

IMPROVE NETWORK CONNECTIVITY

In an era where digital connectivity is no longer a luxury but a necessity, the state of mobile network coverage on India's National Highways remains a matter of serious concern. National Highways are the lifelines of the country, facilitating trade, tourism, emergency services, and daily commuting for millions. Yet, frequent call drops, internet blackouts, and complete 'no network' zones continue to plague vast stretches of these critical corridors. Improving mobile network connectivity on National Highways is not merely a technological upgrade-it is a public safety imperative and an economic necessity.

One of the most critical consequences of poor network coverage is its impact on road safety and emergency response. Accidents on highways require immediate communication with police, ambulances, and disaster response teams. In network-dead zones, even a minor delay in placing an emergency call can cost lives. With the increasing reliance on GPS navigation, real-time traffic alerts, and emergency apps, lack of connectivity leaves commuters vulnerable and helpless. For women travelers, senior citizens, and families, this digital isolation significantly heightens feelings of insecurity.

From an economic perspective, highways support uninterrupted movement of goods and services. Logistics operators, truck drivers, and transport companies depend on mobile connectivity for route coordination, fuel management, digital payments, and compliance tracking. Poor connectivity disrupts supply chains, increases operational inefficiencies, and raises transportation costs. In a country aspiring to become a global manufacturing and logistics hub, such digital gaps undermine competitiveness and growth.

Tourism is another sector adversely affected. Travelers increasingly rely on mobile networks for hotel bookings, digital payments, ride services, and local information. Network outages along scenic and remote highway routes discourage tourism, particularly in hilly, border, and rural regions that are otherwise rich in cultural and natural attractions. Reliable connectivity can significantly enhance visitor experience and promote inclusive regional development.

Emerging technologies offer promising solutions. Installation of small cell towers, use of satellite-based communication, and deployment of fiber optic networks alongside highway projects can dramatically improve coverage. Integrating telecom infrastructure planning with highway construction from the outset would reduce costs and delays. Public-private partnerships can further accelerate implementation, ensuring accountability and efficiency.

Importantly, improving highway connectivity aligns with broader national objectives such as Digital India, Smart Mobility, and disaster preparedness. Seamless mobile networks enable digital tolling, intelligent transport systems, vehicle tracking, and real-time law enforcement, making highways safer and smarter. For border and strategically sensitive areas, enhanced connectivity also strengthens surveillance, coordination, and national security.

DR. BANARSI LAL

India is a home of 6.65 lakh villages, 2.68 lakh Gram Panchayats and rural local bodies which form the backbone of the nation. These villages across scattered across the nation play a significant role in shaping India's rural economy. Govt. is stressing on the upliftment of the rural people by focusing on the women empowerment, agri-entrepreneurship development, education, infrastructure development etc. Many positive outcomes have been observed across various sectors as India moves towards rural prosperity. In agrarian country like India rural development is must for national development. In order to improve the quality of life of rural people, rural development is essential. It requires a sustainable increase in the access of each and every individual to the basic necessities of life. Hence, it is the prime responsibility of every nation to initiate and sustain the process of development. The Indian economy in the past, presently and in future will remain predominantly depend on rural development because very high proportion of the Indian population lives in rural areas. In 1901, 89 per cent of the Indian total population was residing in the rural areas while still around 70 per cent population live in the rural areas. It is expected that by the turn of 21st century at least 50 per cent of population would be living in the rural areas. About two-third of the workforce is engaged in agriculture. Agriculture contributes about 18 per cent of India's gross domestic product.

Development is influenced by the multiple factors such as natural resources, innovative technologies, human resources, different developmental programmes and schemes, policies etc. Different institutions and organisations play the significant role for rural development. They help in the rural development by way of provision of inputs, services, by influencing investments and savings etc.

There is positive correlation between different organisations and level of rural development. In fact, all developed nations are well organised and all developing countries are either not fully organised or poorly organised. Lack of appropriate organisations is one of the most serious hurdles on the pace and development of rural areas. There is dire need to redesign and launch appropriate organisations for the rural development. Presently India has achieved self-sufficiency in the food grain production and milk production-the two important ingredients for the vegetarian diet. These two things have been achieved due to green revolution launched in the late sixties and white revolution launched in the early seventies. In 1950-51 the food grain production in the country was only 51 million tonnes which has increased to 281.37 million tonnes in 2018-19. Now India has emerged as the leading milk producer in the world leaving behind the United States of America. Now per capita availability of good grains in our country is 485.17 gm per day. Currently the milk production in our country has increased to 176 million tonnes. The per capita availability of milk in India has increased to 375gms/day. Per hectare yield rates of the major crops have also reasonably increased. Rapid urbanisation, change in food habits from consumption of food grains to milk and milk products, fruits and vegetables are new challenges to the Indian agriculture. Although India has made an impressive progress in the food grain production and milk production, the achievements in the poverty eradication and improving the life expectancy have been dismal. Still the percentage of people below the poverty line is still high, life expectancy, per capita income and Human Development Index is still low. It has been observed that development in India is both encouraging and discouraging and there is need to enhance both. So, it is necessary to identify the determinants of development and implement them to achieve the desired level of development. There are many organizations in

India which are actively working in agriculture and rural development. They include public, companies, co-operatives, partnerships, charitable societies, trusts, institutions etc. All these organisations work together to cater the needs of the rural people. Rural development should be considered as the joint venture of public, private, co-operative, corporate. A systematic and balance approach is needed for the development of rural India. Although government makes efforts for the development of the rural development but government alone cannot solve all the rural problems. Co-operatives, voluntary organisations, corporations and private sectors all can play their role for the rural development by complementing the activities of the government. The role of government should be to define the role of other agencies, coordinate and regulate their activities and provide certain facilities and services which are not provided by the other agencies. It is necessary that rural people should be organised within an institutional structure that gives them access to the national, political, economic and social system. In India, co-operatives are the most commonly found form of people's organisations.

Co-operation has been emphasized across the globe. Co-operation is manifest in countless social activities performed by the man for attaining the common goal. A co-operative is generally observed as socio-economic organisation that can fulfil both social and economic objectives of its members. A co-operative has certain values and principles of its own which distinguish it from other organisations. Economic, social and moral are three dimensions of co-operatives. The motto of co-operation, "Each for all and all for each", signifies loyalty, trust and faith. A co-operative is democratic institution of the members, for the members and by the members. Co-operatives have more advantage as compared to the other forms of organisations in involving the people, in mobilising the resources and achieving the desired goals. All these advan-

tages help co-operatives in improving their competitive position. Even Gandhiji considered co-operation as a great instrument for the rural development. He suggested the specific roles of co-operatives in the agricultural sector and promoted the co-operative farming and thereby suggested for further fragmentation of land holdings. He suggested the weavers and spinners co-operatives, credit co-operatives and dairy co-operatives. Pt. Jawahar Lal Nehru, the first Prime Minister of India had a strong favour of co-operatives. Sardar Vallabhai Patel, the first Deputy Prime Minister and Home Minister of India, had a great faith in co-operation as a means of promoting farmers well-being. He guided and assisted for the Kheda District Co-operative Milk Producers Union Limited popularly known as Amul. Co-operatives occupy an important position in India's rural economy. India has the largest network of co-operatives in the world. Co-operatives now cover around all the Indian villages and 67 per cent of rural population, nearly 49 per cent of the rural credit, 60 per cent of total sugar produced and 35 per cent of total fertilizers distributed in the country. The Indian Farmers Fertilizers Co-operative (IFFCO) and the Krishak Bharati Co-operative (KRIBHCO) are the two co-operative fertilizers plants which manufacture about 21 per cent of the total fertilizers produced in the country. The Anand dairy co-operatives are considered to be the most successful in serving their members and society on large scale. Co-operatives that are owned and controlled by their members and properly managed can ensure the good quality products at a reasonable price to the consumer. Thus, they help to improve the welfare of both the producers and consumers as has been demonstrated by Anand - pattern dairy co-operatives. There is need to stress on the multipronged strategy for rural prosperity.

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Harmizal: A Winter Flower, a Festival and a Living Memory

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Some memories do not fade with time; they bloom again every winter. For me, one such memory is tied to a small white flower with a golden heart-known botanically as Narcissus, but in our regional language lovingly called Harmizal. From childhood till today, this flower has remained close to my heart, not merely as a plant, but as a symbol of faith, scarcity, community, and warmth amid the harshness of winter.

I grew up in a village where winters were not gentle. Snow would blanket the land, often cutting us off from abundance. Roads would disappear under white silence, fields would sleep, and nature would offer very

little. In such conditions, whatever bloomed felt sacred.

Harmizal was one such blessing. Along with another rare winter flower, Zintoi, it would quietly emerge, defying snow and cold. Its availability was limited, and perhaps that is why its value-emotional, cultural, and spiritual-was immense.

In our region, winter brings with it a festival similar in spirit to Karwa Chauth, known locally as Kunchoth. This festival is deeply connected with women, fasting, faith, and community bonding. Harmizal plays a central role in its rituals. As a child, I didn't fully understand why this particular flower was chosen. I simply believed what elders said-that it was sacred.

Today, with age and understanding, I realise that its sacredness also comes from scarcity. When resources are limited, gratitude becomes religion. On the day of Kunchoth, women observe a fast and seek blessings from their Kul Devta and the Sun. Harmizal is offered during these prayers, and later, the same flower is presented to their husbands. It is not just an offering; it is a silent prayer-for long life, protection, and continuity. The flower's fragrance, soft yet distinct, fills the air, mixing with incense, winter smoke, and faith. Even today, that smell instantly carries me back to my village home.

What makes this festival truly unique is what happens after the rit-

ual. Every woman, irrespective of age or status, goes from house to house in the neighbourhood to seek and give blessings. There is no hierarchy-blessings are exchanged with everyone, from small children to the elderly.

A phrase echoes in every doorway: "Thal Deyi." It is not merely a greeting; it is an affirmation of shared humanity.

Every household prepares a dish, often simple but made with love. Each woman must taste food in every home. It is a ritual that dissolves boundaries-no house is ignored, no person excluded. Hunger after fasting is satisfied not by one meal, but by many small offerings, each carrying goodwill. In a season

of snow and isolation, this practice weaves the community tightly together.

As a child, this felt like a celebration. As an adult, I understand its deeper wisdom. Kunchoth teaches us that survival is collective, that blessings multiply when shared, and that even in the coldest seasons, warmth can be created through togetherness. Harmizal, fragile yet resilient, becomes the perfect symbol of this philosophy.

Today, life has changed. Cities offer flowers throughout the year, erasing the concept of seasonal waiting. Sacredness is often reduced to symbolism without context.

Looking back, I realise that Harmizal was not sacred simply

because elders said so-it was sacred because nature allowed it to exist when nothing else did. It taught us patience, respect for seasons, and gratitude for small mercies.

Whenever I see this flower now, I don't just see petals and colour. I see snow-covered roofs, fasting women wrapped in woollens, the scent of Harmizal in cold air, and the sound of "Thal Deyi" echoing through narrow lanes. I see a childhood where festivals were not events, but experiences-lived together.

Harmizal is more than my favourite flower. It is a reminder that culture grows best where nature, faith, and community meet-and that some traditions, like winter flowers, bloom brightest in hardship.

Cold without Snow: Kashmir Faces a New Winter Reality

MOHAMMAD HANIEF

Winter has always been the defining season of the Kashmir Valley. For centuries, heavy snowfall, prolonged cold and frozen landscapes shaped the rhythm of life, influencing agriculture, water availability, tourism and daily routines. Snow-laden winters were not only visually iconic but ecologically essential, replenishing rivers, nourishing orchards and sustaining fragile mountain ecosystems. In recent years, however, the character of winter in Kashmir has undergone a visible transformation. The current season reflects a growing pattern of climatic instability, where intense cold exists alongside dryness, reduced snowfall and unpredictable weather behavior.

This winter, large parts of the Valley have experienced extended dry spells during what is traditionally the snowiest period of the year. Chillai Kalan, the coldest phase of winter, passed with little to no snowfall in many low-lying areas, while higher reaches received only brief and uneven snow events. Instead of continuous snow cover, the Valley witnessed fluctuating temperatures, clear skies and sharp frost. This shift marks a departure from historical winter norms and points toward deeper changes in the region's climate system.

One of the most striking aspects of this changing pattern is the steady decline in snowfall. In earlier decades, snow arrived in regular cycles, gradually building a thick snowpack that lasted well into spring. Today, snowfall is sporadic and often delayed. When it does occur, it tends to melt quickly due to slightly warmer daytime temperatures. In many cases, precipitation that would earlier fall as snow now comes as rain, particularly in the plains. The absence of sustained snow cover has altered the winter landscape and weakened the Valley's natural capacity to store water for the months ahead.

These changes are closely linked to rising regional temperatures and altered atmospheric circulation. Western Disturbances, which traditionally bring winter precipitation to Kashmir, have



become irregular in both timing and intensity. Their weakened impact has resulted in prolonged dry spells interrupted by short-lived weather systems. Clear skies following these disturbances intensify nighttime cooling, leading to severe frost despite the lack of snow. This combination of dryness and cold has made winters feel harsher in daily life, even as snowfall becomes less reliable.

The consequences of these shifts extend far beyond the winter months. Snow acts as a natural reservoir, releasing water gradually into rivers, lakes and groundwater systems. Reduced snowfall means less water stored in this natural system, increasing the risk of shortages during spring and summer. The Jhelum river system, wetlands and thousands of natural springs that supply drinking water to communities across the Valley depend heavily on winter snowpack. With declining snow accumulation, early signs of water stress are already visible, raising concerns about future availability for households, agriculture and hydropower generation.

Agriculture and horticulture, the backbone of the Valley's rural economy,

are particularly sensitive to these changing conditions. Apple orchards and other fruit crops rely on sufficient winter chill to regulate dormancy and ensure healthy flowering. Snow cover also maintains soil moisture, protects roots from extreme cold and suppresses pests. Warmer and drier winters disturb this balance. Reduced chilling hours can affect fruit quality and yield, while the lack of sustained snow allows pests and diseases to survive through winter. Farmers increasingly face uncertainty as traditional farming calendars tied to predictable seasons become less dependable.

The tourism sector, especially winter tourism, continues to play a crucial role in the Valley's economy, even as changing weather patterns introduce new challenges. Despite irregular snowfall, destinations like Gulmarg, Pahalgam and Sonamarg remain major winter attractions, drawing visitors with their natural beauty, alpine landscapes and seasonal activities.

Gulmarg, often referred to as the winter capital of Kashmir, continues to be the most prominent hub for winter tourism. Its high altitude allows it to

receive comparatively better snowfall than the plains, making it a center for skiing and other snow-based activities. During winter, Gulmarg's snow-covered meadows, gondola rides and pine forests offer visitors a classic alpine experience. Even in years of reduced snowfall, the charm of the landscape, combined with occasional snow spells, keeps Gulmarg relevant as a winter destination. However, the unpredictability of snow has shortened ski seasons and increased dependence on precise weather windows, affecting event planning and tourist inflow.

Pahalgam, known for its serene valleys and forested landscapes, offers a different kind of winter attraction. During colder months, the town transforms into a quiet retreat, with frost-covered meadows, frozen streams and snow-dusted pine forests. Winter in Pahalgam appeals to visitors seeking tranquility rather than adventure, with opportunities for leisurely walks, photography and experiencing traditional winter life in the mountains. Reduced snowfall has altered the visual intensity of winter here, yet the crisp air and stark beauty continue to attract tourists, particularly

those looking for peaceful escapes.

Sonamarg, located at a higher altitude, remains one of the Valley's most dramatic winter landscapes. Often buried under deep snow, it serves as a gateway to some of the region's highest passes. In winter, Sonamarg's rugged terrain, frozen rivers and towering snow-covered peaks create a striking scene. Snow activities, winter treks in safer zones and short snow experiences attract adventure enthusiasts when conditions allow. However, heavy snowfall combined with sudden weather changes can also lead to road closures, highlighting the increasing unpredictability of winter travel in high-altitude areas.

While these destinations continue to draw visitors, the changing nature of winter has made tourism more uncertain. Shorter snow seasons, fluctuating temperatures and delayed snowfall affect bookings, employment and long-term planning. Tourism operators must now adapt to narrower operational windows, while local workers face income instability linked to weather variability. Beyond environmental and economic impacts, the current dry winter has significant implications for public health. Cold, dry air increases the risk of respiratory problems, and this season has seen a noticeable rise in respiratory complaints across the Valley. Low humidity dries out the airways, making people more susceptible to infections and worsening conditions such as asthma and chronic bronchitis. Elderly individuals and those with existing health issues are particularly vulnerable during prolonged dry spells combined with sub-zero temperatures.

Skin-related ailments have also become more common during this dry winter. Reduced moisture levels strip the skin of its natural oils, leading to dryness, cracking, itching and flare-ups of eczema. Eye irritation and throat discomfort are frequently reported as well, especially in urban areas where indoor heating further reduces humidity levels.

Water-related health concerns are emerging alongside declining winter precipitation. Reduced snowmelt affects the reliability of water supply systems, forcing some households to depend on stored or alternative sources. Limited water availability can

compromise hygiene and increase the risk of infections, particularly in rural areas where springs serve as primary water sources.

Mental health challenges are also becoming more visible. Winter in Kashmir has always been demanding, but uncertainty surrounding weather, water resources and livelihoods adds psychological stress. Farmers worried about crops, tourism workers facing irregular incomes and families coping with prolonged cold and dry conditions experience heightened anxiety. The absence of consistent snowfall, which traditionally symbolized winter continuity, also affects emotional well-being during the long, cold months.

The ecological consequences of changing winter patterns are equally serious. Snow plays a vital role in regulating mountain ecosystems, influencing plant growth cycles and providing insulation for alpine flora and fauna. Reduced snow cover disrupts these processes, alters habitats and increases vulnerability to erosion. When winter precipitation falls as rain instead of snow, it can destabilize soil and raise the risk of landslides in mountainous terrain.

As the climate continues to evolve, the Kashmir Valley stands at a critical crossroads. Adapting to these changes will require thoughtful planning, community awareness and sustainable resource management. Strengthening water conservation, supporting climate-resilient agriculture, improving healthcare preparedness and promoting adaptive tourism strategies are becoming essential priorities. Better weather monitoring and early warning systems can help communities respond more effectively to extreme conditions.

Winter in Kashmir has always been more than a season; it is a defining force that shapes identity, culture and survival. As snowfall becomes uncertain and dry cold more common, the challenge lies in preserving the Valley's ecological balance and social resilience. The changing winter landscape calls for informed action and collective responsibility to ensure that Kashmir's winters, though transformed, remain sustainable for generations to come.

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