

1 **“Evaluation of known and unknown tourist destinations along the Lower Sankh River**
2 **Corridor in the Simdega district, Jharkhand”**

3 **Abstract**

4 Jharkhand possesses numerous tourist destinations with significant tourism potential, many of
5 which remain unexplored and largely unknown even among the state's population. If these
6 sites are properly developed and promoted through sustainable tourism planning and
7 infrastructure development, they have considerable potential to generate revenue and
8 contribute to local and regional economic growth. The lower Sankh River corridor in Simdega
9 district, Jharkhand, comprises many such spots like forested hill slopes, reservoirs, and places
10 of pilgrimage with potential to attract tourists. A total of six destinations, including Hirdah
11 Dham, Ramrekha Dham, Basatpur Valley, Kelaghagh Dam and Dangaddi as well as Dumki
12 Village, were emphasized in this study through a field-based multi-criteria framework
13 followed by the development of six indicators-namely aesthetic appeal, accessibility,
14 recreational opportunities, tourism infrastructure, visitation suitability, and safety and
15 management. Data were gathered from repeated field surveys (2024-2026), GPS mapping,
16 photography, and local interactions. The highest scorer was Kelaghagh Dam (28/30),
17 followed by Dangaddi (27/30), Ramrekha Dham (25/30), Hirdah Dham (24/30), Basatpur
18 Valley (23/30), and Dumki Village (22/30). Key findings indicate a promising outlook for
19 sustainable river-based tourism in southwestern Jharkhand.

20 Keywords: *Sankh River, Kelaghagh, Dangaddi, Basatpur, Ramja Simdega*

1. Introduction

River corridors have historically been the central focus of human habitation and a place for cultural exchange, biodiversity protection, and recreation. In addition to their ecological importance, rivers and related landscapes represent sites for tourism through waterfalls, reservoirs, forest nature, and riverfront tourism of scenic valleys, places where rock weathering presents high-interest areas in spiritual terms^[1,2]. The nature-based tourism centered on river ecosystems has proven to be a model for sustainable regional development with livelihood-generating opportunities for local communities, especially the rural and tribal class^[3,4].

Over the last few decades, rising demand for sustainable travel experiences has resulted in tourism development moving towards relatively untouched natural landscapes^[5]. Since river, ecotourism and rural tourism both combine environmental conservation with socioeconomic development, they have been considered relevant for sustainable tourism planning^[6,7]. Nature-based tourism, unlike traditional mass tourism, promotes a more responsible visitation of unique environments by supporting local entrepreneurship, raising awareness of the environment, and providing alternative income sources to indigenous or economically weaker communities^[4,8].

Jharkhand is one of the states possessing excellent natural tourism resources due to its extensive forest cover, dissected plateau topography, perennial rivers along with waterfalls and reservoirs, and tribal cultural heritage^[9], yet these merits are unutilized as tourist destinations or as a source of revenue for the state government. Regions including Hundru Falls, Dassam Falls, Jonha Falls, Hirni Falls, and Netarhat have already become major travel destinations, proving the state has huge tourism potential^[10]. Despite this, many of the more scenic and highest recreation-value river segments are far from established tourism circuits and have been little-documented. As a result, tourism in many inland areas remains limited, poorly planned, and heavily reliant on seasonal domestic tourists.

One such unexplored travel landscape for Jharkhand is the lower stretch of the Sankh River in the southwestern part of the state. The river rises in the hill forest region of the Chota Nagpur Plateau, passing through lush Sal forests, a rocky riverbed, and picturesque valleys filled with waterfalls, reservoirs, places of pilgrimage, and tribal village settlements before entering Odisha. In spite of these attractions, no scientific evaluation of tourism potential has

been conducted in the lower Sankh River area, and its tourism resources have not been assessed thoroughly.

However, before development of model infrastructure planning, sustainable tourism planning can only be undertaken through systematic identification and evaluation of tourism resources^[6]. These evaluations help planners determine the appeal of sites as destinations, visitor access options and infrastructural adequacy, bio-physical sensitivity, safety concerns and opportunities for residents to engage in tourism^[7]. The incorporation of these factors into tourism planning allows for a balanced development maximizing their experiences while preserving the integrity of the natural ecosystem and basic socio-economic benefits for local residents^[11,12].

This study thus seeks to identify and assess the important tourism sites along the lower stretch of Sankh River based on a field visit. The work analyses some destinations on their panoramic beauty, access roads to these destinations (motorable accessibility), facilities for tourists in each destination area, opportunities for recreation, the state of the environment of the particular location, and future development opportunities. Such results underpin strategic planning that promotes sustainable tourism and destination management, but also identify opportunities for ecologically-sensitive infrastructure provision, engagement of local communities and conservation of the natural riverine environment. This study also aims to aid the Government of Jharkhand's efforts in promoting the lower Sankh River as a potential nature tourism corridor.

3. Materials and Methods

3.1. Study area and its Selection Criteria

The study took place in Simdega district in Jharkhand, India. This area is special because the Sankh River and its tributaries flow through different types of landscapes. The district experiences a tropical monsoon climate with distinct summer, monsoon, and winter seasons, which influence river discharge and the seasonal attractiveness of tourism destinations. Rich natural vegetation, scenic river corridors, and the presence of indigenous communities contribute to the district's potential for nature-based and rural tourism. Sites were selected based on their natural scenic attractiveness, accessibility, visitor popularity, recreational opportunities, and tourism potential^[13,14].

3.3 Data Collection

Data used to evaluate sites in the primary selection were collected during field visits between 2024 and 2026. We documented landscape characteristics, accessibility, tourism facilities and visitor attractions, environmental conditions, and the infrastructure that supports it via direct observation, GPS mapping, and photography in combination with informal conversations with local residents and visitors^[15,16].

3.4 Tourism Potential Assessment

The tourism potential scores were assigned during field surveys conducted between 2024 and 2026 based on direct observations, GPS mapping, photographic documentation, and interactions with local residents and visitors. Each destination was evaluated using six criteria: scenic attractiveness, accessibility, recreational opportunities, tourism infrastructure, environmental quality, and safety and management. Each criterion was scored on a five-point scale ranging from 1 (very poor) to 5 (excellent), resulting in a maximum possible tourism potential score of 30. The final tourism score for each destination was obtained by summing the scores of all six evaluation criteria. The scoring framework was adapted from previous tourism resource assessment studies^[13,16].

Total Score	Tourism Potential
25–30	Very High
19–24	High
13–18	Moderate
≤12	Low

3.4 Data Analysis

Total scores for each destination were aggregated and compared against one another to provide a tourism potential ranking. In this study, we assessed the status of individual destinations and recommended ways to achieve environmentally sustainable tourism development based on their strengths and weaknesses. The comparative tourism resource assessment is seen to be an appropriate tool to facilitate destination management, prioritization of investments, and sustainable planning decisions^[17,18].

4. Results

4.1 Hirdah Dham, Ramja

Hirdah Dham is a popular pilgrimage and picnic spot located along the Sankh River, at about 629 m above mean sea level, near the administrative boundary of Gumla district and Simdega district. Nestled between rocky hills, with the Sankh River flowing through it and surrounded

by dense sal forest, this place always invites pilgrims, family visitors, and nature lovers throughout the year.

Approximately 2 km downstream, a naturally formed river island enhances the scenic beauty of the area, providing opportunities for sightseeing, photography, riverside recreation, and picnicking. The local myth behind the name (Hirdah) of this area comes from two words: *Heera*(Precious stone) and *Dah*(Water), since the local people believe that precious stones were easily available in the flow of the river Sankh in this area.

The destination is well connected from Gumla town by motorable road but is only accessible by bike from the other side, Pakartanr Block near Simdega town. The place has considerable potential for tourism through eco-friendly infrastructure development such as facilities for overnight stay, riverside walkways, viewing platforms, picnic facilities, sanitation units, etc. The proximity of Ramrekha Dham further enhances the tourism appeal by linking nature-based tourism with pilgrimage tourism (Figure 1).

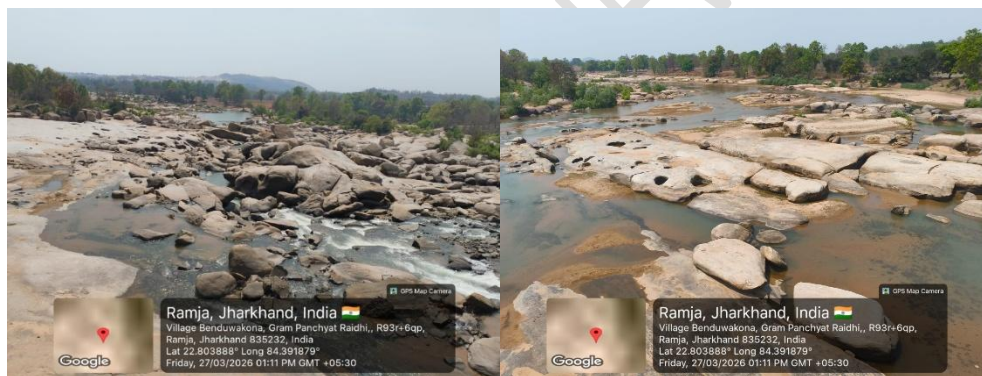


Figure 1: Photograph showing Fluvial Pothole and Scour hole along the Sankh River stretch at Ramja

4.2 Ramrekha Dham

Though not adjacent but very close to the Sankh River is Ramrekha Dham, situated amidst the forested hills of Simdega, represents an important pilgrimage and tourism destination. The history of the place is that, in ancient times, Lord Rama, Sita, and Lakshmana stayed in a cave on the hilltop during their exile; it is believed that Lakshmana, with his arrow, pierced the stone, creating a perennial pond where the deity Sita used to bathe.

The site is surrounded by rugged granite hills and dense forest characteristic of the Chota Nagpur Plateau, offering visitors a unique combination of spiritual significance and natural beauty. The scenic approach road and panoramic hill views contribute to the attractiveness of

the area, making Ramrekha Dham a prominent center for religious tourism and cultural heritage in the region. The area is accessible via motorable road through both Gumla and Simdega town (Figure 2).



Figure 2: Photograph showing its surrounding landscape, the pond, illustrating the spatial relationship between cultural and natural features of the site.

4.3 Basatpur Valley

Basatpur tourist spot on the Sankh River is located in the Pakartanr Block and is a scenic river valley surrounded by forest-covered hills; the valley offers an attractive setting for nature tourism, picnicking, photography, and trekking.

The destination is accessible by a motorable road from Simdega to Basatpur via Pakartanrand has already been partially developed by the Government of Jharkhand with basic tourism infrastructure. Beyond Basatpur, the winding road towards Ramja village passes through dense forests alongside the Sankh River, offering an adventurous drive with panoramic views of the valley, river, and surrounding hills through villages like Purnapani and Bhinjpur. This scenic route itself is a major attraction for bikers seeking nature and adventure experiences (Figure 3).

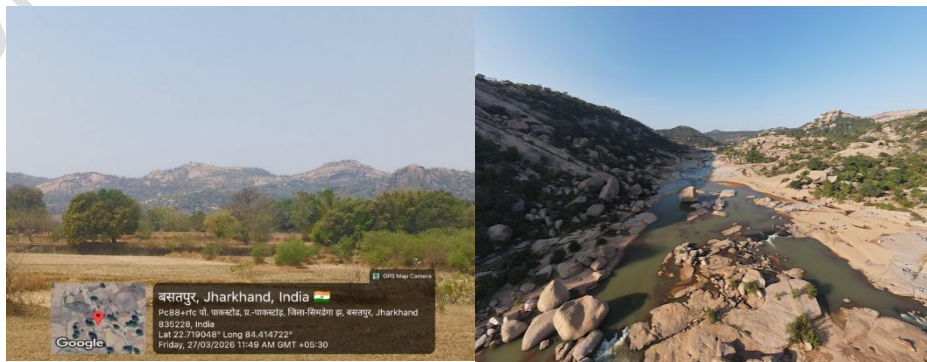




Figure 3:Photographic view of the Basatpur river valley, highlighting popular picnic spots and the picturesque landscape that contributes to the area's recreational and scenic value.

4.4 Kelaghagh Dam

Kelaghagh Dam is the most popular tourist destination in southwestern Jharkhand, situated at the Chhinda River, a tributary of the Sankh River, and about 4 km from Simdega town. With hills covered by forests and a plateau landscape of the Chota Nagpur region, this reservoir attracts visitors with its scenic beauty and a tranquil oasis. However, the site also has a fair degree of cinematographic potential given its picturesque surroundings and natural landscape. Also, the recreational activities such as boating, along with a favorable climate and peaceful environment, have made Kelaghagh Dam an ecotourism, recreation, and leisure destination in Simdega district (Figure 4).



Figure 4: View of the Kelaghagh Dam barrier and the island-type waterbody within the reservoir, highlighting the area's distinctive hydrological and landscape features.

4.5 Dangaddi Tourist Spot

At a height of about 299 m above mean sea level, Dangaddi along the Sankh River in Bolba Block is an upcoming riverfront tourist destination. The area features miles of sandy riverbanks, enormous rock formations, mountain spring clear water, and adjacent forests that provide perfect conditions for picnicking, sightseeing, photography, and nature-type recreation.

The site is well connected by road from Simdega town and has already been partially developed as a tourist site with basic facilities such as the entrance gate, a watchtower, and visitor amenities funded by the Government of Jharkhand. It has a watchtower that offers you beautiful views of the river and surrounding forests, making your visit even better. In addition, as mentioned earlier, the Sankh River can be cooperatively developed to construct other eco-sensitive infrastructure like a connecting footbridge, a proper waste management system on the river banks, and active involvement of local communities in providing tourism services including food junctions, night-stay camps, etc., which collectively could make Dangaddi not less than one of the most scenic riverfront-desired locations in southern Jharkhand (Figure 5).





Figure 5: Photograph showing the river flowing over a rocky riverbed, with surrounding sandy deposits along the banks, illustrating the scenic beauty of Dangaddi

4.6 Dumki village

Granite hills, dry deciduous forests and rocky stream channels combine to form a unique yet beautiful landscape around Dumki village, located not too far from the Jharkhand–Odisha interstate border. The Chinda River, a principal tributary of the Sankh River, and its surrounding area reveal an intimate association between geological formations, forest ecosystems, and fluvial features that are extremely favorable for ecotourism and other nature-based recreation.

The motorable road from Salgaposh village in Thetaitangar Block to the Odisha border meanders through undulating hills and dense blankets of forests, presenting an adventurous ride into a moribund wilderness. The partially completed sections of the road also enhance this experience, offering off-road travel and true wilderness adventures that are rare in more developed tourist destinations (Figure 6).

During off-road travel through the Dumki region, panoramic views of the surrounding villages and opportunities to interact with indigenous communities provide a memorable tourism experience. Their traditional lifestyles and long-standing association with the surrounding forests and rivers add a distinctive cultural dimension to the landscape, enhancing the appeal of Dumki for community-based ecotourism and sustainable rural tourism development.

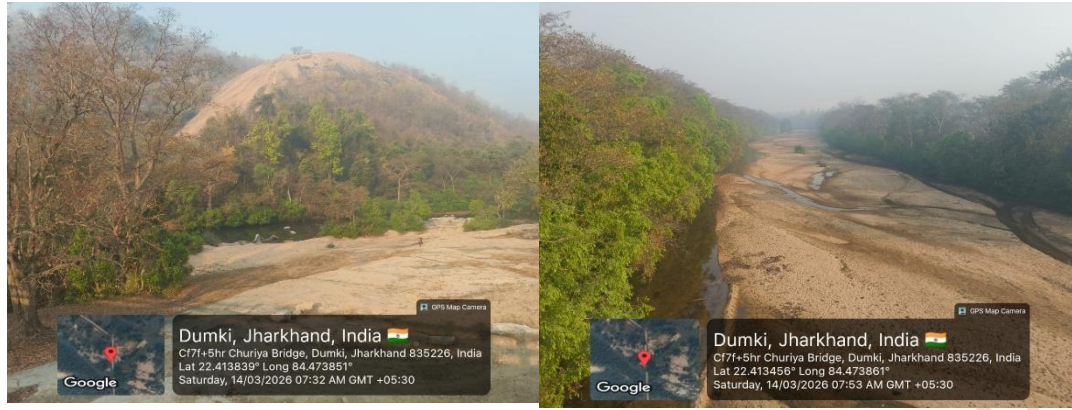


Figure 6: Photographs showing the Dumki River flowing through a landscape surrounded by high hills and dense forest cover, highlighting the scenic and ecological significance of the region.

4.7 Tourism Potential Assessment

Table 1 shows the tourism potential scores calculated for each of the selected destinations. Out of these assessment sites, the Kelaghagh Dam and Ramrekha Dham were identified as places with high tourism potential due to the remarkable accessibility, attractiveness for scenic beauty, recreational opportunities, and availability of tourist facilities in those areas. Expectedly, Hirdah Dham and Dangaddi also scored high on tourism potential given that these sites had riverine landscapes along with burgeoning complements of tourism-related facilities. Though underdeveloped in infrastructure, Basatpur valley and Dumki village had high potential for nature-based tourism, adventure tourism, and community-based ecotourism with their pristine environments.

Table 1: Tourism potential assessment of selected destinations in the Sankh River basin based on six evaluation criteria.

Destination	Scenic Attractiveness	Accessibility	Recreational Opportunities	Tourism Infrastructure	Environmental Quality	Safety & Management	Total Score	Tourism Potential
Hirdah Dham, Ramja	5	3	4	3	5	4	24	Very High
Ramrekha Dham	5	5	3	3	5	4	25	Very High
Basatpur Valley	5	3	5	2	5	3	23	High
Kelaghagh Dam	5	5	5	5	4	4	28	Very High

Dangaddi	5	4	5	4	5	4	27	Very High
Dumki Village	5	3	4	2	5	3	22	High

5. Discussion

The present assessment demonstrates that the lower Sankh River corridor possesses considerable potential for the development of nature-based, riverfront, and pilgrimage tourism in southwestern Jharkhand. Similar studies have shown that river corridors and associated landscapes often serve as focal points for ecotourism development because they combine scenic attractiveness with recreational and cultural opportunities^[2,19]. The observed variability of tourism potential between the selected destinations may be attributed to differences in accessibility, infrastructure, and recreational opportunities - all largely acknowledged as dominant drivers of destination appeal and a visitor's choice^[7].

The highest-ranking destination in the current study was Kelaghagh Dam due partially to its accessibility and provision of established tourism facilities, as well as boating and aesthetically pleasing reservoir landscape. Similar observations have been reported for reservoir-based tourism destinations in other parts of India where the water-based recreation opportunities are crucial as they attract higher numbers of visitors and resulting economic benefits^[20]. Similar is the case of Ramrekha Dham and Hirdah Dham whose tourism potential is strengthened not only by their landscape but also due to religious significance. Pilgrimage and natural landscapes, more broadly, are important motivators of year-round visitation and reduced tourism seasonality at many faith destinations across India^[21,22].

Basatpur Valley, Dangaddi and Dumki Village are also tourism attractions that serve as natural tourist attractions owing to their pristine riverine environments, forest hills, rocky banks of the rivers, trekking paths, photography opportunities, sightseeing and nature exploration options. Similar work in rural and nature-based tourism has proven that scenic landscapes and adventure can be developed into an attraction asset without the need to create extensive infrastructure^[23,24]. Yet this tourism carrying capacity and long-term destination competitiveness is currently limited by a limited number of accommodation facilities, poor sanitation infrastructure, and interpretation services.

In addition, the presence of several indigenous communities living in and around the Sankh River basin also enhances tourism opportunities in terms of cultural tourism and community-

based ecotourism. Traditional ecological knowledge, indigenous cuisine, handicrafts, cultural festivals, and local customs will enhance visitors' areas and also provide additional livelihoods for local people. These results are consistent with experiences reported from community-based ecotourism programs in India and worldwide, where local participation is central to success^[25,26,27].

Although it has great potential for tourism development, unplanned tourism construction can cause environmental deterioration, solid waste generation, habitat disruption, and over-exploitation of natural resources. As other studies indicated, tourism activities with poor regulation in fragile ecosystems could lead to declining environmental quality of these regions and a less satisfying experience for its visitors^[28,29]. In light of this, upcoming tourism planning around the Sankh River must emphasize responsible infrastructure development, waste management, and visitor regulation, as well as community participation in future visions for it to be sustainable in the long term.

Overall, the results suggest there exists an opportunity for the Sankh River corridor to develop into a major circuit of nature-based tourism; one that may complement existing landmarks in Jharkhand such as Hundru Falls, Dassam Falls and Netarhat. A consolidated river tourism development plan in the rivulets connected to temple sites and watersheds, interspersed with mountain valleys and tribal localities, may help revitalize regional economies through attraction, but at the same time it should protect the treasures of biological and cultural uniqueness of southwestern Jharkhand^[17,30].

6. Recommendations for Sustainable Tourism Development

Based on the findings of the present study, several measures are recommended to promote sustainable tourism development along the lower Sankh River corridor while maintaining ecological integrity and enhancing local livelihoods.

1. **Build Eco-sustainable Infrastructure:** Basic visitor amenities, such as toilets, drinking water facilities, resting sheds, parking areas, viewing platforms, and picnic spots, should be constructed using environment-friendly materials.
2. **Improvement of Accessibility:** Existing roads connecting major tourist destinations should be upgraded and maintained regularly. Directional signboards, route maps, and information kiosks should be installed to improve visitor accessibility and safety.

3. Promotion of Community-Based Tourism: Indigenous communities residing along the Sankh River should be actively involved in tourism planning and management through homestays, local guiding services, traditional food outlets, handicraft sales, and cultural performances to ensure equitable economic benefits.
4. Environmental Conservation Measures: Strict waste management practices, prohibition of plastic littering, riverbank protection measures, and regular environmental monitoring should be implemented to preserve the ecological health of the river corridor.
5. Adventure and Nature Tourism Development: Activities such as trekking, bird watching, boating, photography, camping, and nature trails may be promoted in suitable locations while ensuring adherence to environmental safeguards.
6. Promotion and Awareness: Digital tourism promotion, development of tourism circuits, and inclusion of Sankh River destinations in official tourism itineraries of Jharkhand Tourism can increase visitor awareness and improve regional tourism opportunities.
7. Integrated Tourism Planning: A comprehensive river corridor tourism management plan involving local communities, government agencies, forest authorities, and tourism departments should be developed to ensure long-term sustainability and balanced regional development.

7. Conclusion

The present study highlights the immense tourism potential of the lower Sankh River corridor, Simdega district (Jharkhand), comprising pilgrimage centers and reservoirs, river valley, forested hills, and anthropogenic settlements of indigenous tribes. Very high potential sites for tourism included Kelaghagh Dam, Dangaddi, Ramrekha Dham and Hirdah Dham, whereas Basatpur Valley and Dumki Village were identified to have a high development potential. The richness of the natural landscapes and cultural diversity in the region itself are a strong underlying basis for tourism based on nature, riverside, and communities. Nevertheless, poor infrastructure and less promotion are still major hindrances. If planned sustainably with an emphasis on conservation, community participation, and eco-friendly infrastructure development, it could develop into a global tourism hotspot that would also

improve the livelihoods of local communities while protecting the natural and cultural landscape.

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