



Historical and Archaeological Analysis of Living Heritage and Ancient Water Management Tradition: A Study of Chiryai Muttal Bowli Complex

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Abstract

Bowlis is a reservoir in which natural water can be stored. In Hindi, these reservoirs are known as "Bowlis"; in Dogri, they are called "Baan"; and in English, these are "step-wells." As the English name suggests, it has a series of steps that lead down to the ground level where the water is stored. These steps enabled accessibility to reach down to water, especially during summers when the water level went down. In India, Bowlis are mainly found in the arid northwestern region, where we usually observe the scarcity of water. Numerous tanks and Bowlis were commissioned by the ruling clans in such areas in which water was collected mainly during the rainy season and was then used throughout the year by the inhabitants. Different household purposes such as collecting drinking water, bathing and washing in general were the basic routines. Most of the Bowlis were intently constructed close to the temples and human settlements. Occasionally, rituals and ceremonies are also performed near Bowlis. From time to time, daily adorations, which include prayers and offerings of water and flowers, are also performed around them. People washed and bathed before daily prayers and made their offerings here. Thus, these Bowlis are not mere water reservoirs; they are adorned with illustrative architectural originality and shared identity and represent a rich legacy of spiritual and cultural traditions. In this paper, an initiative is taken to bring to the forefront a spectacular complex of Bowlis situated in the village of Chiryai, tehsil Tikri, district Udhampur, J&K, which is facing neglect due to modernization in water supply techniques and lack of awareness of the native of the region. Situated in the foot hills of



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Shri Mata Vaishno Devi Shrine, Katra, the site can be developed as an attractive tourist place. The unique arrangement of Bowlis and water management describing the ancient history, architecture, culture, traditions and technology of water harvesting of former days. Therefore, this paper brings to light the historical and archaeological importance of the Bowlis and their present conditions facing the wrath of time and management. It is high time to take necessary action for the conservation and restoration of the Chiryai Muttal Bowli complex, keeping in mind the sanctity of the site. This paper is based on the field visit organized by our Heritage Club of the Department of History, School of Social Sciences, Cluster University of Jammu, as an outreach program held during the World Heritage Week celebration.

Keywords: *History, Archaeology, Culture, Tradition, Conservation, Restoration, Tourism*

1. Introduction

Bowlis are reservoirs in which natural water can be stored. In Hindi, these reservoirs are known as Bowlis, in Dogri, they are called "Baan"; and in English, these are "step-wells." As the English name suggests, it has a series of steps that lead down to the ground level where the water is stored. These steps enabled accessibility to reach down to water, especially during summers when the water level went down. In India, Bowlis are mainly found in the arid northwestern region, where we usually observe the scarcity of water. Numerous tanks and Bowlis were commissioned by the ruling clans in such areas in which water was collected mainly during the rainy season and was then used throughout the year by the inhabitants. Different household activities such as collecting drinking water, bathing and washing in general were the basic routines. Most of the Bowlis were intently constructed close to the temples, human settlements and along trade routes. Occasionally, rituals and ceremonies are also performed near Bowlis. From time to time, daily adorations, which include prayers and offerings of water and flowers, are also performed around them. People washed and bathed before daily



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prayers and made their offerings here. In India, Bowlis are mainly found in the arid northwestern region, where we usually find the scarcity of water. Numerous tanks and Bowlis were commissioned by the ruling clans and the equivalent authorities in such areas in which water was collected mainly during the rainy season and was then used throughout the year by the inhabitants.

The hilly, steep landscape of Jammu possesses the buried riches of spectacular structures of aqueducts and pools of water, representing an exclusive ancient water management tradition. These structures, popularly known as 'Bowlis' are an excellent example of intricately crafted marvels of water conservation and representatives of the cultural heritage of a particular region. Integral to regional culture, the Bowlis are more than just reservoirs. These are exemplary of expressive architectural originality, skilled artistic workmanship and shared identity, representing a rich legacy of spiritual and cultural traditions.

In the Jammu region, numerous Bowlis were constructed in its villages. These water springs are unique examples where ecological and environmental considerations have led to the sanctifying of perennial water sources since ancient times. Ingrained into the rhythmic life of hilly mountains and the high land communities of outer Himalayan ranges of the Jammu region, these Bowlis act as a central gathering place for the local community, serving as a focal point for social interactions and religious rituals. Of the various Bowlis such as Nagrota bowlis, Bain Bajalt bowli, Jindra bowli, Pangali bowli, Baddi baan, Saakan bowli, etc., the Bowli Complex positioned at a small village, namely Chiryai Muttal, located at Painthal in the Udhampur district is a matter of prime concern.

Constructed around 300 years ago, it is a complex of five Bowlis. Not merely a vessel of water, these architectural structures are the embodiment of tranquility, representing the richness of traditional artistic skills and signifying the historical, archaeological and cultural importance of the time period of their construction. Over a period of time, this Bowli complex is in a state of neglect & despair, having withstood the rigors of weather



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and time for hundreds of years. Many of them have dried up or fallen into disuse due to changing water systems and the adoption of modern water pipe supply methods. Therefore, there is an urgent need to conserve and preserve these historical and architectural marvels and to revive the traditional water management system in order to solve the problem of water scarcity as well. These structures reflect architectural beauty and cultural identity and transfer this cultural legacy to the coming generations. Hence, with the objective of conservation and restoration of this Bowlis complex, this research paper is written to highlight the historical and archaeological significance of this architectural wonder and to create awareness among the locals to make their contribution for its preservation and maintenance and an appeal is made to the concerned departments and organizations for their support and timely action.

A region enriched with its heritage exhibits a sense of identity for local communities, facilitates common understanding and promotes the well-being of the community by providing economic opportunities. The local heritage plays an important role in preserving the local language, traditions, values, history and culture of the region. Unfortunately, many regions are losing their heritages one after another. Many of the historic monuments and sites are now in appalling conditions because of continuous negligence and lack of heritage awareness, both pointing towards an overall hesitation at all levels while taking necessary measures to manage and preserve these heritages in the long run.

2. Objectives

During the field visit, after visualizing the condition of the site, the following objectives become the core area of research:

- ❖ To document the historical, archaeological and cultural significance of Bowlis.
- ❖ To take initiative to prevent Bowli complex from further damage, deterioration and demolition in order to retain its historic, archaeological and heritage value.
- ❖ To highlight the challenges faced by the site and suggest measures to promote the site as a tourist spot and restore its spirit and integrity.



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3. Research Methodology

Basically, this research paper is based on the observations and experiences gained during the field visit. The information collected is thematically evaluated to identify social use, ritual practices and water management systems and then presented in a descriptive design highlighting the historical timelines and archaeological and social significance to understand the political, cultural and environmental factors influencing the construction and maintenance of Bowlis.

4. Review of Literature

As far as written documents focusing on the historical, archaeological and cultural contextualization of the Bowli complex at Chiryai Muttal are concerned, scanty information is available. There is only one written work by Shiv Nirmohi Ji titled “Duggar Ki Bawalian- Ek Sarvakeshan” (Hindi ed.) available, providing a detailed description of almost all the Bowlis constructed over a period of time in Jammu. The work describes in detail the available information about the historical, architectural and cultural significance of the Bowlis of Jammu. For Chiryai Muttal, Nirmohi Ji has provided a historical account of these Bowlis along with architectural and cultural importance. Major understanding of the site is gathered during a field visit with the details given in Nirmohi’s book. A few articles published in the Daily Excelsior and Times of India e-newspapers available online are also consulted for thorough understanding.

5. Historical Contextual

Chiryai Muttal is a small village situated about 20-23 km away from Katra town. Half on the hillock and the remaining half on the downslope side, it is believed that the area was inhabited around 250-300 years ago. This assumption is based on the fact that two



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Chinar trees have been found at the site planted around 250 years ago. Moreover, Bowli Complex itself as a historical site goes back several millennia.

In the absence of any authentic written document, it is not easy to substantiate these Bowlis in any historical outline; as a result, a gap exists in the study of Bowlis of Jammu. Majorly, the account of these Bowlis is drawn from different legendary accounts that throw light on the folk lore associated with the construction of the Bowli complex at Chiryai. As narrated by the local inhabitants, the Bowli Complex was built nearby in the 16th-17th century when Rajasthan was struggling with drought. A large number of people, including laborers and artisans, migrated to the northern hills, including the Shiwaliks. Many of them stayed in various villages, including Chiryai too. At that time, Ghagga Singh of the Jij Rajput clan, belonging to the local Rajawada, was the chief. He allowed these migrants to settle in Chiryai Village. During their stay here, these Rajasthani workers laid the foundation of this bowli under the patronage of Ghagga Singh.

However, some natives are of the view that it is not easy to fix the date of construction of these Bowli because there is no written record related to it. Whether, Ghagga Singh of Jij the Rajput clan's responsibility for its construction is again doubtful, but Nirmohi Ji has confirmed that he had renovated these Bowli during his reign.

The construction of these Bowlis plays a domineering role in fulfilling the needs of the water requirements for the local inhabitants of the village Chiryai Muttal. The gift of Bowlis presented by the artisans of Rajasthan to Chiryai is a magnificent and exclusive piece of architectural and archaeological significance, adding one more jewel to the glory of Jammu architectural heritage.

Another oral tradition mentioned that the natives are of the view that the Bowlis were built somewhere in between the 12th and 18th centuries. Again, a question arises: Who constructed them? It is believed that Maharaja Ghulab Singh used to visit this site during his expeditions and travel. According to local folklore. Maharaja Gulab Singh is also associated with the Chiryai Muttal village through a significant incident. During



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one of his military campaigns, Maharaja remained missing for more than two months. His family members, including the queen, were worried about him. In her quest for faith, the Maharaja's queen got to know about a revered Mahatma, Purshotam Das Ji, residing in the village of Chiryai. This Mahatma is well known for his divine wisdom. The Queen visited Chiryai Village, met Mahatma and narrated the whole incident. Then, Mahatma assured her that Maharaja Gulab Singh is safe, has achieved victory and will return within two days. True to his words, Maharaja returned as predicted. In acknowledgement of the Maharaja's insight and to express her gratitude, Maharaja Gulab Singh and His Queen visited Chiryai and paid homage to Mahatma. Maharaja contributed to the renovation of the whole site. Further adding to its historical and cultural significance.

Adding to these legendary accounts, it is said that these reservoirs reflect the architectural influence of Rajasthani art under the Mughal period, but written records are silent about it. However, Article Twenty-one of the *Ain* mentioned that a well, a tank, a baoli (a step well), or a temple should be erected every year on behalf of the state, but after one work is completed, then the other should be taken in hand. Even the priests are instructed to follow the rules for the conduct of rituals or pujas in temples. (Rai, 2004, p.118) But whether the Bowlis were constructed as per this order in Jammu or the Bowlis of Chiryai were constructed under Mughal patronage is again without any authentic written document.

6. Architectural and Cultural Significance

Generally, the architectural form of a Bowli consists of three elements: the well in which the water is collected, the flight of steps to reach the groundwater through several stories, and intermediate pavilions.

Basically, at Chiryai Muttal, there were five Bowlis. The first one, located near the Raghunath Ji temple, is octagonal in shape. From here water has been taken to another two Bowlis that have been constructed at lower level on the downslope side and are comparatively bigger in size. A survey of the site reveals that architects, planners and



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masons of that era had made water overflow above specially designed channels built on top of arches from where it was made to fall in Bowlis like a waterfall.

One extraordinary feature about these Bowlis is that they have been made in decks but not in a straight line. Each Bowlis is twisted to a given angle and water made to flow in the same direction to make the entire water channel a series of multiple waterfalls, thereby making the entire area come alive. The biggest Bowlis comprises about fifty-nine carved statues around its main pond that has six steps and four arches. From above, these arches' specially carved-out channels allow water to fall into the main reservoir. This Bowlis is approximately forty square feet in size.

Another Bowlis above this is approximately fifteen square feet; that too has been designed on a similar pattern to the bigger one. The walls of the top staircases of these Bowlis have been decked with stone lines separated with carved stones and divided with motifs. Two specially designed cornerstones have been placed on the edges of each Bowlis that too has been convolutedly carved. The last Bowlis houses about forty-one carved stones. It is the largest Bowlis stands out with its remarkable design, featuring fifty-nine intricately carved statues encircling the main pond. This pond is adorned with six steps and framed by four elegant arches, showcasing the architectural skill of the era.

Artists, architects and historians can very well relate stone sculptures or carvings on the walls of all these temples to Hindu mythology. About one hundred and fifty stone-carved statues of Gods and Goddesses including characters from Mahabharata and Ramayana, Lord Rama, his wife Sita and brother Laxman; Varah Avatara; Narsingh Avatara; Krishna playing the flute; Matsya Avatara; Arjuna with his bow and arrow; Lord Hanuman; Durga Mata; Lord Ganesha; Lord Brahmha; Lord Vishnu Avatara; Mata Vaishno Devi; and other Shakti and Naga cult figures; figures of kings, queens, dancers, animals such as elephants, horses, birds, sea creatures and even dragon-like figures; warriors; and royal ladies in palanquins can be identified at the site. Besides faces and motifs from epic series beautifully carved and then laid down in stone masonry on the multiple decks of aesthetically designed buildings. Some of the stones



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have been carved so complexly that their details speak of the craftsmanship of artisans of that era.

While historians, archaeologists, engineers and even locals are unable to solve certain mysteries with regard to this site or structural representation, it apparently describes the craftsmanship of artisans of that era who conserved water in such a tranquil manner that it, while catering to the needs of local villagers besides animals, also provided a visual delight to heart and soul. However, why all the Bowlis are not in alignment or are tilted at a horizontal angle or why each one of them stands covered with high-rise stairs from three and not all four sides alone remains unanswered.

7. Initiatives of Concerning Organisations

The Bowli site at Chiryai Muttal is presently undergoing conservation and restoration under the aegis of the Directorate of Archives, Archaeology and Museum. The Directorate has taken significant steps to safeguard the site by constructing cemented boundary walls, thereby ensuring protection from encroachment and external interference. This intervention reflects an important institutional commitment towards the preservation of the archaeological remains at Chiryai Muttal.

Despite these efforts, several critical issues continue to affect the integrity of the site. The deteriorating condition of the Bowlis, the erosion of relief carvings and the contamination of water within the structures remain major concerns. Historically, the Bowlis were surrounded by well-maintained gardens that enhanced both their aesthetic and ecological value; however, the absence of vegetation today has further exposed the site to environmental degradation.

While the initiatives undertaken by the State Archives mark a positive beginning, the long-term conservation and sustainable preservation of the Chiryai Muttal Bowlis necessitate the active involvement of multiple concerned departments, including those related to heritage, environment conservation, tourism and local governance. Community participation and awareness are equally essential to complement institutional efforts.



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Therefore, it is imperative that a coordinated, interdepartmental approach be adopted to address structural conservation, environmental restoration, water purification and site management. Timely and collaborative intervention will not only strengthen the preservation of the Chiryai Muttal Bowlis but also ensure the safeguarding of this valuable heritage site for future generations.

8. Recommendations and Suggestions

To make Chiryai Muttal Bowli Complex a historically relevant, architecturally marvelous, culturally important and economically viable tourist spot, the following steps should be undertaken:

8.1. Community Engagement and Awareness:

- **Form Local Committee:** Involve local residents, community leaders and experts to create a management committee. This ensures local involvement and enhances sustainable development.
- **Conduct Awareness Campaigns:** Educate the locals/community about the historical and cultural significance of Chiryai Muttal Bowli. Highlight its historical, archaeological, architectural and ecological importance and the benefits of tourism.
- **Skill Development Programs:** Train locals in hospitality, tour guiding and traditional crafts to create employment opportunities within the tourism sector.
- **Issue Pamphlets and Flyers:** To create awareness among the locals and the travelers, it is important to publish pamphlets, flyers and other types of print material which will enlighten them to take necessary steps for the popularization and preservation of the site.

8.2. Conservation and Restoration:

- **Assess the Current State:** Conduct a thorough environmental and structural assessment of the Bowli and its surroundings.
- **Develop a Conservation Plan:** Implement measures to protect the water body from pollution, erosion, and encroachment.



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- **Restore Historical Structures:** If any historical structures are associated with the Bowlis, restore them sensitively while preserving their cultural integrity.

8.3. Sustainable Tourism Development

- **Develop a Tourism Master Plan:** Create a comprehensive plan that outlines the vision for Chiryai Muttal Bowli as a tourist destination.
- **Eco-tourism Initiatives:** Promote eco-friendly tourism activities like nature walks, birdwatching and traditional rides.
- **Homestay Programs:** Encourage locals to offer homestay accommodations to tourists, promoting cultural exchange and supporting the local economy.

8.4. Cultural Preservation

- **Document Local Traditions:** Record and document the cultural traditions and folklore associated with Bowli at Chiryai Muttal.
- **Organize Cultural Events:** Host festivals, fairs and cultural performances to showcase local traditions and attract tourists.
- **Establish a Cultural Center:** Create a space to display local artifacts, handicrafts, and traditional art forms.

8.5. Economic Empowerment

- **Support Local Businesses:** Facilitate the development of local businesses that cater to tourists, such as restaurants, shops and souvenir vendors.
- **Promote Local Products:** Encourage the sale of local handicrafts, food products and other souvenirs to generate income for the natives.
- **Diversify Income Sources:** Explore opportunities for sustainable agriculture and other eco-friendly businesses in the surrounding areas.

8.6. Collaboration and Partnerships

- **Collaborate with Government Agencies:** Work with local and state governments to secure funding, permits and necessary approvals.



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- Partner with Heritage/Tourism Organizations: Collaborate with Heritage and Tourism organisations and travel agencies to develop and promote Chiryai Muttal Bowli as a tourist destination.
- Seek Support from Corporate / Business Houses: Engagement with business houses to secure funding and resources for conservation and development projects.

These initiatives will result in the revival of the Chiryai Muttal Bowli site in all aspects, including historical, archaeological and cultural context. It will promote the site as a Heritage-Tourist destination providing economic opportunities and enhancing the economical standard of living of the natives of the village. As a consequence, the natives will be encouraged to make their contribution to preserve the cultural heritage and promotes sustainable development.

9. Conclusion

Bowlis are an integral part of historical and architectural heritage. These are significant natural reservoirs essential for fulfilling the water requirements of the natives and help to re-establish and maintain the ecological balance. In addition to serving as reservoirs of fresh drinking water, these structures also serve to replenish groundwater, prevent flooding and sustain biodiversity. In the context of India's escalating water crisis, marked by acute water stress affecting millions of people and severe shortages in several urban centres, including Jammu, the revival of Bowlis is a revolutionary initiative. The effective and timely restoration of Bowlis, particularly the Chiryai Muttal site, holds the potential to revive their original functional, ecological and aesthetic values. Such conservation efforts could restore the serenity and sanctity once associated with this sacred landscape, enabling the site to reclaim its historical significance and environmental vitality. The neglect and degradation of these structures not only signify the loss of a vital heritage asset but also the erosion of a sustainable water resource. Therefore, if such Bowlis are restored effectively and timely, then the lost glory can make anyone imagine how these traditional water reservoirs are adding serenity and sanctity to the Chiryai Muttal site that stands damaged now.



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