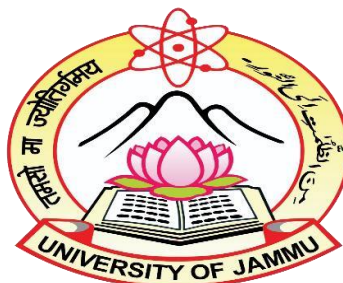


*Unveiling Kandi: Insights into Social Dynamics through
Purmandal village of Samba district*



MAJOR PROJECT REPORT

Semester – 1

Four Year Undergraduate Program

(Design your degree)

SUBMITTED TO:

UNIVERSITY OF JAMMU, JAMMU

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ABSTRACT

The Kandi region of Jammu and Kashmir is a unique area marked by semiarid terrain, *Title - Unveiling Kandi: Insights into Social Dynamics through Purmandal village of Samba district*" aims to explore the region's demographic, social, and economic characteristics while identifying its challenges and opportunities.

The study employs a comprehensive methodology, including field visits, surveys, interviews, and focus group discussions, to collect primary data directly from the local population. Secondary data from government reports and academic literature further enrich the analysis. Key areas of focus include the livelihood patterns, access to essential services, economic activities, and the challenges faced by residents.

The findings reveal the socio-economic realities of the Kandi region, including issues related to unemployment, infrastructure deficits, and agricultural inefficiencies. Insights gained from the study highlight the resilience and adaptive strategies employed by the local population. The report also provides actionable recommendations for policymakers, development agencies, and community stakeholders to foster sustainable development and improve the quality of life in the region.

This project bridges the existing knowledge gap about the Kandi belt, offering valuable perspectives to address its developmental challenges while promoting inclusive and equitable growth.

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CHAPTER –1

INTRODUCTION

The area under study, namely **Purmandal**, is part of the newly established Samba district. These two locations have developed into sacred destinations for Hindus and are referenced in Hindu mythology. The region is traversed by the holy river Devika, which is known by various names such as **Gupt Ganga and Ganga Mai** in the **Uttar Behni** and **Purmandal** areas due to religious beliefs. In earlier times, these regions were densely forested and served as habitats for wildlife. However, over time, human activities and other physical factors have led to the degradation of the forests. Today, these areas are linked to nearby urban centres, resulting in significant demographic changes. Agriculture continues to be a primary activity for both domestic and commercial purposes in the region. The introduction of modern agricultural methods, such as the use of tractors, has begun to alter the landscape in certain areas.

Additionally, **pastoralism**, which supports the livelihoods of the local population, has also contributed to changes in the physical environment. The human inclination to control the natural flow of streams by constructing embankments or retaining walls has further modified the local landscape. **Increased accessibility** and **rapid urbanization** nearby have made the area more vulnerable to resource exploitation, particularly of sand, sediment, and boulders. As previously mentioned, the religious importance of these settlements, along with changes in accessibility and transportation, has left noticeable impacts on the landscape.

1.1 LOCATION AND PHYSIOGRAPHY

The study area Purmandal is a tehsil in **Samba district** of the state Jammu and Kashmir and lies between **32.370N-32.440N latitude** and **74.940E-750.00E longitude**. This area is about **37km** away from Jammu in south eastern side and connected with NHIA from Bari Brahmana.

From Bari Brahmana, Purmandal is connected with metaled road. The total geographical area of village is **696.9 hectares** as per 2011 census. Purmandal lies in the **middle and upper Shivalik's** surrounded by hills and hillocks. Purmandal has an average altitude of about **500 meters above mean sea level**. Purmandal area has a very steep slope and rough topography. It is known for its **semi-arid terrain**, the region falls within the foothills of the Shivalik range, characterized by rolling hills, rocky outcrops, and sparse vegetation. The term “**Kandi**” itself refers to the dry belt along the Shivalik's, known for its unique ecosystem and geographical attributes.

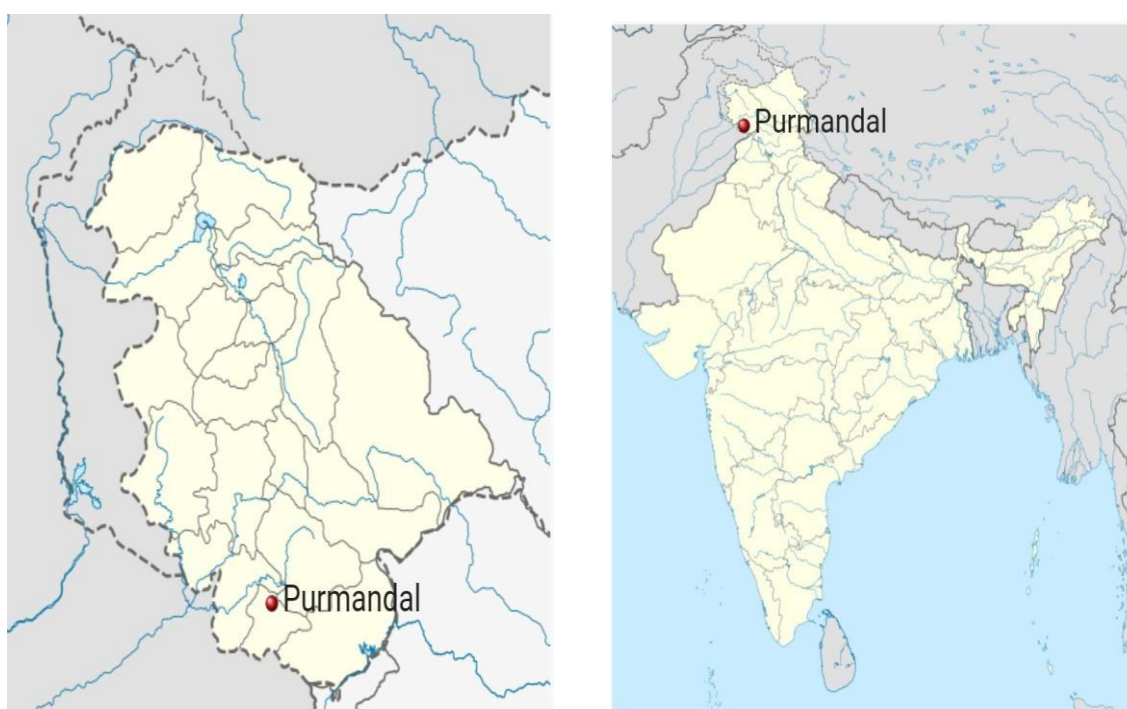


Figure 1 Location of Purmandal region

1.2 PURMANDAL'S POPULATION

Purmandal is a medium size village located in Samba Tehsil of Samba district, Jammu and Kashmir with total **250 families** residing. The Purmandal village has population of **1276** of which **662 are males** while **614 are females** (Population Census 2011).

In Purmandal village population of children with **age 0-6 is 125** which makes up **9.80 %** of total population of village. Average Sex Ratio of Purmandal village is **927** which is higher than **Jammu and Kashmir state average of 889**. Child Sex Ratio for the Purmandal as per census is **1016**, higher than Jammu and Kashmir average of **862**.

Purmandal village has higher literacy rate compared to Jammu and Kashmir. In 2011, **literacy rate of Purmandal village was 74.89 % compared to 67.16 % of Jammu and Kashmir**. In Purmandal male literacy stands at 82.50 % while female literacy rate was 66.61 %.

As per constitution of India and Panchayati Raaj Act, Purmandal village is administrated by **Sarpanch (Head of Village)** who is elected representative of village. (Population census 2011)

Purmandal Data

Particulars	Total	Male	Female
Total No. of Houses	250	-	-
Population	1,276	662	614
Child (0-6)	125	62	63
Schedule Caste	554	289	265
Schedule Tribe	53	26	27
Literacy	74.89 %	82.50 %	66.61 %
Total Workers	334	299	35
Main Worker	289	-	-
Marginal Worker	45	42	3

Figure 2 Population data of Purmandal region

Caste Factor

The caste dynamics in Purmandal, as in much of **rural Jammu and Kashmir**, are reflective of the wider social structure. The population consists mainly of several Hindu castes, such as Brahmins, Rajput's, and other rural communities. Since the area has religious significance with the Purmandal Temple, Brahmins are more prominent here because of their historical association with religious and priestly roles. Rajput's, traditionally associated with agricultural and warrior classes, also make up a large proportion of the population. Other castes include Scheduled Castes (SC) and Other Backward Classes (OBC), which are significant components of the region's social life, especially in rural agricultural activities and small-scale industries. Social hierarchies and caste-based roles continue to influence local dynamics, although there is an ongoing shift towards economic roles defined more by occupation and access to resources than traditional caste boundaries.

Work Profile

Purmandal, located in the Samba district of Jammu and Kashmir within the Kandi region, is primarily an agrarian area with agriculture being the main economic activity. Key crops include rice, maize, wheat, and mustard, along with fruit cultivation like citrus and apples. Livestock farming, particularly dairy, goat, and sheep farming, is also significant. The region's economy benefits from infrastructure development, such as road and irrigation projects, along with local tourism generated by the religious importance of the Purmandal Temple. Handicrafts and small-scale industries add to the local economy. Though challenges persist in healthcare, education, and water management, government schemes like MGNREGA and PMAY are working towards rural development. There is growth potential in better infrastructure, eco-tourism, and agricultural innovations, although economic constraints and youth migration continue to be persistent problems.

1.3 HISTORY OF PURMANDAL

The region is steeped in cultural and religious significance. One of its most notable landmarks is the Purmandal village, often referred to as

“Chhota Kashi” (Mini Kashi), due to its sacred temples dedicated to **Lord Shiva and Goddess Parvati**. The Purmandal temple complex, located on the banks of the **Devika River** (revered as a sacred stream), has been a pilgrimage centre for centuries. The **Devika River is also known as the “gupt ganga”** because; it flows under the ground near the temple region. Historically, this region was part of the **Dogra kingdom** and played a significant role in encouraging the Dogra culture.

1.4 TEMPLE AND ITS IMPORTANCE



Figure 3 Ancient temple of Lord Shiva's in Purmandal

The main attraction of Purmandal is an old Lord Shiva Temple, having no lingam, it is known as “**Svayambhu Alinga**”. A number of stories are well connected with this sacred temple. The temple is said to have been built by **Raja Veni Dutt of Kashmir** who is identified with either **Vinay Aditya** or **Avanti Varman** who ruled over Kashmir from 855 to 883 AD. As per the caretaker of the temple there are more than **1400 shivlings** in the temple.

The statue of vixen (Jackal)



Figure 4 Statue of the vixen (jackal)

The **statue of Vixen** at the back of the main temple serves as an interesting aspect to explore in light of the popular tale indicating the **daughter of King Veni Dutt to be reincarnation of the jackal** who was shot in the head by a hunter and died near the lingam. The daughter of King Veni Dutt is said to have suffered from incurable headaches since childhood which could be alleviated after the arrow from the skeleton of the jackal at Purmandal was removed. The arrow was searched out by a hunting party guided by astrologers. Raja Veni Dutt who visited the place accompanied by several persons including the family members is said to have worshipped Lord Shiva at Purmandal and built the central shrine. A **hooded stone serpent jutting out of a cistern in the rock** in the central shrine is an object of religious attraction as it is believed to be the only manifestation of Lord Shiva of that kind anywhere in the country. The present complex of Purmandal shrine was built by **Maharaja Gulab Singh**, the founder of Jammu and Kashmir state. He took a lot of interest in the renovation of this holy place. He made the oblation of golden ewers to Lord Shiva. He also established a

Sanskrit Vidyalaya on the banks of the river Devika. Haveli constructed on Devika's bank are still in prominence. Purmandal was also a centre of Sanskrit learning where great Sanskrit Scholars from the country and abroad were called to study scriptures.

1.5 CULTURE AND LANGUAGE

The region is a replica of Jammu's rich Dogra heritage. The predominant language spoken here is **Dogri, an official language of Jammu and Kashmir**. Other languages such as **Hindi, Punjabi, and Urdu** are also spoken, reflecting the linguistic diversity of the area.

Culture:

The Dogra culture is deeply rooted in the region, reflected in its festivals, art forms, and rituals. Major festivals like **Lohri, Baisakhi, Navratri, and Diwali** are celebrated with traditional touch. Folk dances like **Kud** and **Bhakh** and **the melodious Dogri music** are integral to the cultural fabric of the region.



Figure 5 Festival (mela) at Purmandal, near Jammu in 1846, from a sketch by Charles Hardinge

1.6 RELIGIOUS SIGNIFICANCE

The Purmandal temple complex draws Hindu pilgrims, particularly during **Maha Shivaratri**, when the temples come alive with vibrant rituals and fairs. The Devika River, considered sacred, is a focal point for religious activities, including immersion rituals.

The Devika River has a fascinating historical background. The Devika River, often referred to as the "Ganga of the North," holds immense historical and spiritual significance, particularly in the Purmandal. According to legend, the goddess Parvati took the form of Devika and manifested as this river to bless humanity. Purmandal, often called "Chhota Kashi," is a focal point of this spiritual heritage, with numerous ancient temples lining the riverbanks. These temples, dating back several centuries, are dedicated to Lord Shiva and other deities, drawing pilgrims from across the region. The Devika River is also believed to have the unique attribute of purifying sins, and many people perform last rites and immerse ashes here, akin to the Ganges. Over time, the river has become an integral part of the region's cultural and religious identity.

1.7 WALL PAINTINGS

Another attraction of Purmandal is the large number of wall paintings done extensively on the walls of the old buildings, the theme of the painting is slightly different from other wall paintings of Jammu, because paintings in Jammu are mostly of **Ramayana and Krishna theme** but at Purmandal the figures of **Lord Shiva, Goddess Parvati, Ganesha** etc; are painted.

Purmandal is considered sacred because people immerse the ashes of the departed souls in Devika, which according to Hindus customs should be immersed at **Haridwar or Kashi**. This clearly indicates the comparison of Purmandal with Kashi in Uttar Pradesh

The fame of Purmandal as a religious centre had spread far and wide through the ages. A large number of dignitaries having association with different faiths visited here, even some Muslim rulers held it high esteem. It is said that **Maharaja Ranjit Singh** was also among the great devotees and made huge offerings there.

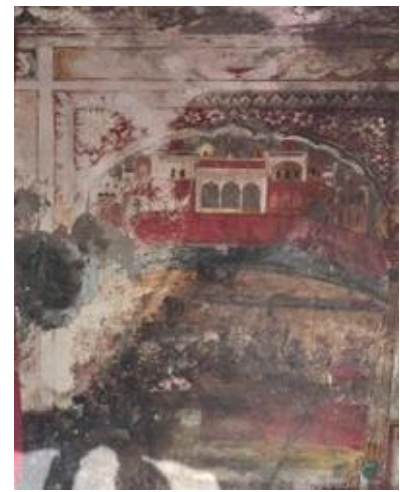


Figure 6 Wall paintings on the old buildings

1.8 AGRICULTURE



Figure 7 Agriculture in Purmandal region

This section delves into the agricultural practices in Purmandal, the transformations over the years, contrasts between traditional and modern methods, recent challenges, and the impact of the increasing monkey population on crop destruction.

Traditionally, Purmandal's agriculture has been characterized by subsistence farming, with farmers cultivating crops such as **wheat, maize, pulses, and vegetables**. The region's agrarian activities are heavily dependent on monsoon rains, with irrigation systems being rudimentary or non-existent in many areas. Farmers have historically **employed manual labour and traditional tools for ploughing, sowing, and harvesting**.

Changes in Agricultural Practices over the Years

In recent years, Purmandal has witnessed several changes in agricultural practices:

1. **Introduction of High-Yielding Varieties (HYVs):** To boost productivity, farmers have adopted HYVs of wheat and rice, which are more resistant to pests and diseases.
2. **Use of Chemical Fertilizers and Pesticides:** There has been an increased reliance on chemical inputs to enhance soil fertility and protect crops from pests.
3. **Mechanization:** The adoption of tractors and threshers has improved efficiency in ploughing and harvesting, reducing the dependence on manual labour.
4. **Diversification:** Farmers are exploring horticulture and floriculture, cultivating fruits and flowers to access more lucrative markets.

Differences between Past and Present Agricultural Methods

The shift from traditional to modern agricultural methods in Purmandal is evident in several areas:

1. **Irrigation:** While traditional farming relied solely on rainfall, modern practices incorporate tube wells and canal irrigation to ensure a more consistent water supply.
2. **Crop Selection:** There is a transition from traditional crops to cash crops and HYVs, aiming for higher profitability and market demand.
3. **Farming Techniques:** Traditional manual labour is increasingly being replaced by mechanized farming, enhancing productivity and reducing labour costs.

Aspect	Traditional Methods	Modern Methods
Tools and Equipment	Bullock-drawn Plows, manual labour	Tractors, harvesters, mechanized tools
Irrigation	Rain-dependent, traditional wells	Canal systems, tube wells, drip irrigation
Seeds and Inputs	Native seeds, organic manure	HYV seeds, chemical fertilizers, pesticides
Labour	High manual labour dependency	Reduced labour through mechanization
Farming Techniques	Crop rotation, mixed cropping	Monoculture, intensive farming
Output	Limited yield, subsistence farming focus	Increased yield, commercial farming focus

Recent Challenges in Agriculture

Despite advancements, farmers in Purmandal face several challenges:

1. **Climate Change:** Erratic rainfall patterns and increased frequency of droughts have made farming unpredictable.
2. **Soil Degradation:** Excessive use of chemical fertilizers and pesticides has led to soil health deterioration, affecting crop yields.
3. **Market Access:** Limited access to markets and inadequate infrastructure hinder farmers from obtaining fair prices for their produce.
4. **Wildlife Encroachment:** The increasing population of monkeys has become a significant concern, leading to substantial crop losses.

Impact of Monkey Population on Agriculture

The rise in the monkey population, particularly rhesus macaques, has had a detrimental effect on agriculture in Purmandal:

1. **Crop Destruction:** Monkeys raid fields, consuming and destroying crops such as maize, wheat, and fruits, leading to significant economic losses for farmers.
2. **Abandonment of Farming:** Continuous crop damage has forced some farmers to abandon their fields and migrate to urban areas in search of alternative livelihoods.
3. **Economic Impact:** In 2018, about 250 villages in Jammu reported farm produce losses **worth Rs. 33 crores** due to monkey invasions. (Gupta, R. K. 2018 “Farming crisis in India: A wake-up call for rational farm policy” *Acta Scientific Agriculture*,2(8);1-2)

Mitigation Measures

To address the monkey menace, several strategies can be considered:

1. **Deterrent Measures:** Implementing physical barriers, using noise makers, and deploying trained dogs to deter monkeys from entering fields.
2. **Community-Based Solutions:** Engaging local communities in monitoring and managing monkey populations through coordinated efforts.
3. **Crop Selection:** Cultivating crops that are less attractive to monkeys to minimize damage.
4. **Government Intervention:** Seeking support from authorities for compensation schemes and implementing sterilization programs to control the monkey population.

In conclusion, while Purmandal has made strides in modernizing its agricultural practices, challenges such as wildlife encroachment, particularly by monkeys, pose significant threats to the livelihoods of farmers. Addressing these issues requires a multifaceted approach, combining modern technology, community engagement, and government support to ensure sustainable agricultural development in the region.

1.9 CHALLENGES AND OPPORTUNITIES

Challenges:

1. **Soil Erosion:** The hilly terrain and deforestation have led to soil erosion, affecting agriculture and ecological balance.
2. **Underdeveloped Infrastructure:** Limited Road connectivity, healthcare facilities hinder the socio-economic development of the region.
3. **Monkey menace:** In the past few years the population of monkey has increased in the Purmandal village, due to which the agriculture is hindering as most of the crops are being destroyed by the monkeys and pigs.
4. **Flood prone areas:** In the Purmandal, there are many flood prone areas. Due to heavy rainfall, this hinder telecommunication services as well as transportation.

Opportunities:

1. **Tourism Development:** The religious and cultural significance of the Purmandal temple complex can be used to attract pilgrims and heritage tourists.

2. **Eco-Tourism:** The natural landscape offers opportunities for eco-tourism, trekking, and nature trails.
3. **Cultural Revival:** Promoting Dogra art, music, and festivals can enhance the cultural identity of the region while fostering economic growth.

CHAPTER – 2

OBJECTIVES

2.1 Project description

The Kandi belt of Jammu and Kashmir constitutes an area that holds unique socio-economic significance because of its semi-arid geography, distinct cultural identity, and difficulties in terms of sustainable development.

Our study aims to bridge the knowledge gap by delving into various facets of the Kandi belt, including its **agricultural practices, access to education, healthcare, employment patterns, and infrastructure development**. By comprehensively understanding these dimensions, we aim to present a holistic view of the region's socio-economic landscape.

The project is systematically undertaking field visits to different villages and towns within the Kandi belt. We have direct interviews conducted with residents for primary data collection. The efforts taken along this line will make the findings realized based on the reality of the local population while capturing the diversity of experiences and perspectives. The findings from this research will be of great value to policy makers, developmental agencies, and community stakeholders for sustainable growth and better quality of life for the inhabitants of the Kandi belt. This project reflects our commitment to understanding and addressing the socio-economic challenges of marginalized regions, with hope for fostering equitable development and empowering local communities.

2.2 OBJECTIVES OF THE STUDY

Following are the objectives of the study:

PRIMARY OBJECTIVES:

- 1. Examine Social Structures:** Analyse the social hierarchy, cultural practices, and community relationships in Kandi to understand its societal framework.
- 2. Identify Challenges and Opportunities:** Highlight the social and economic challenges faced by the community, along with potential opportunities for development and growth.

SECONDARY OBJECTIVES:

- 3. Explore Demographics:** Investigate population trends, education levels, and occupational patterns to provide a demographic profile of Kandi.
- 4. Cultural Relevance:** Document events, customs, and social behaviours to note how they relate to the community's identity and the economy.

2.3 PROBLEM STATEMENT

The Kandi region in the state of Jammu and Kashmir is a typical area with arid semi-desert. The region having a unique cultural and geographical identity faces social and economic challenges such as lack of basic infrastructure, limited livelihood opportunities, and practice of unsustainable development.

Socio-economic dynamics in the Kandi belt have not been researched extensively, thus insufficient data for policymakers and stakeholders to address areas where the local population is challenged are available. The said areas include factors like **unemployment, education and healthcare, agricultural inefficiencies, and lack of diversity in the economy.**

This project aims to fill this gap by analyzing the demographic, social, and economic dimensions of the Kandi region. It will identify the core issues affecting the region's development, and provide actionable insights to support inclusive and sustainable growth.

2.4 RELEVANCE

This project, *"Unveiling Kandi: Insights into Social Dynamics through Purmandal village of Samba district"* addresses the challenges faced by the Kandi region of Jammu and Kashmir. The results of this study are expected to contribute meaningfully in the following ways:

- 1. Understanding Regional Dynamics:** This project will explore the demographic, economic, and social aspects of the Kandi belt to provide a comprehensive understanding of the region's unique characteristics and its role within the broader socio-economic framework of Jammu and Kashmir.
- 2. Empowerment of the Communities:** By understanding the local population's issues and adaptive measures, this study will showcase areas of opportunities in terms of improvement in the quality of life as well as community empowerment through enhanced resource, infrastructure, and livelihoods.
- 3. Bridging knowledge gaps:** This project would contribute to filling the existing knowledge gap, leading to a better understanding of the region among the academia, researchers, and development agencies.

2.5 PROJECT OUTCOMES

This project, would seek to address the following deliverables:

1. Comprehensive Socio-Economic Profile:

A well-rounded understanding of the demographic and social characteristics of the Kandi region, which gives an insight into its unique challenges and opportunities.

2. Key Challenges Identification:

An in-depth analysis of the primary issues confronted by the people, such as unemployment, lack of infrastructure, limited education and healthcare access, and inefficient agriculture.

3. Improved Awareness and Community Engagement

Increased awareness among the local population on socio-economic problems they face and possible solutions in order to contribute to active participation in developmental works.

4. Knowledge Contribution:

The paper will contribute to academia and research realms by providing a new perspective for socio-economic activity of an area that has yet to be properly explored, becoming a basis for future studies and projects.

These outcomes the project is supposed to achieve, help in bringing significant impacts, not only on people's socio-economic lives but on the entire developmental scenario of Kandi.

CHAPTER – 3

METHODOLOGY

3.1 PRIMARY DATA COLLECTION

1. **Field Visits:** Periodical visits to the villages and towns of the belt to observe realities on the ground and document.
2. **Interviews:** Interviews with residents, local leaders, and key stakeholders to gain qualitative insights into their experiences and perspectives.

3.2 SECONDARY DATA COLLECTION

1. Review of government reports, academic studies, and existing literature regarding the socio-economic status of the Kandi region.
2. Census data and official statistics will be analysed to supplement primary data.

3.3 REPORTING AND RECOMMENDATIONS

The findings will be synthesized into a detailed report that provides a review of key challenges, and opportunities. The report shall thus include practical recommendations for all the stakeholders concerned towards sustainable development of the Kandi belt.

CHAPTER –4

LITERATURE REVIEW

4.1 INTRODUCTION

A literature review is required to understand the existing body of knowledge and to identify gaps in research related to the socio-economic dynamics of the Kandi region. This chapter provides an overview of studies conducted on similar semiarid regions, socio-economic challenges, and development strategies. The review also highlights the need for further research specific to the Kandi belt in Jammu and Kashmir.

4.2 STUDIES ON THE KANDI SUB-REGION

The existing literature on the Kandi region focuses mainly on its geographical characteristics, agricultural practices, and water resource management. However, limited studies examine the socio-economic aspects in depth. Reports by the Jammu and Kashmir Government highlight the region's reliance on agriculture, constrained by erratic rainfall and poor soil fertility, leading to economic vulnerabilities.

Several studies have been conducted to understand various aspects of the Kandi region in Jammu and Kashmir, focusing on its socio-economic dynamics, agricultural practices, and resource management. Notable among these are:

1.Socio-Economic Assessment of Farmers in ‘Kandi’ Region of Jammu: This study examines the socio-personal profiles of farmers across four districts in the

Jammu region. It assesses their awareness regarding various agricultural schemes and the challenges they face in a predominantly rain-fed agricultural system. *(Authored by P. Kumar, S. K. Kher, M. S. Nain, and P. S. Slathia. published in 2018 in the Indian Journal of Extension Education, Volume 54, Issue 3, on pages 146–149)*

2. Study of Cropping System in Kandi Area of Jammu Region: This research deals with different crops grown, types of cropping and cropping intensity of the Kandi belt. Findings reveal net cultivable area and cropping intensity variations across districts, which clearly reflect the region's agricultural activity *(Parveen Kumar, P.S. Slathia, and S.K. Kher, Date of Publication: February 2015, Published In: Economic Affairs, Volume 60, Issue 1, Pages 95-98)*

3. Hydrological Aspects of Rainwater Harvesting in the Kandi Belt of Jammu Region: This article discusses the hydrological aspects of rainwater harvesting in the Kandi belt. The article presents results from a case study on water conservation techniques to address water scarcity in the region *(authored by Mohiddin S. K. and published in 2000 by the National Institute of Hydrology, Roorkee.)*

4. Farming Systems study in Kandi Area of the Region, Jammu: The research conducted focuses on Kandi areas' farming systems mainly prevalent in Subtropical Districts of the Jammu Kathua and Udhampur district. It throws light on diverse agricultural components amalgamated under a single farmer and their result in farmers livelihoods. *(Parveen Kumar, published by: Sher-e-Kashmir University of Agricultural Sciences and Technology (SKUAST), Jammu, in 2013.)*

5. Agriculture Practices and Poverty Scenario in Kandi Areas of Kashmir Valley: This study examines the linkage between agricultural practices and

poverty within the Kandi areas of Kashmir Valley. This study explains the traditional farming systems that are leading to the socio-economic status of the local people (*authored by Tanveera Ahad and Dilafroza Jan published in 2018 in the International Journal of Advanced Research in Science and Engineering (IJARSE).*

6. Socio-Economic Characteristics of the Farmers involved in Rainfed Farming in Jammu Region Kandi Belt: The current study is focusing on the Kandi belt. It throws lights on socio-economic characteristics like distribution of farmers age, family size, and nature of farming practised. (*Authored by Vipal Bhagat, Sudhakar Dwivedi, Pawan Kumar Sharma, Rajinder Peshin, and S.E.H. Rizvi published in March 2022 in the International Journal of Social Sciences, Volume 11, Issue 1.*)

7.Traditional Practices for Sustainable Livelihood in Kandi Belt of Jammu: This study identifies indigenous practices followed by farmers in the Kandi belt, emphasizing sustainable livelihood strategies and resource management techniques. (*P.S. Salathia and Narinder Paul, Date of Publication: July 2012, Published in: Indian Journal of Traditional Knowledge, Vol. 11, Issue 3, pp. 548552.*)

8.Input Use Pattern in Rainfed ‘Kandi’ Area of Jammu Region: This research examines the input use patterns among farmers in the subtropical rainfed Kandi belt, providing insights into agricultural productivity and resource utilization. (*Authored by P. Kumar, S. K. Kher, P. S. Salathia, and G. Kumari. It was published in June 2013 in Volume 26, Issue 1 of the Indian Journal of Hill Farming.*)

These studies collectively contribute to a deeper understanding of the socioeconomic and agricultural landscape of the Kandi region, offering valuable insights for future research and policy formulation.

4.3 SOCIO-ECONOMIC DYNAMICS IN SEMI-ARID REGIONS

Studies from other semi-arid regions of India, such as Bundelkhand and Marathwada, provide insights into common challenges, including:

- Limited access to education and healthcare facilities.
- High dependency on agriculture and livestock for livelihoods.
- Seasonal migration due to lack of employment opportunities.
- These findings serve as a comparative framework for understanding similar issues in the Kandi belt.

4.4 CHALLENGES HIGHLIGHTED IN PREVIOUS

RESEARCH

- 1. Agricultural Constraints:** Research emphasizes low productivity in rain-fed agriculture, the primary livelihood in the Kandi region. Inadequate irrigation facilities and soil erosion exacerbate these challenges.
- 2. Infrastructure Deficits:** Reports indicate poor road connectivity, limited educational institutions, and insufficient healthcare facilities in semi-arid areas like Kandi.
- 3. Economic Vulnerabilities:** Studies note a lack of diversification in income sources, with most households relying solely on agriculture or daily wage labour.

4.5 GAPS IN EXISTING RESEARCH

While existing literature provides valuable insights, several gaps remain:

1. Limited focus on the demographic and social aspects of the Kandi region.
2. Lack of data on the region's informal economy and employment patterns.
3. Lack of comprehensive studies integrating socio-economic and environmental factors for holistic development.
4. Insufficient exploration of community-driven resilience strategies and adaptive measures, and their potential for sustainable development.
5. These gaps underscore the importance of this study to provide a comprehensive socio-economic analysis of the Kandi region.

4.6 THEORETICAL FRAMEWORK

The study is guided by the sustainable livelihood's framework, which emphasizes the interaction between human, social, natural, physical, and financial assets. This framework is particularly relevant for analysing the socio-economic dynamics of resource-constrained regions like Kandi.

4.7 CONCLUSION

The literature review highlights the need for a detailed investigation into the socio-economic aspects of the Kandi region. By addressing the gaps in existing research, this study aims to provide actionable insights and recommendations for the sustainable development of the region.

CHAPTER-5

MAIN FINDINGS

5.1 KHAD OF KANDI JAMMU – THEIR ADVANTAGES AND DISADVANTAGES

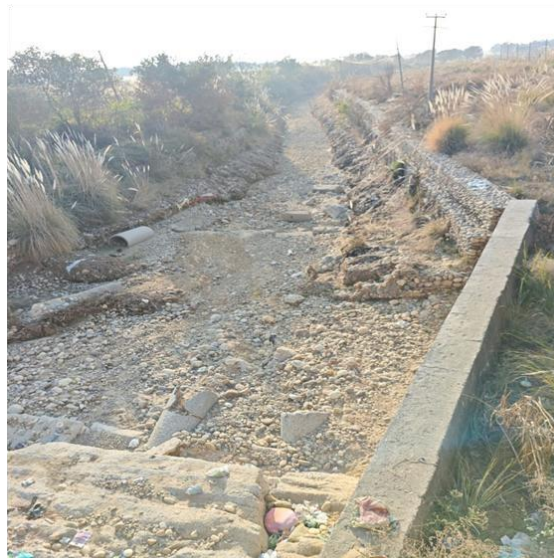


Figure 8 Khad in Kandi region.

INTRODUCTION:

Khad, or seasonal riverbeds, play a significant role in the geographical and ecological landscape of Jammu. These natural formations are especially common in the Kandi region, an area of land that is higher than the surrounding areas and are located between the plains and mountains. Characterized by its stony terrain and lack of consistent water resources, the Kandi belt relies heavily on the monsoon for water. While wadis serve essential purposes, they also present several challenges, particularly during the rainy season.

UNDERSTANDING THE KHAD OF JAMMU:

In the Kandi region, khad are prominent features of the landscape. They remain dry for most of the year but become active during the monsoon, carrying water and sediments such as stones and silt. These wadis are vital for natural water drainage in the area but also highlight the challenges posed by the region's topography and climatic conditions.

ADVANTAGES OF KHADS IN JAMMU:

1. **Natural Drainage System:** Wadis act as natural channels for draining excess rainwater during monsoons, preventing widespread flooding in certain areas.
2. **Source of Construction Materials:** After the monsoon, khads are often filled with stones and sand. Local truck drivers collect these materials and sell them for construction purposes, providing an additional economic benefit to the region.
3. **Recharge of Groundwater:** The seasonal flow of water in wadis can help recharge the groundwater table, especially when managed effectively.
4. **Biodiversity Hotspots:** During the monsoon, wadis support diverse plant and animal life, providing temporary habitats for aquatic species.
5. **Erosion Control:** In their natural state, khad can help control soil erosion by channelling water in a defined path.
6. **Potential for Water Harvesting:** With proper interventions, khads can be utilized for rainwater harvesting, addressing water scarcity in the Kandi region.



Figure 9 Khad

DISADVANTAGES OF KHADS IN JAMMU:

1. **Impact on Roads:** Many khads intersect roads, and during the rainy season, the flow of water, often carrying stones and debris, disrupts transportation and damages infrastructure.
2. **Damage to Culverts:** Culverts constructed over khads are frequently damaged or washed away during heavy monsoon rains, leading to repeated repair costs and logistical challenges.
3. **Limited Agricultural Use:** In the Kandi region, the stony terrain and unpredictable flow of water in “khad” make the land less suitable for agriculture, reducing the area’s productivity.
4. **Flash Floods:** Sudden and intense rainfall can cause flash floods in khads, posing risks to nearby settlements and infrastructure.

THE KANDI REGION AND ITS CHALLENGES

Approximately 30% of Jammu's area falls within the Kandi belt, which faces unique challenges due to its geographical location and lack of natural water resources. The land, filled with small stones, is of limited use for agriculture. The reliance on wadis as natural drainage systems underlines the need for improved infrastructure and management strategies to mitigate their negative impacts.

Recommendations

1. **Improved Culvert Design:** Constructing robust culverts with higher capacity to withstand monsoon flows can reduce damage and maintenance costs.
2. **Rainwater Harvesting Projects:** Developing small dams or check dams along khads can help store water for use during dry seasons, addressing water scarcity in the Kandi belt.
3. **Afforestation:** Planting vegetation along khads can stabilize the soil, reduce erosion, and enhance groundwater recharge.
4. **Early Warning Systems:** Implementing systems to predict flash floods can help communities prepare for potential risks.
5. **Community Engagement:** Educating local communities about sustainable khad management can foster better practices and reduce environmental degradation.

CONCLUSION

The khads of Jammu, especially in the Kandi region, are both a natural asset and a challenge. While they contribute to drainage, biodiversity, and potential water harvesting, their seasonal nature and the associated risks during monsoons pose

significant problems. With effective management and infrastructure improvements, the advantages of khads can be maximized, and their disadvantages minimized, creating a sustainable balance for the region's development.

5.2 AGRICULTURE IN PURMANDAL AREA, SAMBA DISTRICT, KANDI REGION

The Purmandal area of the Samba district in Kandi region of Jammu and Kashmir is characterised by semi-arid conditions with rain-fed agriculture. The irrigation system in this region is scanty due to erratic rains and water scarcity. This makes the agricultural productivity affected directly due to all these factors. Despite all these constraints, agriculture has remained the single main source of income for a vast majority in Purmandal. The agricultural practice, associated issues, and the creative alternatives introduced in Purmandal have been studied for the present case.

1. PHYSICAL AND CLIMATE CONTEXT

Geography: Purmandal is part of the Kandi region which falls within the subtropical zone and features a terrain of waves with very shallow soils.

Climate: The region has hot summers and mild winters. The average rainfall is about 700-800 mm, mostly received during the monsoon season.

Soil Type: Primarily sandy and loamy soils with low organic matter content, hence the water-retention capacity is poor.

2. FARMING SYSTEMS

Crops Grown:

- **Kharif Season:** Maize, pulses (black gram, green gram), and millet are mainly grown.
- **Rabi Season:** Wheat, mustard, and barley are the main crops.
- **Livestock Integration:** Livestock farming, particularly goats and cows, supports agriculture, as it provides manure and extra income.
- **Rain-fed Farming:** Most of the farming is rain-based because there are no irrigation facilities.
- **Traditional Methods:** The farmers mostly use traditional farming methods, such as wooden Plows and manual sowing.

3. CHALLENGES FACED

1. Water Scarcity:

- Irregular and inadequate rainfall hampers crop growth and yield.

2. Soil Degradation:

- Overgrazing and deforestation have caused soil erosion.
- Low organic matter and nutrient content in the soil leads to poor fertility.

3. Economic Constraints:

- High cost of seeds, fertilizers, and pesticides.
- Limited access to credit and financial support.

4. Market Access:

- Farmers face difficulties in selling their produce at fair prices due to poor market linkages.

- Absence of storage facilities leads to post-harvest losses.

5. Climate Change:

Unpredictable weather patterns, such as prolonged dry spells and unseasonal rains, have become a major concern.

5. INITIATIVES AND INNOVATIONS

1. Rainwater Harvesting:

Some farmers have adopted small-scale rainwater harvesting techniques, such as ponds and storage tanks, to mitigate water scarcity.

2. Adoption of Improved Seeds:

With support from agricultural extension programs, a few farmers have started using drought-resistant and high-yielding seed varieties.

3. Community Participation:

Farmers have formed cooperatives to collectively address challenges like water sharing and procurement of inputs.

4. Agroforestry Practices:

Planting trees like Cacia and eucalyptus around fields to prevent soil erosion and improve soil health.

5. Training Programs

NGOs and government agencies conduct training sessions to educate farmers about sustainable farming techniques, organic farming, and integrated pest management.

6. OUTCOMES AND IMPACT

1. **Increased Awareness:** Farmers are becoming more aware of the importance of sustainable agricultural practices and resource conservation.
2. **Improved Livelihoods:** Households that adopted improved seeds and rainwater harvesting reported a 10-15% increase in crop yield.
3. **Soil Conservation:** Agroforestry and reduced tillage practices have shown positive effects on soil health over the past five years.
4. **Enhanced Community Cooperation:** Farmers' cooperatives have strengthened market linkages and reduced the cost of inputs through collective purchasing.

8. CONCLUSION

Though there are difficulties with agriculture in Purmandal, there is potential for sustainable development. Challenges in water scarcity, soil degradation, and economic limitations can be mitigated through creative, community-based approaches, transforming the face of agricultural practice in this region. Purmandal serves as a template to address challenges similarly in other regions of the Kandi.

5.3 TRADITIONAL PONDS (TALABS) IN PURMANDAL AREA, SAMBA DISTRICT, KANDI REGION

The Purmandal area of Samba district in Jammu and Kashmir's Kandi region is famous not only for historical and cultural heritage but also as a place totally dependent on the traditional water conservations systems that include ponds popularly known locally as talabs. These ponds have been at the heart of water management in the region for centuries, providing vital sources of water for agriculture, livestock, and domestic use. However, changing environmental conditions and socio-economic factors are threatening these traditional systems. This case study discusses the importance, challenges, and efforts related to the conservation and utilization of ponds in Purmandal.

1. HISTORICAL AND CULTURAL SIGNIFICANCE

1. **Cultural Role:** The ponds in Purmandal have always been a significant part of the region's culture and religious traditions. Most of these water bodies have temples attached to them and have been considered sacred by the local people.
2. **Historical Context:** These water bodies were mainly constructed by the local rulers, landlords, or communities as an answer to the chronic water deficiency in the Kandi belt.
3. **Community Ownership:** The ponds were maintained by the community, with the responsibility shared among the villagers.

2. FEATURES OF PONDS IN PURMANDAL

– Design and Construction:

Most of the ponds are shallow, earthen ones without any concrete lining. Designed to collect and store rainwater during the monsoon season.

Usage:

Irrigation: Supplementing agriculture.

Livestock: Main source of water for cattle.

Domestic: For washing, cleaning, and sometimes drinking purposes.

Distribution: More than 30 traditional ponds are distributed over the Purmandal area, of different sizes and capacities.

3. PRESENT ISSUES

1. Degradation of Ponds:

Infiltration by expanding settlements and agricultural operations. Sedimentation by soil erosion and lack of desilting.

2. Water Pollution:

Pollution by domestic waste and agricultural runoff has rendered many ponds useless.

3. Neglect and Apathy:

Shift to modern water supply systems, like borewells, has decreased dependence on ponds. It also has led to lack of maintenance and community involvement.

4. Climate Change Impacts:

Reduced and irregular rainfall has reduced the holding capacity of ponds.

CASE EXAMPLE: BAWALIYA TALAB IN PURMANDAL

Description: Bawaliya Talab is one of the biggest and oldest ponds in the region, covering about 2 hectares.

Historical Use: Traditionally used for irrigation purposes as well as religious ceremonies.

Current Situation:

1. Silting and low water levels are affecting it.
2. Periphery encroachment has reduced its effective capacity.
3. Community Perception: Locals complain of the lack of attention but agree to be involved in restoration processes if assisted by external bodies.

RESTORATION AND INTERVENTIONS

1. Government Actions:

Rural Development Department under MGNREGA has undertaken desilting and repair work in some ponds.

2. Community Action:

In villages such as Sangar and Purmandal, local committees have been established to clean and maintain ponds.

3. NGO Involvement:

NGOs such as Tarun Bharat Sangh have conducted awareness programs on the importance of water conservation and traditional pond systems.

4. Innovative Solutions:

Planting vegetation around ponds to prevent soil erosion. Introduction of fish farming in some ponds as a source of income for maintenance.

OUTCOMES AND IMPACTS

1. Environmental Benefits:

Restored ponds have improved groundwater recharge and reduced soil erosion.

2. Economic Gains:

Revived ponds support irrigation, enhancing agricultural productivity and also provide livelihood opportunities, such as fish farming, have emerged.

3. Social Benefits:

Increased community participation in water management and revival of cultural practices associated with ponds.

CONCLUSION

The traditional ponds in the Purmandal area are a reflection of the wisdom and resilience of local communities in managing water resources in an arid region. While these systems face numerous challenges today, their restoration and conservation hold immense potential for addressing water scarcity and promoting sustainable development in the Kandi region. Preserving these invaluable water bodies for future generations requires collaborative efforts from the government, NGOs, and local communities.

5.4 THE ROLE OF BODHI (BANYAN TREES) IN KANDI, JAMMU

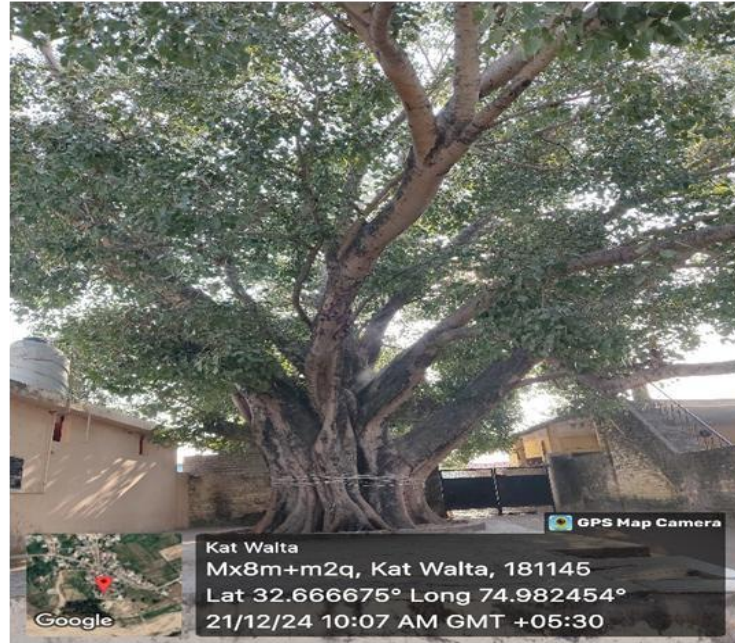


Figure 10 banyan tree

Bodhi (Banyan trees) in Kandi, Jammu, stand as significant landmarks for the local communities. These trees, deeply rooted in the traditions and daily lives of the villagers, serve as hubs for various activities. However, the common practice of covering the bases of such trees with cement has raised questions about their long-term health and environmental impact. This case study explores the advantages and disadvantages of the banyan trees' multifunctional roles in the communities across Kandi, Jammu, as well as the implications of their preservation practices.

ADVANTAGES OF BANYAN TREES IN THE COMMUNITY

1. Social Gathering Spots:

Banyan trees serve as central points for villagers to gather, fostering a sense of community. People often meet under their shade to play cards, engage in discussions, and relax. Their locations often make them convenient spots for social interaction, especially in rural areas where such communal spaces are limited.

2. Shade and Comfort:

The large canopies of banyan trees provide shade, making them ideal spots for respite during hot weather. This natural cooling system reduces reliance on artificial cooling methods.

3. Cultural Significance:

Banyan trees hold cultural and spiritual significance in Indian society. They are often associated with longevity, wisdom, and shelter, adding to their value in the community.

4. Utility for Daily Activities:

Villagers utilize the spaces around banyan trees for parking, for playing cards, informal meetings, and other activities. Their strategic locations make them practical assets to the communities.

Environmental Concerns:

The use of cement disrupts the natural ecosystems around the trees. It eliminates the habitat for microorganisms and small creatures that thrive in soil. Cement surfaces contribute to heat retention, increasing the temperature of the surrounding areas.

for prolonged human activities near the trees, especially for children.

RECOMMENDATIONS FOR SUSTAINABLE PRACTICES:

1. Community Awareness:

Educate villagers about the long-term consequences of cementing on the trees' health. Encourage community-driven efforts to preserve the trees through sustainable practices.

2. Regular Monitoring:

Engage local environmental experts to periodically assess the health of the trees. Implement corrective measures, such as pruning and soil enrichment, to ensure their sustainability.

CONCLUSION:

Bodhi (Banyan trees) in Kandi, Jammu, are more than just trees; they are cornerstones of community life. While they offer numerous benefits—social, environmental, and cultural—current maintenance practices pose risks to their health. By adopting sustainable preservation techniques and promoting community awareness, banyan trees can continue to thrive and serve as cherished parts of the villages for generations to come.

5.5 LACK OF INFRASTRUCTURE FACILITIES

Purmandal, a historical and religious site in Jammu and Kashmir, attracts many visitors each year. The region is well-connected by road, facilitating smooth transportation for visitors. However, certain patches of the roads suffer from deterioration due to heavy rainfall and soil erosion, posing challenges for commuters. Also the lack of proper washroom facilities for women is a major issue that affects their comfort and well-being. There is one Sulabh washroom, but it is not in good condition, making the problem worse. This case study looks at the challenges caused by this issue and its impact on women.

CHALLENGES FACED BY COMMUTERS

While the overall road network is efficient, sections affected by erosion and waterlogging create discomfort and safety risks for travelers. During the rainy season, these patches become particularly hazardous, leading to increased chances of accidents and vehicle damage. The poor road conditions not only inconvenience daily commuters but also deter tourists from visiting, affecting the overall visitor experience and limiting the area's tourism potential.

CHALLENGES FACED BY WOMEN

Without proper washroom facilities, women often avoid visiting such places or face discomfort and safety risks. Women traveling with families or during menstruation struggle the most. Many have to use nearby open areas, which compromise their privacy and expose them to health and safety risks. This lack

of facilities discourages women from fully enjoying cultural, religious, or recreational activities.

CONCLUSION

Improving infrastructure in Purmandal, including fixing the lack of washroom facilities and addressing road connectivity issues, is essential for enhancing the overall visitor experience. Providing basic sanitation will benefit women by improving their comfort, health, and safety, while repairing and maintaining road patches will ensure safe and reliable transportation for all commuters. These improvements will not only promote tourism but also contribute significantly to the growth of the local economy. Implementing proper drainage systems, erosion control measures, and consistent maintenance will ensure long-term infrastructure quality and sustainability.

CHAPTER-6

INTERVIEW AND DISCUSSIONS

INTERVIEW1:

A recent survey and interviews conducted in Purmandal brought to light the remarkable story of an elderly man who shared his deep insights into the region's past and present. This 81-year-old former teacher, originally from the nearby village of Padal, now resides in Purmandal. With a teaching career spanning over three decades before retiring twenty years ago, his life journey is both inspiring and illustrative of the area's history.

The man reflected on his educational experiences during a very different era. In his school days, English was introduced in the 6th grade, while the 1st-grade curriculum was taught in Hindi. Subjects like Geology and History were studied in Urdu, which gave him proficiency in multiple languages. He completed his matriculation in 1962, after which he joined the Indian Army and served for six and a half years. In 1969, personal circumstances led him back to his village, and by 1970, he had embarked on a career in teaching.

When asked about the changes in Purmandal and its surrounding areas over the years, he highlighted that while the road infrastructure within Purmandal has improved significantly, the nearby villages continue to suffer from a lack of proper roads. Although electricity and water facilities have reached these villages, the absence of roads remains a major challenge. He shared a poignant memory from his childhood, describing how he used to walk from his village to school.

Sadly, this remains unchanged, as his grandsons now make the same daily journey on foot.

He also noted the stark contrast in education levels between Purmandal and the villages. While Purmandal has a relatively educated population, the villages are still lagging far behind. According to him, the local panchayat has made little progress over the years and continues to be underdeveloped. Even after Jammu and Kashmir was designated a Union Territory, the benefits have not trickled down to these remote villages. He expressed frustration that government funds rarely reach the people who need them the most.

For basic supplies, villagers still rely on Purmandal. They must walk 5 to 6 kilometres, often carrying heavy goods on their heads to bring them back home. The lack of roads exacerbates these challenges, particularly during the rainy season when overflowing water makes the paths impassable. In extreme cases, villagers are forced to spend the night in the forest, waiting for the rain to subside.

The economic situation in the villages is equally bleak. With no stable sources of income, most families depend on domestic animals like cows and goats for survival. Agricultural activities are limited, with small-scale cultivation of maize, wheat, and pulses being the primary crops. Educational opportunities are also scarce, as schools in the villages only go up to the 5th grade. For higher education, children must travel to Purmandal.

This harsh reality forced the elderly man to make a difficult decision—he built a small house in Purmandal so that his grandsons could access better educational opportunities. Meanwhile, he entrusted the care of his ancestral home and land in Padal to others. His hope is to eventually return to his village once his grandsons complete their education.

He also mentioned the demographics of Purmandal, noting that the majority of the population follows Hinduism, with only a few Muslim families residing there.

The interview was an enlightening experience. The gentleman was extremely polite, humble, and cooperative, patiently answering all our questions in great detail. His insights painted a vivid picture of life in Padal and Purmandal, highlighting both the progress and persistent struggles of the region.

INTERVIEW-2

During their visit to the temple in Purmandal, the team had the opportunity to speak with the temple priest, or Pandit Ji, who was seated near the Shivling. He shared fascinating details about the history of the temple, providing deep insights into its significance and the stories surrounding it.

When asked about the temple's history, Pandit Ji explained that it is an ancient temple known as the Aap Shambu Temple. The temple is approximately 2,600 years old and features naturally formed Shivlings. It was built by Venni Dutt, a king of Kashmir. One of the temple's unique features is that no matter how much water is offered to the Shivlings, the water level in the temple remains constant, neither increasing nor decreasing.

The priest also spoke of the temple's *akhand jot*—a sacred flame that has been burning continuously since the temple's construction. According to belief, pouring oil into this flame brings peace to the souls of living beings. He recounted that the temple was originally surrounded by dense forests, home to wild animals, including a fox that used to drink from the Shiv Kund near the temple.

A particularly intriguing story associated with the temple involves King Avantipur. Pandit Ji narrated how the king accidentally killed a fox during a hunt, and its head fell into the Shiv Kund. Over time, the king's daughter suffered from an incurable headache, which astrologers linked to the fox's death. Following their advice, the king's hunting party retrieved the fox's head, removing the arrow embedded in it. Remarkably, this action relieved the princess of her pain. Deeply moved, the king built the temple to honour the fox, placing its head behind one of the temple walls. People began to revere the fox as Gidhri Mata.

Pandit Ji further elaborated on Purmandal's spiritual significance, mentioning that it is also referred to as *Shoti Kashi* due to its holiness. The area is home to 121 temples, each containing 11 Shivlings, making a total of 1,421 Shivlings. In addition, 125,000 Shivlings were brought to Purmandal, with the remaining Shivlings stored in a special room in Uttarvaini. These Shivlings are used for rituals and placements when new temples are built.

Another sacred site in Purmandal is Gupt Ganga, which, according to belief, is an incarnation of Mata Parvati. This mystical river is said to flow from Udhampur to Gaya Ji Prayagraj. The priest highlighted that Purmandal holds immense religious importance, and it is believed that after visiting other holy places, devotees should visit Purmandal within 12 years to complete the spiritual journey and make their pilgrimages successful.

The team found the interaction with Pandit Ji both enlightening and enjoyable. His polite demeanour and ability to explain the history of Purmandal in an engaging and understandable way left a lasting impression on everyone present.

INTERVIEW-3

During a visit to Purmandal, the team stopped by a school named Gardha. Located within the village, this primary school was established in 2008 under government regulations, which mandate the availability of a primary school within a one-kilometre radius. Despite its presence for over a decade, the school has seen no significant development since its establishment. Currently, the school has 20 students.

While speaking with a teacher, insights were gained about the local community. Most of the residents are either laborers or landowners (zamindars). Agriculture in the area is primarily subsistence-based, with villagers growing crops mainly for their own consumption.

The teacher also shared information about water availability in the region. Wells, tube wells, handpumps, and tap water are the primary sources, and while most areas do not face water scarcity, some pockets still experience shortages. Interestingly, about 30 years ago, wells could be found every 100 meters, reflecting an earlier abundance of water sources.

The main crops grown in the region are wheat and maize. However, for the past decade, farmers have struggled with damage caused by monkeys and pigs, which have increasingly become a nuisance by eating and destroying crops.

INTERVIEW-4

During a survey conducted in Purmandal, the team visited a private educational institution called Devika International School. Established in 2018, the school is a primary-level institution, offering education up to the 5th standard. The school

currently enrolls 148 students, many of whom travel distances ranging from 10 to 15 kilometres to attend classes. The institution is staffed by 20 dedicated members.

As a privately-run setup, the school does not receive any government subsidies. According to the school principal, the idea of establishing the school arose during a visit to Purmandal, where they observed significant gaps in the local education system. Motivated by a desire to provide quality education to children in this rural area, they set up the school with the goal of replicating the facilities commonly found in urban schools.

The school uses state board textbooks but follows a CBSE teaching methodology to ensure better academic standards. It also prioritizes the well-being of its students by maintaining a clean well connected to an RO system, ensuring access to safe drinking water. The school operates from 8:55 AM to 2:35 PM daily.

The rural setting presents several challenges, including frequent power outages. However, the school has implemented backup power solutions to address these interruptions. Network connectivity in the area is another significant issue, with only Airtel providing limited coverage. The school compensates for this by utilizing broadband services, though these too are affected during the rainy season, when power and internet services can be disrupted for up to two days.

Transportation in the region is sparse, and residents often face difficulties, especially during the rainy season. Flooded streams sometimes make it impossible to cross, leaving people stranded. Despite these hurdles, the area is equipped with some essential facilities, including a Primary Health Centre (PHC) with a 20-bed hospital, along with both high schools and primary schools.

CHAPTER-7

RECOMMENDATIONS

→ Based on the findings and insights from the study of the Kandi region, particularly the Purmandal area in Samba district, the following recommendations are proposed:

1. WATER RESOURCE MANAGEMENT

- **Revive Traditional Water Systems:**

Restore and maintain existing talabs (ponds) and other traditional water conservation structures to address water scarcity. Implement community-led desilting and maintenance programs for sustainable use.

- **Promote Rainwater Harvesting:**

Encourage households and institutions to adopt rooftop rainwater harvesting systems.

Develop recharge pits to improve groundwater levels.

2. INSTITUTIONAL REFORMS

- **Education Infrastructure Development**

Build proper class rooms, libraries, and labs in schools and ensure separate toilets for girls for reducing dropout

- **Development of Teacher Skills:**

Train teachers periodically to enhance the quality of education as well as hire more teachers to balance the teacher-student ratio.

3. LIVELIHOOD OPPORTUNITIES

- **Skill Development Programs**

- a. Vocational training in carpentry, tailoring, and IT should be provided to increase employability.
- b. Establish small-scale industries based on local resources, such as handicrafts and agro-processing.

- **Promote Eco-Tourism:**

Develop cultural and religious tourism in Purmandal to generate employment and boost the local economy.

- **Support Livestock Rearing:**

Provide veterinary services, fodder banks, and training in modern livestock management practices.

4. HEALTH AND SANITATION

- **Improve Health Infrastructure:**

Upgrade primary health centres with better facilities and staff. Organize regular health camps focusing on maternal and child health.

5. INFRASTRUCTURE DEVELOPMENT

- **Improve Connectivity:**

Construct and maintain roads to improve access to markets, schools, and health facilities. Develop reliable public transport systems for better mobility.

- **Electrification and Digital Access:**

Expand electricity supply to remote villages. Provide internet connectivity to support education and e-governance.

- **Tailored Development Programs:**

Develop region-specific development plans with regard to the specific needs of the Kandi belt.

FUTURE SCOPE

1. **Integrated Water Management:** Developing advanced water management systems, including rainwater harvesting structures, check dams, and reservoirs, can help utilize seasonal water flows more effectively and ensure year-round water availability.
2. **Sustainable Agriculture:** With proper soil conditioning and irrigation solutions, stony land in the Kandi belt can be converted for specific types of agriculture, such as drought-resistant crops or agroforestry.
3. **Renewable Energy Projects:** Khad and the Kandi region have the potential to host solar and wind energy projects due to their open landscapes and high solar exposure
4. **Eco-Tourism:** The unique geography of the Kandi belt, including the wadis, can be promoted as a destination for eco-tourism, offering trekking, bird-watching, and seasonal water-based activities.
5. **Stone and Sand Industry Development:** Encouraging organized collection and processing of sand and stones from wadis can generate local employment and contribute to the construction sector sustainably.
6. **Flood Control Measures:** Enhanced engineering solutions, such as robust culverts and flood barriers, can minimize the risk of damage caused by monsoon flows.
7. **Road Infrastructure Improvement:** The Kandi area often suffers from poor road infrastructure due to the impact of khad. Building elevated roads and improving drainage systems can reduce damage and ensure better connectivity.

8. **Education Development:** Many government schools in the Kandi area are poorly maintained, and villages lack sufficient educational institutions. Establishing and upgrading schools can improve access to quality education in the region.
9. **Pond Development:** Creating and maintaining ponds in the Kandi belt can serve as water reservoirs for agriculture, livestock, and daily use. This can also help in groundwater recharge and provide a buffer against water scarcity during dry seasons.
10. **Employment Opportunities:** By promoting small-scale industries and sustainable practices like fish farming in ponds, stone processing, and eco-tourism, the region can witness improved livelihoods for its residents.

CONCLUSION

The exploration of Kandi through Purmandal has provided an excellent insight into the complex interaction between tradition, geography, and development. The semi-arid region of Kandi, with its rugged terrain and limited resources, has socio-economic dynamics shaped by its historical and cultural significance. Purmandal, which is often termed as the "Chhota Kashi," has emerged as a central point in this narrative that combines the rich heritage of the region with the socio-economic transformation that is unfolding there.

Preservation of Heritage and Culture

Purmandal is in itself a testament to the enduring legacy of faith, art, and architecture in Kandi. The temples of Purmandal, especially the sacred shrine dedicated to Lord Shiva, attract pilgrims from all corners of the region. It fosters a sense of cultural unity and spiritual identity. These religious locations are not only worship but also platforms for preserving the folklore, rituals, and traditional crafts of the region. However, it is a challenge to use this heritage while modernizing, thus ensuring that cultural values are maintained, but adapted and kept abreast with the present needs.

Economic Interdependence and Livelihoods

Economically, Kandi's dependence on agriculture, coupled with the challenges posed by its semi-arid climate, has necessitated resilience among its people. Purmandal's religious tourism significantly contributes to the local economy, offering livelihoods through hospitality, retail, and artisanal crafts. The interaction between pilgrims and locals creates

opportunities for micro-enterprises and promotes traditional crafts, which otherwise risk extinction. At the same time, interdependence highlights sustainable practices to prevent overexploitation of resources and maintain ecological balance.

The Way Forward: Balancing Development with Sustainability

Purmandal unveils the socio-economic dynamics of Kandi and brings out the possibility of balanced development. Infrastructural investments, such as better road connectivity and water conservation projects, can significantly enhance the economic prospects of the region. Modern agricultural practices and ecotourism can be catalysts for sustainable growth. Community-centric initiatives, such as education and skill development programs, are essential to empower the youth and address social disparities.

In conclusion, Kandi's journey toward socio-economic transformation is deeply intertwined with its cultural and historical roots, epitomized by Purmandal. By embracing sustainable development practices, leveraging its cultural heritage, and fostering community resilience, Kandi has the potential to become a model of harmonious coexistence between tradition and progress. It is essential that policymakers, community leaders, and citizens work together to ensure that the heart of Kandi is preserved while paving the way for a prosperous future.

ANNEXURES





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