

Ecosystem Study of Tribal Village Alka Kheda, Sailana Block, Madhya Pradesh: Exploring Its Dimensions and Development Issues

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Abstract: This study explores the socio-economic, ecological, cultural and political dimensions of Alka Kheda, a tribal village in Sailana Block, Ratlam District, Madhya Pradesh. Using participatory tools and a mixed-methods approach, key development issues and village dynamics were analyzed to suggest actionable interventions.

The village primarily relies on agriculture and livestock for livelihoods, with crops like cotton, soybean, maize, and wheat being prominent. However, water scarcity, attributed to overexploitation of resources and water-intensive farming practices, emerges as a significant challenge. Limited water availability affects irrigation, household needs, and personal hygiene, particularly during summer months. Women in the village face excessive drudgery, balancing agricultural labour with domestic responsibilities, leading to health issues like joint pain and occupational neuropathy.

The study underscores the need for sustainable water management, reduced workloads for women, and better implementation of welfare schemes. Strengthening community awareness and promoting gender equity are essential for fostering sustainable development in Alka Kheda.

Key Words: Tribal Communities, Ecosystem Studies, Development Issues, Socio-Economic Resilience, Poverty, Sailana, Madhya Pradesh.

1. INTRODUCTION:

A village is a small rural settlement, larger than a hamlet but smaller than a town. As per the 2011 Census, 68.84% of India's population, around 83.3 crores, live in villages. These villages have 159.59 million hectares of operated land and 138.35 operational holdings.

Villages often lack basic facilities like clean drinking water, healthcare, proper roads, and modern technology. People in rural areas face poverty, illiteracy, and ignorance. Many have a traditional mindset, which stops them from using government schemes fully. Land and resources are usually controlled by a few, which adds to inequality. To address this, a detailed village study is needed. It helps us understand the social, cultural, ecological, political, and economic aspects of a village. This helps in planning the right development interventions to improve the situation.

2. OBJECTIVES:

- To understand the tribal context and their way of life.
- To understand Socio-Economic dimension of the tribal village.
- To study Cultural, Political, Environmental dimension of the Tribal area.
- To explore the relationship between tribal community and natural resources.
- To explore the contextual livelihood opportunities for the tribal community.
- To identify the community development challenges in the tribal community.

3. RESEARCH METHOD/METHODOLOGY:

The research was conducted in Alka Kheda, a tribal village in Gudbhili Panchayat, Sailana Block, Ratlam District, Madhya Pradesh. The village covers 432.99 hectares and has a population of 1,750 people in 288 households. Most

residents belong to the Bhil tribal community and rely on agriculture and livestock for their livelihood. During lean periods, many migrate to urban areas for work.

The study used a mix of methods to understand the village's social, cultural, ecological, economic, and political aspects. Primary data was collected using Participatory Rural Appraisal (PRA) tools like Transect Walks, Resource and Social Mapping, Historical Timelines, Festival Calendar, Pairwise Ranking, and Focus Group Discussions. These tools helped analyse livelihoods, gender roles, migration, and inequalities. Secondary data was gathered from Panchayat records, government officials, and NGOs. A survey of 60 households was conducted using stratified random sampling.

4. RESULT and DISCUSSION:

4.1 Social Dimension

Humans are social beings, forming families and societies to live together. This study explored the social aspects of Alka Kheda, covering its history, demography, religion, caste, gender roles, education, health, transportation, and traditional institutions.

Alka Kheda, situated in Sailana Block of Ratlam District, Madhya Pradesh, is approximately 600 years old. The village's name comes from the once-abundant 'Aal' trees, which are now extinct in the area. Its residents trace their roots to Chittorgarh, Rajasthan, where their ancestors migrated. The community maintains records of their lineage through a person called Bhant, who visits every two years to recount and update their ancestral history.

The village has 1,750 residents, with 890 males and 860 females living in 288 households spread across 124 houses. Multiple families often share a single house due to a tradition of staying together even after sons marry, although their livelihoods are managed separately.

The villagers practice Hinduism, worshipping Nag Devta as their primary deity. Rituals include fasting on Saturdays and offering coconuts and incense at the Nag Bavshi temple. Their ancestral deities, or Kuldevta, are also revered. The entire population belongs to the Bhil tribe, classified as Scheduled Tribes.

The community is divided into seven clans: Ninama, Sarpota, Dhindod, Maida, Charel, Masar, and Bhagora. Ninama is the dominant clan, comprising 200 households, while others have smaller representations. Many clans established themselves in the village through a tradition called Ghar Jamai, where men marry into the village and settle permanently.

The sex ratio in Alka Kheda is 966 females per 1,000 males. Boys are traditionally preferred, and women may face multiple pregnancies until a male child is born. Over time, this practice has decreased. Women carry a heavier workload, contributing to both household chores and agricultural activities, while men focus primarily on fieldwork. According to the daily activity calendar, women work longer hours than men, including fetching water and caring for livestock. Open defecation is common due to water scarcity and the lack of proper toilets.

The village has one Anganwadi centre for preschool children, but it operates irregularly, and many residents are unaware of its location. Two primary schools, one in Alka Kheda and another in Magdipada, have poor infrastructure and low attendance. Out of 80 enrolled students, only 14 attends regularly. Many families prefer sending their children to nearby boarding schools after primary education. Limited teacher availability and poor teaching quality discourage education within the village.

Healthcare facilities in Alka Kheda are inadequate. The village lacks a Primary Health Centre (PHC), relying instead on a sub-health centre in Gudbhelli that operates only one day a week. Villagers often consult local quacks, who administer saline drips for nearly all ailments, leading to high medical expenses. Traditional healers, called Bhopa, are also trusted for treatments using herbal remedies and rituals. AASHA workers conduct vaccination camps and promote institutional deliveries, reducing home births. However, early marriages contribute to poor reproductive health among women. Addiction to tobacco and alcohol, especially Mahua-based liquor, is prevalent among women and men respectively, leading to severe health issues like Leukoplakia.

Families are predominantly nuclear, though they often live within the same house, separating financial responsibilities after marriage.

The Chira Bavshi is a significant ancestral site where memory stones are placed for the deceased. The village celebrates the Swadesh festival to honor ancestors. Temples for Nag Devta, Hanuman, and Mata Ji are central to religious life, though their maintenance relies on community efforts.

Alka Kheda is a remote village with poor road connectivity. The nearest markets are in Danpur (12 km) and Sarvan (21 km). Limited public transport, such as private buses, jeeps, and autos, is available. Farmers often face challenges transporting their produce to markets, relying on rented tractors and trolleys at high costs.

4.2 Cultural Dimension

Culture defines the identity of a community, reflecting its beliefs, customs, and societal norms. The Bhil tribe of North India, one of the oldest tribal groups, is known for its rich cultural heritage and unique traditions. In Alka Kheda, festivals, ceremonies, and traditional practices highlight the vibrancy of their culture.

Festivals play a significant role in binding the community together. Major festivals celebrated in the village include *Makar Sankranti*, marked by preparing sesame and jaggery sweets like *ladoo* and *teelpapdi*. *Holi*, the festival of colors, lasts two days. The first day involves burning dried sticks and cow dung cakes to symbolize the victory of good over evil. On the second day, people celebrate with colors and water. A unique practice during Holi is visiting homes of families who have experienced a death in the past year to express grief.

Dund is celebrated three days before Holi, where women visit their parental homes and present dresses and money to their nephews. *Dasham* involves fasting and worshipping the Peepal tree, with women wearing new dresses and performing rituals for peace. *Aaka Teej* is a family day where villagers spend the day outdoors, cooking and eating together under trees, especially enjoying goat meat. *Deeva Amavasya* is marked by fasting and lighting lamps in homes and livestock sheds. *Raksha Bandhan* is celebrated with sisters tying *rakhis* on their brothers' wrists.

Navratri lasts nine days, dedicated to worshipping Goddess Durga, and ends with a village feast. *Deepawali* involves lighting homes, creating rangoli, and worshipping Goddess Lakshmi and Lord Ganesha. *Swadesh* is a special day to honor ancestors, with feasts organized by families offering vows of goats, calves, and fish. On *Aadiwasi Deewas* (August 9), tribal awareness is celebrated with folk songs and gatherings. These festivals, while joyful, also involve expenses ranging from Rs. 100 to Rs. 2,000, depending on the occasion.

Ceremonies, deeply rooted in Bhil traditions, include unique practices in marriage, birth, death, and other life events. Bhils avoid marrying within the same clan. Unlike typical dowry systems, the groom's family provides cash (Rs. 50,000–1 lakh) and jewellery to the bride's family. The bride's family may offer household items like almirahs and utensils.

Nautara, a financial support ceremony, is a distinctive practice where the host family organizes a feast, and attendees contribute money. Initially intended to provide financial assistance for significant events like marriages, it has evolved into a socially obligatory practice. Villagers now view it as a burden, with frequent *Nautara* ceremonies causing financial strain.

Birth ceremonies are simple, but when a male child is born after fulfilling a wish (*Mannat*), the family offers a feast to the village. *Mannat* involves prayers to deities for specific desires, and once fulfilled, offerings like goats, cocks, and coconuts are made.

Death rituals are elaborate. After a person's death, the body is bathed, dressed in new clothes, and placed before the ancestral god (*Chira Bavshi*). Cremation follows, and mourning lasts 12 days for elders or 12 months for younger individuals. On the 12th day, a community feast is organized. Accidental deaths hold special significance, with stones placed at *Chira Bavshi* in memory of the deceased, who is then worshipped as a god.

The villagers uphold their ancestral lineage through *Bhants*, individuals responsible for maintaining family records. *Bhants*, originating from Chittorgarh, Rajasthan, visit every 2-3 years to update records and recount family histories. They are highly respected, and villagers offer them donations during their visits.

Festivals like *Navratri* involve offerings of *Mahua* liquor to the goddess, reflecting the integration of local traditions into religious practices. Villagers worship at temples dedicated to Nag Devta, Hanuman, and Mata Ji, showcasing their deep spiritual connection.

4.3 Economic Dimensions

The economy of Alka Kheda provides insights into livelihoods, wealth distribution, and infrastructure, highlighting inequalities and vulnerabilities within the community. Agriculture is the primary occupation, with black soil supporting crops like cotton, soybean, maize, and wheat. Farming techniques, passed down through generations, maximize yields despite the rocky, uneven terrain. Entire families contribute to farming activities, while larger farmers with more than 10 bighas of land hire local labour at a daily wage of Rs. 200, along with a meal. Livestock rearing complements farming, with goats providing a primary income source through sales in local markets. However, cows and buffaloes produce minimal milk, used only for household consumption. Hens are rarely sold and are primarily reserved for emergencies. So, it is one of the traditional form of savings.

Non-farming livelihoods include petty shops, flour mills, and liquor production. Petty shops, often run by elders or as secondary income sources, earn Rs. 2,500–3,000 monthly. Flour mills, operated by three families in the village, face challenges like irregular electricity but remain in demand. Liquor production from *Mahua* flowers, though illegal, is highly lucrative, earning Rs. 12,000–15,000 monthly, with higher profits during festivals.

Wealth ranking reveals disparities in economic status. Families are classified as rich, middle, or poor based on land ownership, income, and assets. Of 129 families, 39 are rich, 57 are middle-class, and 33 are poor.

Table 1: Criteria for Wealth Ranking

Financial Status	Criteria set by the community.
Rich	More than 10 bigha land/ Govt. Job/ Tractor/Rs.8000-10000 per capita income/Self Dependent
Middle	5to10 Bigha land/ Bike/ 5000-7000 per capita income/ Own agricultural Land
Poor	3-5 Bigha land/ Own agricultural land/ labor work/ Cycle/ 3000-5000 per capita income

Most households rear livestock, predominantly goats, while fewer keep cows or buffaloes due to costs and water scarcity. Seasonal migration affects 87% of families during the lean season (April-June), with workers heading to urban centers like Ratlam, Surat, and Ahmedabad. Migration often disrupts children’s education, especially for those under six, unless they stay with relatives or attend boarding schools.

Housing reflects both traditional and modern styles. Most homes are *kutcha*, built with local materials like mud, cow dung, and tree trunks, which require frequent maintenance. Roofs are made of tin or tiles, with plastic sheets for rain protection. These homes are vulnerable to weather conditions, and only 35.15% of villagers own *pucca* houses, some constructed under the Pradhan Mantri Awas Yojana. Villagers also build enclosed sheds to protect livestock from wolves, a recurring threat.

Women face significant vulnerabilities due to their dual roles in household and agricultural work, leading to health issues like joint pain and neuropathy. Early pregnancies result in complications like white discharge, while excessive *Mahua* liquor consumption contributes to low life expectancy and liver disorders. The lack of medical infrastructure forces villagers to rely on quacks, who charge Rs. 500 for saline treatments, regardless of the ailment, increasing healthcare expenses.

Agricultural cash flow analysis highlights income disparities. Cotton is the most profitable crop, yielding a net income of Rs. 15,100 per bigha, followed by soybean at Rs. 14,600 and wheat at Rs. 8,000. Maize generates the least profit, at Rs. 4,200. Despite its profitability, cotton farming requires higher initial investment and water availability. Farmers depend on rainwater, rivers, ponds, and wells for irrigation, and the lack of proper facilities affects crop yields. The poverty analysis uses the "5 I's" framework: **Income**, **Inequality**, **Illiteracy**, **Ill-health**, and **Isolation**. Income is irregular due to seasonal agriculture, with limited opportunities during the lean season. Inequality is evident in gender roles, with women overburdened by work. Illiteracy is high, as poor educational infrastructure and unresponsive teachers hinder learning. Ill-health persists due to reliance on quacks, and isolation from urban centers limits market access, government oversight, and program implementation.

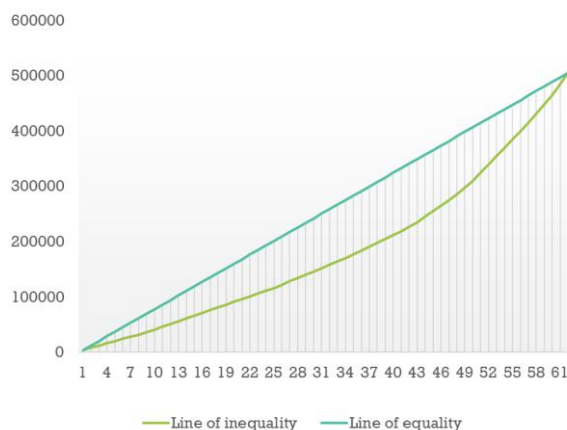


Chart 1: Lorenz Curve of Alka Kheda

The Lorenz curve analysis shows income inequality, with some families earning Rs. 3,500 monthly while others earn up to Rs. 20,000. The Gini coefficient of 0.29 indicates relatively low inequality compared to extreme cases, but

significant challenges remain. Addressing these issues requires targeted interventions in agriculture, education, healthcare, and infrastructure.

4.4 Ecological Dimension

The ecology of Alka Kheda plays a vital role in sustaining the livelihoods of its indigenous Bhil community, who depend heavily on natural resources like rivers, forests, and land. The interaction between the environment and the villagers provides essential resources, including food, water, medicinal plants, and fuelwood.

The village relies on multiple water sources for irrigation, including rivers, water channels, wells, and tanks. The seasonal *Budhiya River*, a tributary of the Mahi River, flows for about seven months, serving as the lifeline of the village. Its water is used for irrigation, drinking, cooking, and cleaning. However, due to its location, only residents near the river benefit directly, while those in the upper part of the village face limited access, leading to conflicts. Water pumps placed in the river by some villagers further reduce water levels after March. Another seasonal water channel, known locally as *Chota Nala*, also aids irrigation during the rainy season.

The village has three irrigation tanks, with one built in 1965 and another recently constructed under the MGNREGA scheme. These tanks are located in the upper part of the village and serve as critical reservoirs during periods of low rainfall. For drinking water, villagers rely primarily on nine handpumps and two wells. However, 61.3% of households must travel 300–500 meters to fetch water, a task mainly carried out by women, adding to their physical burden.

Rainfall in Alka Kheda is seasonal, with 91% received during the southwest monsoon from June to September. Annual rainfall is 734.5 mm, significantly lower than Madhya Pradesh's average of 1130 mm. This deficiency impacts agriculture and water availability. The village experiences a moderate climate, with hot summers from March to June and cold winters in December and January.

The soil in Alka Kheda includes *kali* (black loamy soil), *bhatroi*, *bhuri*, and other mixed types. These soils are fertile and support both kharif (monsoon) and rabi (winter) crops, with *kali* soil particularly suitable for cotton cultivation. However, the use of inorganic fertilizers and pesticides has caused some soil pollution, threatening long-term fertility.

The groundwater level in the village is 400–450 feet, requiring deep wells and boreholes for access. Despite this, villagers primarily use surface water sources for daily needs.

The flora in Alka Kheda is diverse, featuring trees like neem, babool, teak, mango, tendu, mahua, and banyan. Each plant has practical uses. For instance, mahua flowers are used to produce liquor, a major livelihood source, while neem and babool have medicinal and agricultural applications. The villagers also value sacred trees like the peepal, which is worshipped during the Dasham festival. Commercial species like teak and bamboo provide materials for construction and furniture, contributing to the local economy. Fauna includes domesticated animals like cows, buffaloes, goats, and hens, as well as wild animals like nilgai and jackals, which coexist with the community.

4.5 Political Dimension

Alka Kheda falls under the Gudbhelli Panchayat, which governs both Gudbhelli and Alka Kheda villages. The Panchayat president hails from the dominant clan which is Ninama clan in Alka Kheda whereas Maida in Gudbhelli village. Leadership within the Panchayat generally alternates between the two villages, but the presidency usually remains within the dominant clan families, reflecting their social influence.

The village has a strong traditional governance system led by a hereditary head known as *Patel*, *Rawat*, or *Tadvi*. This system, operational since British times, ensures stability and continuity. The Patel convenes a meeting called *Bhangjad* to resolve disputes or conflicts, where fines are decided collectively. Historically, the Patel also collected revenue and provided labour to the British or the state king.

Several government schemes are active in the village, though their implementation faces challenges. Under the *Pradhan Mantri Awas Yojana* (PMAY), 42 households have received houses. The *Pradhan Mantri Gram Sadak Yojana* (PMGSY) has built only two roads at the village periphery, leaving internal pathways unpaved. Similarly, while 100% of families have received LPG connections under the *Pradhan Mantri Ujjwala Yojana* (PMUY), most villagers still use firewood due to the high cost of refilling LPG cylinders.

The *Mahatma Gandhi National Rural Employment Guarantee Act* (MGNREGA) aims to provide 100 days of employment per year but is poorly implemented. Villagers report working only 60 days and receiving wages far below the mandated rate of Rs. 221, often earning just Rs. 120–135 per day. Corruption and mismanagement by local authorities have further reduced the program's effectiveness.

Under the *Swachh Bharat Mission*, household toilets were constructed for every family. However, villagers rarely use them, citing water scarcity and alternative uses such as firewood storage. The *Ladli Laxmi Yojana* supports 64 girls in the village, promoting education and financial security for them. The *Eklavya Model Residential School* scheme benefits all students, offering quality education and mitigating the impact of migration on children's learning.

The village has one Public Distribution System (PDS) shop located in Gudbhelli, serving 288 families with subsidized grains, oil, and salt. An *Accredited Social Health Activist* (ASHA) works to raise health awareness, mobilize the community, and facilitate access to medical services.

Four active SHGs under DHAN Kalanjiam Foundation operate in the village, with 48 women participating. These groups provide low-interest loans at 2%, enabling members to reduce dependency on moneylenders who charge 10% interest. Loans are primarily used for marriages and debt repayment. Regular savings and meetings have strengthened the financial independence of these women.

While governance systems and welfare schemes are present in Alka Kheda, their success is limited by poor implementation, water scarcity, and socio-economic challenges. Strengthening governance and improving the delivery of services could significantly enhance the village's development.

5. Development Issues :

The development issues in Alka Kheda were identified through pairwise ranking exercises conducted separately with men and women. Two critical issues emerged: scarcity of water and excessive workload for women, both of which significantly impact the villagers' quality of life.

Scarcity of Water

Water scarcity is the most pressing issue in the village. Villagers attribute this problem to several factors, including the installation of water pumps in the *Budhiya River*, an increase in the number of handpumps, extensive borewell drilling, and the cultivation of water-intensive crops like cotton and wheat. These practices have depleted water sources, making it difficult to meet the village's irrigation and domestic water needs.

The lack of water severely affects agricultural productivity. Farmers struggle to irrigate their fields, leading to stunted crop growth, reduced yields, and even crop failures. For a community that heavily depends on agriculture for its livelihood, this directly impacts their income and sustenance. During the summer months, especially in April and July, the situation worsens as even drinking water becomes scarce. This water crisis extends to household activities, disrupting cooking, cleaning, and personal hygiene. Many villagers cannot bathe daily during peak summers, further affecting their well-being.

Excessive Workload or Drudgery for Women

Another major issue in Alka Kheda is the excessive workload faced by women. Women are involved in agricultural labor alongside their household responsibilities, which include cooking, cleaning, fetching water, and caring for children and livestock. This dual burden leaves them with little time for rest or self-care, leading to physical and mental exhaustion.

The drudgery of continuous physical labor results in various health problems for women, including joint pain and occupational nervous pain. These issues often worsen with age, reducing their capacity to work and impacting their overall quality of life. Despite their significant contribution to both the household and agricultural economy, women receive little recognition for their efforts, perpetuating gender inequality in the community.

6. CONCLUSION and WAY FORWARD :

The government in the place is not very functional; same is the condition of panchayat. The only thing which can help them now is their own leadership and associations provided some help by the NGOs. NGOs can play a great role in development.

People are having risk handling in their own way. Their traditional practices are noticeable. Influence of the political parties are very much high and that can be seen very clearly. People are very sensitive to politics. The panchayat is the powerful body as for as people concern.

Lack of awareness programme about various govt. schemes and benefits is one of the most important causes of the exploitation of tribal poor. The people don't know about it and also anything about the implementation and service available under the various govt. schemes

There is a scope of intervention in the Alka Kheda village. Though there is a Bhils own financial institution which is performing well but it has its own drawback that is it works only in the month of cotton cultivation. So, if

there will be number of institutions helping like Kalanjian it will work. Since the land is elevated land and the ground water is very less. There is also a need of tank program in this region.

As there is scarcity of water so small millet programme can also be introduced in the village. As women told that they are doing excess of work so their drudgery is more. So, for women skill development activities can be promoted for the alternative sources of income. If they will learn any skill then they would not go as agriculture labor or they would not have to more for 12 hours in the agriculture fields.

REFERENCES:

1. Kapoor, N., Ahmad, N., Nayak, S. K., Singh, S. P., Ilavarasan, P. V., & Ramamoorthy, P. (2021). Identifying infrastructural gap areas for smart and sustainable tribal village development: A data science approach from India. *International Journal of Information Management Data Insights*, 1(2), 100041.
2. Jay, E. J. (1963). *A tribal village of middle India* (Doctoral dissertation, The University of Chicago).
3. Mukherjee, R. (1963). On village studies in India.
4. Maheshwari, J. K., Kalakoti, B. S., & Lal, B. (1986). Ethnomedicine of Bhil tribe of Jhabua district, MP. *Ancient Science of life*, 5(4), 255-261.
5. Majhi, A. S. (2010). *Tribal culture, continuity, and change: a study of Bhils in Rajasthan*. Mittal Publications.