The Indian Geographical Journal
Volume 99 (2) December - 2024, pp 103-119
ISSN 0019-4824

ANALYSIS OF REGIONAL DISPARITIES IN THE LEVEL OF DEVELOPMENT OF GRAM PANCHAYATS IDENTIFIED UNDER THE SANSAD ADARSH GRAM YOJANA (SAGY) IN RAJASTHAN, INDIA

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Abstract

Rural development is a vital yet complex undertaking in India, where most of the population resides in rural areas. This study investigates the disparities in the development levels of Gram Panchayats (GPs) under the Sansad Adarsh Gram Yojana (SAGY) in Rajasthan. Using a composite index of 35 infrastructure indicators, the research evaluates 190 GPs, categorising them into four groups: relatively highly developed, moderately developed, low developed, and very low developed. The results reveal significant regional disparities—only 12.10% of GPs fall into the highly developed category, while 40% are classified as low developed, and 9.48% as very low developed. The findings underscore the necessity for targeted interventions to address these inequalities, especially in underperforming regions. The study emphasises the importance of continuous monitoring, collaborative efforts, and tailored resource allocation to promote equitable development in rural areas, making a case for adaptive strategies in rural development programs like SAGY.

Keywords: Rural development, Regional disparities, Rajasthan, Sansad Adarsh Gram Yojana (SAGY), Development levels

1. Introduction

Rural development is a complex and multifaceted endeavour aimed at improving the quality of life and economic well-being of rural populations across the country. India, with a significant 70 per cent portion of its population residing in rural areas (World Bank, 2023), recognises the critical importance of uplifting these regions for overall national development. The concept of rural development in India encompasses various dimensions, including economic empowerment, social inclusion, infrastructure development, environmental sustainability, and governance reform.

Historically, rural development in India has been intertwined with agrarian reforms and initiatives aimed at boosting agricultural productivity and rural livelihoods (Swamy, 2012). For example, the Green Revolution of the 1960s and 1970s introduced high-yielding

crop varieties, irrigation infrastructure, and agricultural credit schemes, leading to a significant increase in agricultural output and rural incomes (Chanti, 2017). However, despite these efforts, rural India faces numerous challenges, including poverty, unemployment, inadequate access to basic services such as education and healthcare, infrastructure deficits, and environmental degradation (Saroha, 2017). In recent years, there has been a shift towards a more holistic approach to rural development, emphasising the need for comprehensive strategies that address the diverse needs and aspirations of rural communities. Initiatives such as the National Rural Employment Guarantee Act (NREGA), launched in 2005, aim to provide rural households with guaranteed employment opportunities, thereby enhancing livelihood security and reducing poverty (Kedia, 2023). Similarly, the Pradhan Mantri Gram Sadak Yojana (PMGSY) focuses on improving rural connectivity by providing all-weather road infrastructure, facilitating market access, and promoting economic growth in rural areas (Panda & Majumder, 2013). Moreover, the government has been promoting rural entrepreneurship and skill development through programs like the Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM), which aims to empower rural women and marginalised communities by facilitating access to financial services, capacity-building initiatives, and market linkages (Chatterjee, 2017).

Environmental sustainability is also a key aspect of rural development in India, with initiatives like the Swachh Bharat Abhiyan focusing on sanitation and hygiene promotion in rural areas and schemes promoting sustainable agriculture practices and natural resource management (Khurana & Raj, 2021; Kumar Mohapatra, 2015; Ramesh et al., 2016). However, despite these efforts, challenges persist, and there is a need for continued innovation, investment, and policy reform to address the complex and interconnected issues facing rural India (Saroha, 2017). Regional disparity in India prevails at vast levels, showing stark differences in development outcomes and opportunities across various geographical regions. These disparities manifest in terms of economic growth, social indicators, infrastructure availability, and access to essential services. (Kowal & Paul, 2019). Factors such as historical legacies, uneven distribution of resources, and policy priorities have contributed to the widening gap between developed and less-developed regions. (Leyshon, 2021). In the rural-urban scenario of India, significant developmental disparities exist between rural and urban areas, reflecting economic, social, and infrastructural dimensions. (Hasib & Ahmed, 2012). Rural areas, home to a substantial portion of the population, often face challenges such as limited access to basic amenities like healthcare, education, and sanitation. Agricultural dependency, coupled with inadequate infrastructure and employment opportunities, contributes to rural poverty and migration to urban centres in search of better prospects (Chigbu, 2015; Joshi, 2019). On the other hand, urban areas, characterised by rapid industrialisation and modern infrastructure, offer greater employment opportunities, access to services, and a higher standard of living. However, urbanisation brings its own set of challenges, including congestion, pollution, inadequate housing, and socio-economic disparities (Punyamurthy & Bheenaveni, 2023). Addressing the rural -urban development gap necessitates holistic

strategies that prioritise rural infrastructure development, livelihood enhancement, skill-building, and decentralisation of governance. Sustainable rural development can help alleviate challenges faced by urban areas, such as overcrowding, strain on urban resources, and socio-economic disparities. By investing in rural development, India can potentially reduce mass migration to cities, thereby easing pressure on urban infrastructure and improving overall urban living conditions. Bridging the rural-urban divide is essential for achieving balanced regional development and ensuring inclusive growth across the country (Khurana & Raj, 2021; Ramesh et al., 2016; Rayjada, 2023; Sarabu, 2016).

Rural development in Rajasthan is a multifaceted endeavour encompassing infrastructure enhancement, community empowerment, inclusive growth, and environmental sustainability. Government schemes like SAGY play a pivotal role in driving comprehensive, participatory, and sustainable development in rural areas. It emphasises community participation and collaboration, echoing findings from research suggesting the significance of participatory approaches in rural development initiatives. (Dwivedi, 2015) . By involving villagers, government officials, and non-governmental organisations (NGOs) in decision-making processes, SAGY ensures that development projects are tailored to meet the unique requirements of each village, enhancing their effectiveness and sustainability. (Tiwari et al., 2023). Inclusive growth is another key focus of SAGY, with specific attention given to marginalised groups within rural communities. SAGY's provision of skill development programs, access to credit facilities, and support for livelihood diversification aligns with these findings, aiming to reduce disparities and promote social inclusion in rural Rajasthan (Raj et al., 2018). It also emphasises environmentally sustainable practices, reflecting growing recognition of the importance of environmental conservation in rural development efforts. (Pathak Neemaand Kothari, 2013). By promoting eco-friendly initiatives like rainwater harvesting and renewable energy adoption, SAGY seeks to enhance environmental resilience and ensure the long-term prosperity of rural communities in Rajasthan. The specific objective of the study is to examine the regional disparities in the level of development within the Sansad Adarsh Gram Yojana (SAGY) areas of Rajasthan.

2. Study Area

Rajasthan, the largest state in India by area, is characterised by its diverse geographical landscape, rich cultural heritage, and significant rural population (Sharma & Mishra, 2021). With a substantial portion of its population residing in rural areas, the state faces unique challenges and opportunities in the realm of rural development. Infrastructure development is recognised as a cornerstone of rural development initiatives in Rajasthan (Garg, 2017). Studies emphasise the pivotal role of infrastructure, including roads, sanitation facilities, healthcare centres, and educational institutions, in stimulating economic growth and enhancing living standards in rural areas (Agrawal, 2021). Government schemes like the Sansad Adarsh Gram Yojana (SAGY) have been instrumental in addressing infrastructure deficits and improving basic amenities in rural Rajasthan. Participatory approaches to rural development have gained traction in Rajasthan, with a growing body of research highlighting the importance of community participation and

empowerment in driving sustainable change. Scholars underscore the significance of involving villagers, government officials, and non-governmental organisations (NGOs) in decision-making processes to ensure the relevance and sustainability of development projects (Rayjada, 2023). Initiatives like SAGY prioritise community engagement, fostering ownership and accountability at the grassroots level. Inclusive growth lies at the heart of rural development strategies in Rajasthan, with a focus on addressing socio-economic disparities and promoting social equity. Research by Ranga Rajan Krishnamani and world bank highlights the importance of targeted interventions aimed at empowering marginalised groups, including women, children, and the elderly, to achieve more equitable outcomes (Krishnamani, 2016).

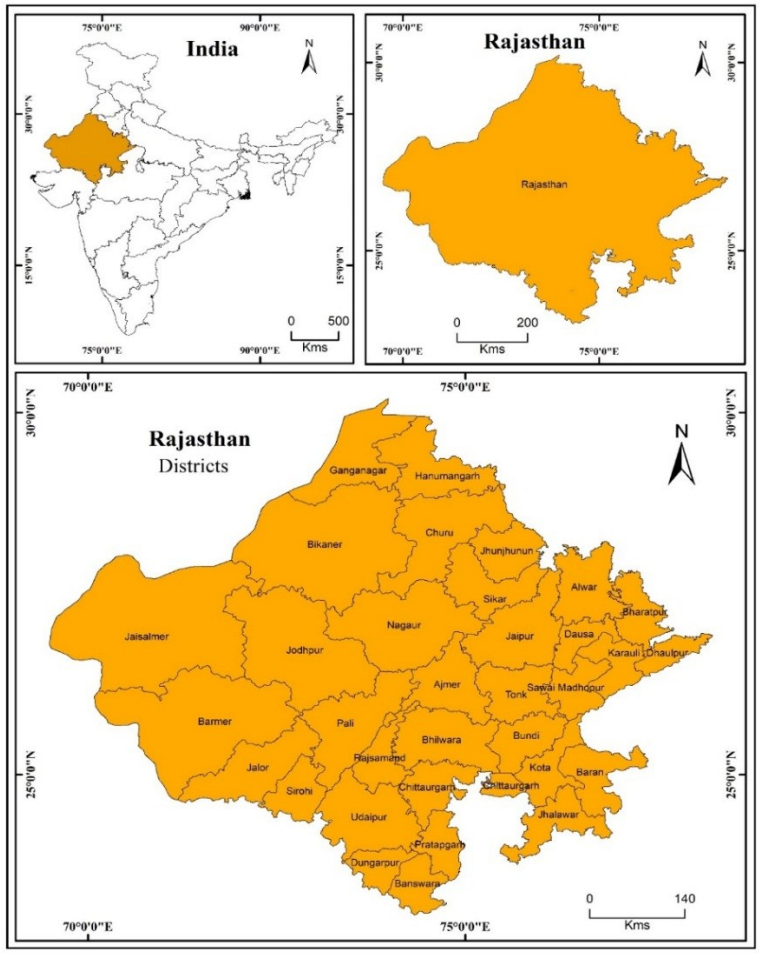

Fig. 1: Location Map of the Study Area

Government programs such as SAGY incorporate provisions for skill development, access to credit, and livelihood diversification to reduce disparities and promote social inclusion in rural Rajasthan (Sharma & Chouhan, 2024). Environmental conservation

emerges as a critical consideration in rural development discourse in Rajasthan, given the state's vulnerability to environmental degradation and climate change. Studies underscore the importance of integrating eco-friendly practices and technologies into rural development initiatives. (Sharma et al., 2022). SAGY promotes environmental sustainability through initiatives such as rainwater harvesting and renewable energy adoption, aiming to enhance resilience and ensure long-term prosperity in rural communities (SAGY, 2022).

The study focuses on Rajasthan, the largest state in India, which is an integral part of the Sansad Adarsh Gram Yojana (SAGY) Zone-2. Rajasthan is situated between latitudes 23.3° North and 30.12° North, and longitudes 69.3° East and 78.17° East. This positioning places Rajasthan predominantly in the northwestern part of India. Covering an area of 342,239 square kilometres, Rajasthan is notable for its vast and diverse geographical features, which include the Thar Desert, the ancient Aravalli Range, and its fertile plains. According to the 2011 Census, the state has a population of approximately 68.6 million people. The arid climate of Rajasthan plays a crucial role in shaping its agricultural practices and socio-economic conditions. Administratively, the state is divided into 7 divisions, 33 districts, 244 tehsils, and 9,177 Gram Panchayats, supporting a rural population across 39,753 inhabited villages. Politically, Rajasthan holds significant influence with its 25 Lok Sabha seats and 10 Rajya Sabha seats. The region faces various developmental challenges, some of which it shares with its neighbouring state, Gujarat, under the collaborative efforts within SAGY Zone-2.

3. Database and Methodology:

The study is grounded in secondary data, collected from reputable sources such as the District Census Handbooks (2011), the Mission Antyodaya database (2020), the Socio-Economic Caste Census (2011), and the Government of Rajasthan websites (2020-21). These datasets provided comprehensive insights into development disparities across 190 SAGY Gram Panchayats in Rajasthan, offering a rich and multidimensional view of regional development.

3.1 Rationale for Indicator Selection:

The methodology hinges on a well-thought-out selection of 35 indicators (listed in Table 1) across four categories: demographic, economic, infrastructural, and socio-cultural. These indicators were selected to provide a multidimensional view of development, reflecting key areas such as agricultural infrastructure, education, healthcare, and social services. These indicators were specifically chosen to reflect critical aspects of regional development, ensuring that the analysis covers not only economic performance but also infrastructural quality and social well-being.

These indicators were selected based on their relevance to both the overall objective of the research—measuring development disparities—and their proven applicability in similar developmental studies.

Table 1: Indicators Used to Measure Levels of Development

Variable	Indicators of Development	Description
Agriculture and Livelihood Support		
X1	Total households engaged in farm activities	Indicates the reliance of the local population on agriculture for their livelihood. A higher number suggests an agrarian economy and highlights the importance of agriculture-based interventions.
X2	Availability of government seed centre	Seed centres provide quality seeds, critical for improving crop yield and promoting sustainable farming practices. Their availability reflects government support for agriculture.
X3	Availability of watershed development project	Watershed projects help in water conservation, improving soil fertility, and promoting sustainable agricultural practices. They are vital for water-scarce regions.
X4	Availability of rain harvest system	Rainwater harvesting systems aid in water conservation and ensure a reliable water supply, especially in areas prone to drought or erratic rainfall.
X5	Net sown area in hectares	Represents the amount of land under cultivation, reflecting the agricultural potential and intensity of farming activities in the area.
X6	Availability of soil testing centre	Soil testing services help farmers optimize the use of fertilizers and manage soil health, leading to better agricultural productivity.
X7	Availability of fertilizer shop	Access to fertilizers is crucial for improving crop productivity, and the availability of shops ensures that farmers have timely access to these inputs.
X8	Area irrigated in hectares	Irrigation is a critical factor for agriculture, especially in areas with insufficient rainfall. More irrigated land often correlates with higher agricultural productivity.
Livestock and Dairy Development		
X9	Availability of livestock extension services	These services provide technical support to farmers engaged in animal husbandry, improving livestock health and productivity.
X10	Availability of milk routes	Milk routes are essential for dairy farmers to market their produce. A well-established route indicates good infrastructure for dairy farming.
X11	Availability of veterinary hospital	Veterinary hospitals ensure livestock health, crucial in rural areas where animal husbandry is a significant part of the economy.
Housing and Living Conditions		

X12	Total households with kutcha wall and roof	A higher number of such houses indicates poor housing conditions, reflecting low living standards and the need for better housing infrastructure.
X13	Total households with PMAY house	This indicator tracks the number of houses built under the Pradhan Mantri Awas Yojana (PMAY), a government scheme for affordable housing. More PMAY houses suggest better housing conditions.
Water, Roads, and Transport Infrastructure		
X14	Availability of piped tap water	Piped water supply indicates improved access to clean and safe drinking water, a crucial factor in rural health and well-being.
X15	Village connected to all-weather road.	All-weather roads ensure year-round connectivity, facilitating access to markets, healthcare, and education, and are key to overall rural development.
X16	Availability of internal pucca road	Internal roads made of durable materials (pucca) improve intra-village connectivity, enhancing mobility and access to services within the village.
X17	Availability of public transport	Public transport is essential for rural mobility, providing access to employment opportunities, healthcare, education, and markets.
X18	Availability of railway station	Proximity to a railway station improves connectivity to larger urban centres, facilitating trade, travel, and access to broader economic opportunities.
Electricity and Digital Connectivity		
X19	Availability hours of domestic electricity	Regular and sufficient electricity supply is essential for daily life, including education, healthcare, and economic activities like farming and small-scale industries.
X20	Availability of CSC (Common Service Center)	CSCs offer digital services like e-governance, banking, education, and telemedicine. Their presence is crucial for bridging the digital divide in rural areas.
X21	Availability of bank	Banks provide access to financial services, promoting savings, credit, and economic activities. Their availability reflects economic integration.
X22	Availability of ATM	ATMs ensure easy access to cash, supporting financial inclusion and enabling smoother transactions in rural economies.
X23	Availability of post office	Post offices provide postal services and often financial services, playing a key role in communication and financial inclusion in rural areas.
X24	Availability of broadband	Broadband access is critical for digital connectivity, facilitating education, communication, and access to government services.

Public Distribution and Education		
X25	Availability of PDS (Public Distribution System)	The PDS ensures the availability of subsidized food grains, an essential service for ensuring food security among the rural poor.
X26	Availability of primary school	The presence of primary schools indicates basic educational infrastructure, which is essential for early childhood education.
X27	Availability of mid-day meal scheme	The mid-day meal scheme provides meals to school children, improving nutrition and encouraging school attendance.
X28	Availability of middle school	Middle schools provide further education beyond the primary level, supporting continued education for children in rural areas.
X29	Availability of high school	High schools are crucial for secondary education, enabling rural students to access higher levels of education without having to travel long distances.
Healthcare and Market Access		
X30	Availability of market	A market in or near the village supports local commerce, agricultural trade, and access to consumer goods, promoting economic activities.
X31	Availability of PHC (Primary Health Center) or CHC (Community Health Center)	Access to healthcare facilities like PHCs and CHCs is critical for providing basic and emergency healthcare services in rural areas.
X32	Availability of Jan Aushadhi Kendra	These centres provide affordable generic medicines, improving access to essential healthcare for the rural population.
X33	Community waste disposal system	A proper waste disposal system helps maintain sanitation and hygiene, which is essential for public health.
Social Services and Health		
X34	Availability of Aanganwadi center	Aanganwadi centres provide early childhood care and development services, including nutrition, preschool education, and health check-ups for children and mothers.
X35	Availability of mother-child health facilities	These facilities are critical for ensuring maternal and child health, offering services like prenatal care, vaccinations, and nutrition programs.

Source: Prepared by author based on Census of India, 2011 & Mission Antyodaya, 2020

The 35 indicators were chosen to assess multiple facets of rural development, which include agricultural support (e.g., availability of soil testing centres, fertilizer shops, irrigation), infrastructure (e.g., roads, railways, electricity), basic services (e.g., healthcare, education, water supply), and socio-economic amenities (e.g., banking, communication, housing). They also cover economic, social, and infrastructural dimensions crucial to understanding rural development. Many of the variables focus on agriculture, which remains a key livelihood source in rural India, while others emphasize basic living conditions and services, contributing to an overall assessment of development. Indicators such as the availability of veterinary services, watershed projects, and Aanganwadi centres address the unique needs of rural populations, particularly in areas with agricultural and livestock-based economies.

The selected indicators collectively assess multiple dimensions of rural life, providing a comprehensive understanding of rural development. Agriculture and livelihood support indicators highlight the critical infrastructure and services necessary for farming, which is the primary source of income for many rural households. Livestock and dairy development further diversify rural income sources, while housing and living conditions reflect socio-economic well-being. Water, roads, and transport infrastructure are essential for mobility, market access, and service delivery, improving economic opportunities and quality of life. Access to electricity and digital connectivity is vital for modern economic activities, education, and governance, while public distribution and education ensure food security and human capital development. These indicators provide a holistic picture of rural development, helping identify strengths and gaps that require targeted interventions to improve living standards and promote sustainable growth in rural areas.

3.2 Weightage of Indicators:

To ensure objectivity in the assessment, each indicator was assigned a binary weightage of either 1 or 0. This weightage was based on the presence (1) or absence (0) of the indicator in a given Gram Panchayat. For example: If a Gram Panchayat has access to public transport, the indicator for public transport will be assigned a weightage of 1; if not, it receives a weightage of 0. Similarly, for healthcare facilities, the availability of a Primary Health Center (PHC) or Community Health Center (CHC) is assigned a 1 if available and 0 if not. This binary approach ensures that each indicator is given equal importance in the analysis, regardless of the specific category it belongs to. Thus, the final development score of a Gram Panchayat is calculated as the sum of the weights across all indicators.

3.3 Standardization and Composite Index:

After assigning weights, the raw data for each indicator is standardized using Z-scores to ensure comparability across different scales. The formula used for Z-score standardization is:

- The first step is to select the indicators (**X1……. Xn**) that you want to include in the composite index.
- The next step is to standardize the indicators by converting them into a standard scale, such as Z-scores. This allows for the comparison of indicators across different areas or periods.
- The formula for calculating the Z-score for a particular indicator is:

$$Z_{ij} = X_i - \bar{X} / \sigma$$

Where;

Z_{ij} = standard score of the i^{th} observation
X_i = original value of the observation
$\bar{X}$ = mean of all the values of **x**
σ = standard deviation

- Calculate the composite index by combining the standardized indicators into a single index by dividing **(X- $\bar{X}$)** by Standard Deviation (SD). i.e. **(X- $\bar{X}$ /SD).**
- In the next step the Gross Value has been calculated by the formula:

Gross value = Mean + (Z-score * SD)

- The composite index scores are computed by dividing the gross value by the total number of development indicators.

CI = GV/ Number of indicators

3.4 Justification of the Approach:

This approach ensures that each development indicator is given an equal chance to influence the final composite index. The binary weightage (1 for presence, 0 for absence) reflects whether a Gram Panchayat has access to critical resources, while the Z-score standardization levels the field across indicators measured in different units. The indicators selected align with the study's objectives of assessing regional development holistically, while the weightage system ensures transparency in how the absence or presence of key resources contributes to the development score. This method guarantees that no single category (economic, infrastructural, demographic, or socio-cultural) disproportionately influences the outcome.

4. Results and Discussion

The analysis of 35 development indicators across 190 Gram Panchayats under the Sansad Adarsh Gram Yojana (SAGY) in Rajasthan reveals significant spatial variations in performance levels. These indicators, which span demographic, economic, infrastructural, and socio-cultural dimensions, provide a comprehensive picture of the developmental

disparities within the state. The district-wise classification highlights the diverse challenges and opportunities across the region, helping to identify areas for targeted intervention.

Table 2: Level of Development

Composite Index (CI)	Level of Development
Above 0.5	Relatively High Developed
0.5 to 0	Moderately Developed
0 to -0.5	Low Developed
Below -0.5	Very Low Developed

4.1. Relatively High Developed Gram Panchayats

The relatively highly developed Gram Panchayats, accounting for 12.10% (23 Gram Panchayats), exhibit above-average performance across most development indicators. Districts like Jaipur, Jodhpur, and Udaipur are prominent in this category (Fig. 2), benefiting from better infrastructure and socio-economic services. Strong healthcare access, particularly the availability of Primary Health Centers (PHCs) and Community Health Centers (CHCs), is a significant contributor to the high performance in these areas, with Jaipur and Udaipur showing remarkable health outcomes. Educational infrastructure is another key strength, particularly in districts like Jaipur and Alwar, where primary and high schools, along with programs such as the midday meal scheme, are well-established. In terms of public transport and road connectivity, Jaipur leads with well-maintained pucca roads and all-weather roads, ensuring economic linkages and mobility.

However, some GPs in districts like Barmer and Churu struggle with deficiencies in agricultural services despite their relatively high development status. The lack of advanced irrigation systems and livestock extension services suggests that further improvements in these sectors could enhance overall development. Ajmer and Chittorgarh also demonstrate robust performance, driven by well-established roads, schools, healthcare services, and water conservation efforts. Bhilwara and Dungarpur follow closely, benefiting from government initiatives in agriculture and infrastructure.

4.2. Moderately Developed Gram Panchayats

The Moderately Developed Gram Panchayats, comprising 38.42% (73 Gram Panchayats), show a mix of progress and underperformance. Districts like Ajmer, Bhilwara, and Bikaner fall into this category, where moderate development in infrastructure and economic indicators is evident but requires further enhancement. Key strengths include improvements in basic education and access to piped water, particularly in Bhilwara and Ajmer. The presence of financial services such as banks, ATMs, and post offices also contributes to the overall development of these areas. However, significant challenges remain, especially in healthcare. Districts like Bikaner and Ajmer experience limited access to advanced healthcare services, particularly mother-child healthcare.

Additionally, waste management systems are inadequate in these areas, adversely affecting public health and sanitation, especially in Bikaner and Jalore. Sikar has made decent progress in agriculture and connectivity, but still needs improvements in healthcare and education. Similarly, rural Jaipur shows moderate development, with varying levels of access to education and infrastructure.

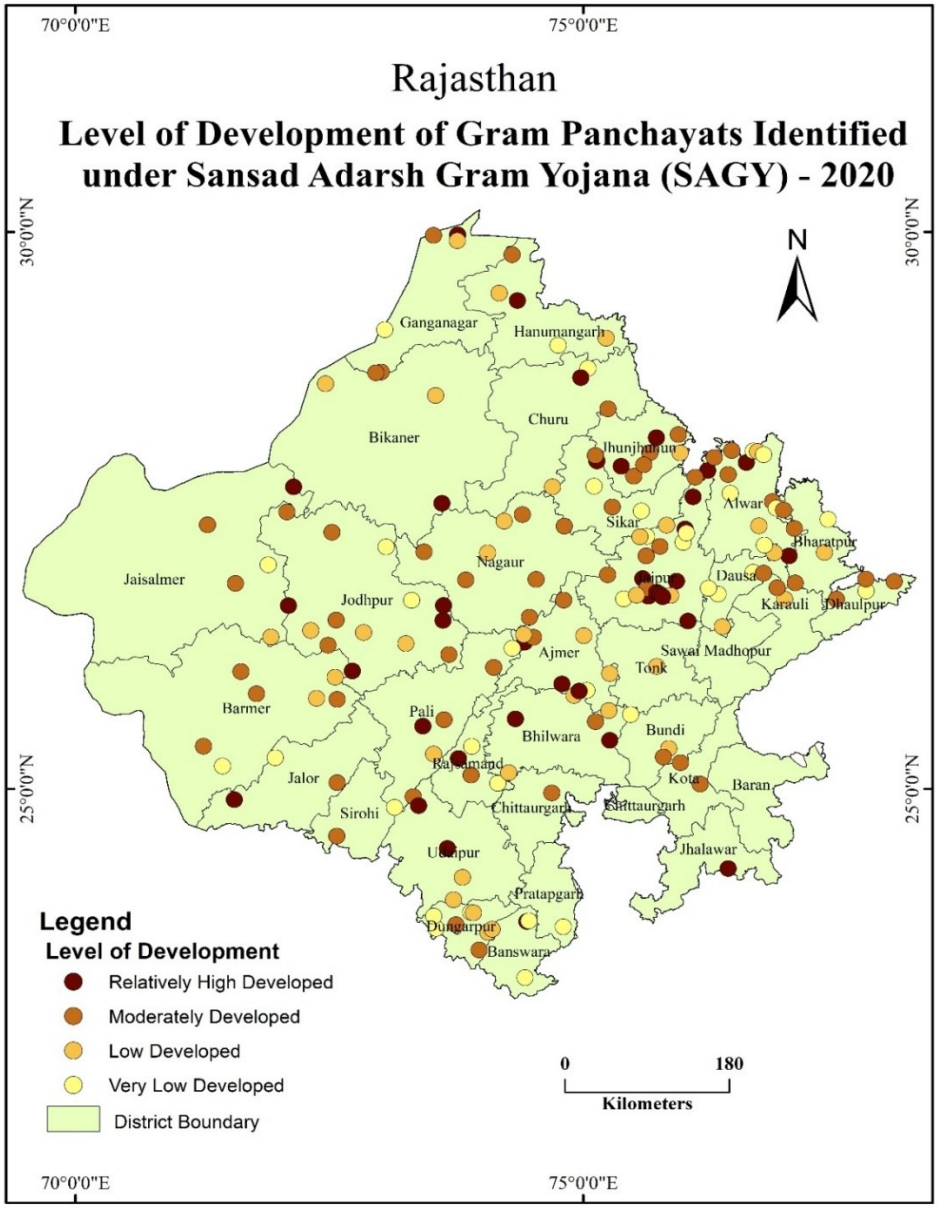

Fig. 2: Level of Development of Gram Panchayats Identified under Sansad Adarsh Gram Yojana (SAGY)- 2020-21

4.3. Low Developed Gram Panchayats

The largest group, the Low Developed Gram Panchayats, encompasses 40% (76 Gram Panchayats) of the total and includes districts like Barmer, Dholpur, and Sikar. These areas are characterised by underdeveloped socio-economic infrastructure and lagging performance across most indicators. Despite the overall low development, some strengths can be observed, such as a high level of agricultural engagement. In districts like Barmer and Sikar, agriculture plays a central role in the local economy, with high participation in farming activities and large areas of net sown land.

However, the lack of basic amenities such as sanitation, housing, and education is a pressing issue. Many households in Dholpur and Barmer still rely on temporary (kuccha) housing, and access to sanitation facilities remains inadequate. Furthermore, educational and transport services are severely lacking, particularly in Barmer and Dholpur, where many villages have limited access to high schools, public transport, and postal services. The absence of broadband and IT infrastructure in districts like Sikar and Barmer also hampers access to digital services, impacting education, governance, and economic development opportunities.

Table 3: Level of Development of SAGY's Gram Panchayat of Rajasthan, 2020-21

S. No.	Level of Development	Composite Index Value	No. of SAGY GP	Per cent
1	Relatively high developed	Above 0.50	23	12.10
2	Moderately high developed	0.50 to 0	73	38.42
3	Low developed	0 to -0.50	76	40.00
4	Very Low developed	Below -0.50	18	09.48
Total			**190**	**100.00**

4.4. Very Low Developed Gram Panchayats

The Very Low Developed Gram Panchayats, which represent 9.48% (18 Gram Panchayats), are concentrated in districts like Jaisalmer, Barmer, and Jalore, where severe developmental challenges are evident. These areas face critical issues in healthcare, education, and basic infrastructure. In Jaisalmer and Jalore, healthcare facilities, including Aanganwadi centres and PHCs, are scarce, and access to mother-child health services is limited. Educational infrastructure is similarly weak, with minimal availability of primary and high schools. Water scarcity is another major concern in this category, particularly in the desert regions of Jaisalmer, where access to clean drinking water and sanitation services is inadequate. The lack of rainwater harvesting systems exacerbates the situation, contributing to chronic water shortages. Additionally, many households in these districts live in temporary housing, and the lack of livelihood diversification further contributes to the economic vulnerability of these regions.

4.5 Spatial Variations within Districts

The study finds notable spatial variations within districts. Barmer, for example, has a high concentration of Gram Panchayats classified as low-developed or very low-developed, emphasising the need for targeted investments in infrastructure, particularly in areas such as sanitation, healthcare, and transport connectivity. Jaisalmer, facing harsh environmental conditions, suffers from severe deficits in water supply and educational infrastructure. In contrast, districts like Jaipur and Udaipur show better overall performance, with a significant number of Gram Panchayats in the relatively highly developed category, thanks to strong public services, healthcare, and road connectivity. Bikaner and Ajmer, though falling predominantly in the moderately developed category, demonstrate reasonable progress in education and economic indicators but require improvements in healthcare services and sanitation systems.

District-specific strategies that address the unique challenges of each region are indispensable. For instance, Barmer and Jaisalmer need urgent investments in water supply, sanitation, and healthcare infrastructure, while Ajmer and Bikaner should focus on improving waste management and expanding educational services. Water scarcity remains a pressing issue in districts like Jaisalmer and Barmer, necessitating the expansion of rainwater harvesting systems and improved irrigation facilities. Similarly, healthcare access, particularly in terms of PHCs, CHCs, and Aanganwadi centres, needs to be expanded, especially in the Very Developed districts. Furthermore, improving high school availability in these regions is essential for long-term socio-economic development.

The analysis of development indicators across Rajasthan's Gram Panchayats reveals substantial spatial variations in performance. Districts like Jaipur and Udaipur show commendable progress, while western districts such as Barmer and Jaisalmer face significant developmental challenges. The heterogeneity of development across districts underscores the need for tailored, district-specific interventions that address the unique needs of each region. Expanding infrastructure, particularly in healthcare, education, water supply, and sanitation, is essential to bridging the development gap and ensuring more equitable growth across the state.

5. Conclusion

The analysis of the development levels of Gram Panchayats under the Sansad Adarsh Gram Yojana (SAGY) in Rajasthan reveals significant regional disparities, highlighting the uneven progress among villages. While some Gram Panchayats have made commendable advancements, with a higher Composite Index (CI) and falling into the "Relatively High Developed" category, a large number remain in the "Low Developed" and "Very Low Developed" categories. This underscores the complexity of rural development and the challenges in achieving uniformity across regions.

The classification of Gram Panchayats into four levels of development—Relatively High Developed, Moderately Developed, Low Developed, and Very Low Developed—reflects the nuanced nature of rural development in the state. The analysis shows that 40% of the Gram Panchayats fall under the "Low Developed" category, while only 12.10% are "Relatively High Developed." This indicates that, while significant progress has been made in certain areas, there are still substantial gaps in infrastructure, healthcare, education, and socio-economic opportunities that need to be addressed. The presence of 9.48% of Gram Panchayats in the "Very Low Developed" category further accentuates the urgent need for targeted interventions.

The findings of the study suggest that a one-size-fits-all approach to rural development is not effective. Instead, tailored interventions that consider the unique challenges and opportunities of each Gram Panchayat are essential. This includes addressing deficits in basic services, such as water supply, sanitation, healthcare, education, and transportation, while also fostering human capital and economic opportunities. Additionally, the promotion of sustainable practices, particularly in water management and agriculture, is crucial for long-term development.

Continuous monitoring and evaluation of the SAGY initiative are also critical. Learning from the success stories of the relatively highly developed Gram Panchayats can help replicate best practices in lower-performing areas. Policymakers and stakeholders should work together to ensure that resources are allocated effectively to address the most pressing needs, particularly in the very low developed Gram Panchayats.

In conclusion, while SAGY has laid the groundwork for transformative rural development in Rajasthan, addressing regional disparities remains a critical challenge. Achieving equitable and inclusive development requires collaboration between government agencies, local communities, and development partners. By prioritizing the least developed villages and focusing on sustainable growth, Rajasthan can make significant progress toward achieving the goals of SAGY and ensuring a prosperous future for its rural population.

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