhancing the utilisation of e-commerce platforms and developing pilot rural settlements as holistic and sustainable hubs.
- In the Union Government's Budget of 2023, **'Agriculture Accelerator Fund'** was introduced to encourage agri start-ups founded by young entrepreneurs in rural areas.
- Providers of farming supplies such as agrochemicals, fertilisers, and seeds are also using such smart technologies to strengthen farming economy.
- There are over 1,000 such agritech startups that are assisting farmers in improving farming techniques. State Bank of India (SBI) has developed the **YONO Krishi app** to meet farmers' finance, inputs, and advisory needs.
- The Indian Tobacco Company leverages its **e-Choupal** network for 20 years, expanding direct-from-farm procurement. Their new **ITC MAARS app** aims to enhance farmer income and efficient agricultural procurement via digital services.
- To uplift rural areas, Dr. APJ Abdul Kalam's PURA concept suggests integrating urban amenities in rural hubs for economic growth, encompassing improved infrastructure, education, health, water, power, sanitation, and social safety nets.

AATMANIRBHAR VILLAGES THROUGH AGRICULTURAL DEVELOPMENT

In recent years, the concept of Aatmanirbhar Bharat (self-reliant India) has gained significant momentum, aiming to reduce dependency on foreign resources and foster self-sufficiency across diverse sectors. One of the most critical aspects of this initiative is the promotion of Aatmanirbhar Villages, where agriculture and allied sectors play a pivotal role in the process of economic development.

Need of Making Villages Aatmanirbhar

- Strengthening the rural economy to attain self-sufficiency at the village level occupies significant importance in a country like India, where nearly two-thirds of the total population and more than 70 per cent of the workforce reside in rural areas.
- The rural areas face formidable economic challenges, including poverty, unemployment, and inequality. Addressing these challenges is crucial not only to foster sustainable growth but also to stem the rural-urban drift.
- The concept of Aatmanirbhar Villages embodies the potential to create opportunities for livelihood and income generation in rural communities. This, in turn, can be a powerful tool for lifting people out of poverty, improving their quality of life, and reducing the income disparities that exist between urban and rural regions.

Employment Opportunities

- Agriculture secures the nation in food, fodder, and industry raw materials, providing livelihoods to a significant rural population. About 70% of rural households rely on agriculture directly or indirectly for employment, making it the predominant sector in India.
- Agricultural development in rural India has the potential to generate a plethora of employment opportunities, extending far beyond the farming sector. It also catalyses job creation in associated fields like agribusiness, food processing, and allied sectors.

- Diversifying the rural labour market empowers local communities and curbs rural-to-urban migration, easing urban crowding and unemployment. This fosters a more balanced, sustainable socio-economic landscape.

Role of Women

- Empowering rural women is crucial for village self-sufficiency and nationwide socio-economic growth.
- Agricultural initiatives must prioritize gender equality, granting women access to education, health, land, and credit. Their active involvement in farming and decision-making enhances rural community welfare.

Infrastructure Development

- Investments in infrastructure, including roads, electricity, irrigation, sanitation, and storage facilities, are the basic requirements to make villages self-reliant.
- These improvements enhance the overall quality of life in rural areas and also attract business and investment to these areas. Better infrastructure connects the villages to the market, thus making it easier for the farmers to sell their produce and access resources.

Technology Integration

- The adoption of modern technology and information systems in agriculture has the potential to significantly boost productivity.
- Empowering rural India necessitates equipping farmers with the necessary tools and knowledge to embrace cutting-edge farming practices. This encompasses precision agriculture, data-driven decision-making, and the use of innovative equipment and tools.

Present Status

- India transitioned into a major agricultural exporter, ranking seventh globally, post-1970, accelerating after 1994 due to global trade reforms and reduced agricultural tariffs under the WTO. Agricultural exports surged from Rs. 6,013 crores in 1990-91 to Rs. 3,75,742 crores in 2021-22, marking a 14.27% annual rise.
- In 1990-91, the imports of agricultural goods of the country were to the tune of Rs. 1206 crore which mounted up to Rs. 2,31,850 crores in 2021-22, witnessing an annual compound growth rate of 18.49 per cent during the period.
- Despite India's negative trade balance, agricultural goods have consistently remained positive, growing almost 30 times with an 11.59% annual growth, highlighting agriculture's crucial role in generating foreign exchange.
- In the wake of liberalisation, the composition of Indian agricultural exports has undergone a substantial transformation. Traditional agricultural commodities have given way to a more diversified range of value-added products. This shift towards higher value-added items demonstrates India's adaptability and ability to cater to the emerging global market demands.
- Despite a multi-fold expansion in agricultural exports, India's agricultural export basket represents just over 2.5 % of global agricultural trade. Its overall share in total world exports has always been less than 1.7%.
- With diverse agro-ecological zones, India holds vast potential to elevate agricultural exports. Leveraging modern farming techniques, high-yield seeds, and genetically modified, drought-resistant crops is vital for boosting domestic agricultural output.

Government Initiatives

- To empower rural areas under the Aatmanirbhar Villages initiative, the Indian government-initiated schemes targeting enhanced productivity, reduced costs, and diversification to high-value crops. Supply chain reforms, efficient taxation, clear legal frameworks, skilled labor, and financial stability were key focuses.

- Launched on May 12, 2020, the Aatmanirbhar Bharat Abhiyan introduced a Rs. 20 lakh crore economic package, emphasizing local products and aligning with 'Make in India.'
- This vision empowers individuals and businesses, especially in rural areas, crucial for India's self-reliance by fostering rural economy development and generating employment.
- Agriculture, vital for rural life, drives Aatmanirbhar Bharat goals. Its impact, direct or not, touches every citizen. Three key ordinances in June 2020 marked a leap towards self-reliant farming. These ordinances mark a leap toward liberalization, empowering farmers and optimizing market services for better incomes.
- The focus is on stabilizing markets, managing food price swings, backing contract farming, boosting private investment in agri-supply chains, and enhancing export infrastructure, uplifting farmer livelihoods.
- India's stride for agricultural self-sufficiency includes the **e-NAM scheme**, a nationwide digital marketplace for farm produce, launched on April 14, 2016. Fully funded by the Central Government, it's overseen by SFAC under the Agriculture Ministry. The e-NAM platform provides better marketing opportunities for the farmers to sell their produce through an online competitive and transparent price discovery system and ensuring fair prices based on the quality of their produce.
 - With the objective of reaching even the remotest farmers and revolutionising their approach to selling agricultural produce, e-NAM has expanded its reach to encompass 1361 mandis across 23 states and 4 Union territories as on 31 March 2023.
- In February 2021, a central scheme aimed to establish **10,000 Farmers Producers Organisations (FPOs)** by 2027-28 with a budget of Rs. 6,865 crores. These specialized bodies, formed by various primary producers, use cluster and commodity-based approaches, emphasizing '**One District One Product**' for specialization.
 - Nine agencies, including SFAC, NCDRC, and NABARD, will establish FPOs, offering comprehensive support from cultivation to marketing. This aims to boost farmer income and foster self-reliance at grassroots for Aatmanirbhar Bharat.
- The '**Vibrant Villages Programme**' in the 2022-23 Union Budget targets border villages in Himachal Pradesh, Uttarakhand, Arunachal Pradesh, Ladakh, and Sikkim. It aims to uplift these areas through improved infrastructure, housing, tourism, connectivity, renewable energy, and livelihood support.
 - The Vibrant Villages Programme targets 2,963 villages, initially focusing on 663. A substantial allocation of Rs. 4,800 crores, approved on February 15, 2023, highlights the government's commitment to fostering sustainable growth and enhancing living standards in these border communities.

Conclusion and Way Forward

Government initiatives aim to make villages self-reliant via agricultural growth and rural entrepreneurship, offering excluded sections opportunities in Aatmanirbhar Bharat Abhiyan. Engaging educated unemployed youth in agribusiness requires nurturing innovation and a robust non-farm sector strategy. Enhancing rural infrastructure, supporting local industries, ensuring finance access, and promoting education and sustainable practices are vital. Digital literacy, community involvement, market access, and collaboration among stakeholders are crucial for enduring rural development and contributing to Aatmanirbhar Bharat Abhiyan's goals.

LAKHPATI DIDI: A UNIQUE INITIATIVE

- The 'Lakhpati Didi' scheme, unveiled by PM Narendra Modi, aims to empower rural women in SHGs. The 'Lakhpati Didi' Scheme aims to empower 2 crores affluent Didis among the 10 crore SHG members in DAY-NRLM. These self-help groups, predominantly women-led, foster socio-economic growth, empowering

women and enabling households to earn **Rs. 1 lakh annually**. The 'Lakhpati Didi' Scheme drives rural Amrit Kaal's economy, training women in crucial skills like plumbing, LED manufacturing, drone operation, and STEM.

- The **Ministry of Rural Development** is dedicated to realizing this vision promptly. Over 1.5 crore Lakhpati Didis are empowered, aiming for 2 crores by this year, expediting efforts through interdepartmental collaboration and convergence strategies for rural economic transformation. Recently, a partnership with the Ministry of Ayush was established to train rural youth and women for Ayush healthcare under DDU-GKY.
- The execution of the 'Lakhpati Didi' initiative falls under the purview of the Deendayal Antyodaya Yojana- National Rural Livelihoods Mission (**DAY- NRLM**). DAY-NRLM is a flagship rural poverty alleviation programme of the Government of India, and today it is the world's largest initiative to improve the livelihoods of the rural poor.
- Addressing multiple dimensions of poverty, the programme aims to reach out to 10 crore rural poor households and organise one woman member from each rural household into affinity-based women SHGs.
- These SHGs provide close, long-term handholding support to their members, enabling them to access financial services from banks, diversify and stabilise their livelihoods, and effectively access their entitlements with ease.
- The core objective of the programme is to ensure that each family, once it is in SHG for 6-8 years, is able to achieve household food security and have more than one stabilised livelihood source.
- The mission, in its endeavour to empower the SHG women, has made concerted efforts in the collectivisation of women, strengthening their federations, and capacitating them with knowledge and skills for livelihood intervention, financing, and credit support, etc. for the livelihood augmentation of the SHG women.
- The mission seeks to achieve its objective through investing in four core components:
 - (a) social mobilisation and promotion and strengthening of self-managed and financially sustainable community institutions of the rural poor;
 - (b) financial inclusion of the rural poor;
 - (c) sustainable livelihoods; and
 - (d) social inclusion, social development, and convergence.
- The progress made by the mission is as follows:
 - ✓ Geographical Coverage: The mission has covered 7091 blocks spread over 742 districts across all States and UTs (except Delhi and Chandigarh) under the intensive strategy
 - ✓ Social Mobilisation/Institution Building: 9.54 crore women have been mobilised into 87.39 lakh Self-Help Groups (SHGs).
 - ✓ Social Capital: Community driven approach is the central to the mission's implementation strategy. Nearly 4 lakh Community Resource Persons have been trained in multiple interventions.
 - ✓ Capitalisation Support: Cumulatively, about Rs. 33,497.62 crore has been provided as community investment support under the mission.
 - ✓ SHG-Bank Linkage: Nearly Rs. 6.96 lakh crore of bank credit has been accessed by the SHGs since 2013-14. The NPA at 1.88% is a result of the efforts undertaken at various levels of the mission.
 - ✓ SHG members as Business Correspondent Agents (BCAs): In order to provide last mile delivery of financial services, more than 1,00,000 SHG members have been identified and trained as Business

Correspondent Agents/ Digipay points. At present, 1.07 lakh Banking Correspondents Sakhi/Digipay Sakhi have been deployed.

- ✓ Livelihoods: DAY-NRLM promotes sustainable agriculture, livestock, and NTFPs in intensive blocks under the Farm interventions. The focus of the interventions is on training and capacity building, and promotion of agro-ecological practices as well as livestock practices to enhance crop and animal productivity. As of August 23, 3.02 crore women farmers have been covered under these interventions.

Under the Non-Farm strategy, DAY-NRLM works on Startup Village Entrepreneurship Programme (SVEP) that aims to support entrepreneurs in rural areas to set up local enterprises. Implemented since 2016-17, nearly 2.45 lakh enterprises have been supported under SVEP thus far.

8. Custom Hiring Centres / Tool Banks: About 28623 Custom Hiring Centre/ Community Managed Tool Bank have been set up across multiple States. These CHCs enable small and marginal famers provided access to farm equipment and other services at a nominal rate.

Under the mission, about 9.54 crore women are part of 87.39 lakh Self Help Groups (SHGs). A great deal of head way has been made in financial inclusion, e.g., financial literacy, opening of Bank accounts, Credit, insurance etc. Around Rs. 33,497 crore of capitalisation support has been provided to the SHGs. This has enabled credit linkage of Rs. 6.95 lakh crore from the banks to the SHGs and their federations since the year 2013-14.

- The mission adopts a collaborative approach involving government, private sector, NGOs, and more to boost SHG household income. With over 5 lakh trained Community Resource Persons (CRPs), including various Sakhi roles, the mission ensures grassroots facilitation of livelihood interventions, supported by professionals at multiple administrative levels.
- Similarly, to give impetus to economic empowerment of women, the Lakhpati Didi initiative has been initiated by the Deendayal Antyodaya Yojana- National Rural Livelihoods Mission, wherein each SHG household is encouraged to take up multiple livelihood activities coupled with value chain interventions, resulting in a sustainable income of Rs. 1 lakh or more per year.
- The Lakhpati Didi Initiative and DAY-NRLM reflect the government's commitment to empowering rural women and alleviating poverty.
- The 'Lakhpati Didi' Initiative aims to provide self-employment and skilled-wage employment opportunities to women from poor households. The scheme is designed to empower women by equipping them with essential skills that pave the way for the establishment of microenterprises.
- It focuses on social mobilisation, financial inclusion, sustainable livelihoods, and social development to empower rural women and enhance their access to entitlements.
- Through these efforts, the government aims to create sustainable and diversified livelihood options for rural women, thereby contributing to poverty reduction and economic empowerment at the grassroots level.
- It is well said that when women prosper, the world prospers. Their economic empowerment fuels growth, and their access to education drives global progress.
- Their leadership fosters inclusivity, and their voices inspire positive change. The most effective way to empower women is through a women-led development approach, and India is making huge strides in this direction.