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**Assessment of Local Level Heritage Value of Kishangarh,
Rajasthan**

Sakshi Patel^a, Darshana Rander^b, and Kishori Dalwadi^b

^aSault College, Ontario, Canada

patelsakshi1997@gmail.com

^bSchool of Interior Design, UID, Karnavati University, Gujarat, India

randerdarshna@gmail.com

kishori@karnavatiuniversity.edu.in

Abstract. In conflicting urban development, it is difficult to highlight the appropriateness of the categorization of heritage buildings, sites, and ensembles. Protecting agencies like the Archaeological Survey of India (ASI), National Monument Authority (NMA) and State Departments of Archaeology are authorized government bodies handling this vast task. With the growing awareness about local-level heritage values, needs to be prioritized. Local-level structures are recognized based on their manifest values and linked to the uniqueness of a structure. Rudimentary value identification in heritage architecture is limited, as often these not-so-popular heritages are not reflected. At the governance level, often criteria for heritage inclusion might not match the one prescribed by the authorized bodies. In such a scenario, local awareness can be simulated. Professionals in a similar field can initialize the process and put forward the proposal. The paper investigates the heritage of Kishangarh city as a case study to demonstrate the challenge of preserving and restoring cities in a holistic and integrated manner. A strength-weakness-opportunity-threat (SWOT) analysis is conducted to understand the current situation. The study is framed with parameters as- history, landmarks, access and linkages, green and open spaces, functional zoning, and informal structures. The proposal concludes with bridging the old and new segments of the canal through the Gond Talav Lake. It discusses that preserving and restoring the past is essential for shaping the future and that can be achieved through recent practices which can be contextually relevant.

Keywords: Preservation • Kishangarh • Water • Architectural elements

1 Introduction

Robert L. Meyer introduced the UNESCO World Heritage Convention in 1976, he expressed optimism that someday, world heritage items would be transferred from the national state to the international community. Each person or group has their preferences, and it should be free to express those preferences symbolically. (Menon, 1989) The Western vision of conservation focuses on maintaining heritage sites similar to that of the past. This principle came from the way they defined heritage- material and monumental forms being one of the most important aspects of tangible heritage. (Smith & Waterton, 2012) The critical question for conservation theory today in India is that we do not have a vision for conservation, we are restricted to operating around the assumption that our city is static and a stable entity. The critical question is how the ideas intersect with our ability to spatially imagine the preservation of the environment. (Mehrotra, 2017). An integrated understanding of conservation needs, and taking that into action, demands a systemic approach. A multi-faceted approach has been taken by the Government of India to ensure better environmental governance. National Environment Policy (NEP) is one such framework that aims to implement Articles 48A and 51 A(g) of the Indian Constitution which mandates a commitment to a clean environment. This is reinforced by the judicial interpretation of Article 21. Enhancing and conserving man-made heritage is also one of the sub-objectives defined under policy features. (Nallathiga, 2012). However, there are symptoms of the absence of social awareness that can translate into a management system. The ability needed for lasting conservation, as well as modesty, is essential for bringing together and leading interdisciplinary and inter-institutional teams. Ultimately, it is the teamwork and many layers that can help to simulate the process of conservation. There is a need to reorient the education program to meet the challenges and to increase the concern for conservation professionals (Mehrotra, 2007) (urban planning, architects, or designers).

The research paper here is putting down a case study undertaken as part of Design Studio with Masters Students during the online teaching mode. The idea was as they were aware of the city they dwelt in, it was easy for each student to identify the places in their city for creating a vision for an upliftment or environment concern for that particular node, which is tangible. Spaces that were highlighted in the urban context varied from Streets, Bazaars, Ghats, Nalliah's, Gardens, and Plaza spaces. One such example is showcased in this paper, which initializes the concept of preserving a water system furnished for the city of Kishangarh, Rajasthan. The study provides suggestions to involve the public and community in conservation management, taking Kishangarh as a case study. To value and use a historical environment concern must rise within the society. The paper showcases the proposal submitted for the restoration of the water system in Kishangarh, Rajasthan. The aim was to ensure the Professional designer's role in understanding the dynamics of creating a constituency of committed citizens, which can resonate from town- to -city- to world.

1.1 Authorities and Monuments

There are three levels of significant parameters as identified by different organizations and researchers. These are international (also known as UNESCO world heritage sites), national, and local levels. (Pickard, 2002). In an urban setting, the preservation of heritage is frequently regulated by the guidelines established by the Archaeological Survey of India. The ASI requires that heritage buildings possess certain qualities, such as an unfinished or imperfect appearance, which showcase the nuances of history and culture that have contributed to the structure's current existence. The ASI also imposes conditions for designating a building as a protected monument, recognizing structures of both local and national importance based on their manifest values, which are often linked to the building's uniqueness. This value can stem from a structure that is the only one of its kind or from an exceptional example of innovation or aesthetic expression within a particular time, which continues to captivate viewers. However, these criteria are limited when it comes to identifying the value of heritage architecture, particularly when it comes to most vernacular structures. Without a well-defined system for categorizing heritage buildings, sites, and ensembles, it is challenging to impose restrictions on conflicting developments. There is a lack of clarity in categorization creates a barrier to protecting agencies from taking action. The local level, such as panchayats or similar groups, have a restricted approach to strengthening conservation efforts.

1.2 Overview of regulation globally:

Most countries of the world use various laws and regulations for the conservation efforts of heritage sites. However, they use different approaches and laws suitable to the context. In the majority of countries, all-inclusive laws are present to preserve cultural heritage, including movable and immovable ones. (Jain, 2017). Some of them, such as Denmark, Ireland, and the UK, use different laws and policies for architectural and archaeological heritage, though a certain level of overlap exists. 'Listed buildings' can be protected as individual objects in Denmark and the UK, depending on the national criteria. Various planning legislation were imposed in the UK to protect the buildings, which have historical and architectural significance. The same policy is implemented in the region of Walloon, Belgium. Local authorities for planning in Ireland design the objectives for the protection of various structures for the preservation of buildings with historical and cultural interest. (Pickard, 2002).

1.3 Objective of the study

The paper comes as a case study of Kishangarh, Rajasthan, as a way to look into the proposal of government vs a proposal done through strength-weakness-opportunity-threat analysis to give a solution that can be taken at a local level to preserve the system for which the canals were designed. It comes as an empirical study to understand the amalgamation of preservation and alteration as a concept in heritage conservation.

2 Material and Methods

To understand the importance of local heritage, the study set three frameworks:

- a) Demography understanding
- b) Government initiatives
- c) SWOT analysis

2.1 Demographic understanding

Kishangarh is an undiscovered heritage city in Rajasthan. The city is home to the most iconic fort, the water palace, and one of the most magnificent water canal systems, allowing any region of the city to endure periods of drought, marking the development of the city back in time. Kishangarh was also renowned for its architectural styles, including its intricately carved marble temples, which are evidence of the Marwar architecture from the eighteenth century. We can see that this is destroying architecture and our environment. The man-made water system was created in 1470 AD to provide fresh water to every part of the city. Kishangarh has average rainfall, and the source of fresh water is minimal. Kishangarh experiences extreme seasonal variation in monthly rainfall [9]. Problems like using canals as sewers, allowing algae to grow in lakes, and not maintaining the surrounding flora and fauna are ruining the environment. The water canals of Kishangarh connect every waterbody that is present in the city (fig. 1). Major water bodies such as Hamir Talab, Gundolav Lake, Ransamand Pond, and Satolav Talab are interconnected and provide fresh water to the whole city. This whole circulation system prevents floods and droughts. But in today's time, these canals are being used for sewage. People connect the regional sewage outlet to these canals, and it now acts as city sewage. As a result, according to a study, the quality of the water in Gundolav has been steadily declining. The drainage is causing pollution and, as a result, a loss of flora and fauna in this lake. (Sharma, Ranga, & Sharma, 2010).



Fig 1: Current pictures of the canal

2.2 Government initiatives

The state government realized the Atal Mission for Rejuvenation and Urban Transformation (Amrut) In 2016, under a budget of Rs 348 crore has been sanctioned under the AMRUT scheme to develop a sewerage system in Ajmer, Kishangarh City of the district. Under the project, sewerage lines will be laid in this city and 26,000 sewerage connections will be made in Ajmer city. This also includes the laying of sewerage lines in Kishangarh and Beawer of approximately 100kilometers. The bill

has been passed in Ajmer district stating that an underwater sewage pipe in some regions of Kishangarh has been completed, so these canals will be abandoned once the underground sewage line is completed. The Amrut scheme is intended to provide much-needed relief to the waterbodies of Kishangarh, but in the short term, it has not been so effective. The canal and lake are seeing some serious water degradation, and the prominent reasons among them were urban wastewater discharge, cultivation of Singhara (*Trapa bispinosa*), and discharge of industrial waste. This has increased phosphorus and nitrogen levels, causing a decrease in dissolved oxygen, which is essential for aquatic life (India Water Portal, n.d.) These water sources had degraded to the point where, in 2017, Kishangarh witnessed numerous fish deaths in Gundolav due to a lack of oxygen, and millions of fish starved to death due to a lack of oxygen in the water. The rainwater collection system, this canal distribution system not only distributes water but also helps collect it in hilly terrain where these canals start and merge with lakes, as seen in the figure1. Its nodes are the roots of tributaries.

2.3 SWOT understanding

A set of contexts was set as overall context, infrastructural context, and elemental context to get an overview of the Talav (table 1). This was necessary to maintain a certain harmony and neutralization of the proposal.

Table 1

SWOT analysis of different contexts for the Talav

Context	Strength	Weakness	Opportunity	Threat
Overall context	Historical, cultural, economic, and recreational life of Kishangarh	Poor involvement of authorities	Preserve the original and revive the concept modulate for the canal	Demolition of the original concept water system within the city
Infrastructural context	Connecting the city	Hindering with the current developed infrastructure	Water resource	Awareness in the local community
Elemental context	Image Maker of the city	Less awareness within the community	Tourist attraction	Over commercialization

3 Results

3.1 Demographic Analysis

To restore the original dictum of the Gundolav talav, as a constant water channel within the then-town of Kishangarh. The project further also tries to conserve Kishangarh architecture, heritage, values, culture, and flora and fauna in the area. The proposed project includes the restoration of the old canals, the creation of better drainage systems, and the incorporation of accessible green spaces and urban parks for all citizens (fig. 2). The proposal seeks to restore the canals of Kishangarh to their former glory while providing a safe, clean, and aesthetically pleasing environment for the local citizens. The canal was developed, but recently it was not able to meet the freshwater needs of the growing population.



Fig. 2 Showing tributaries of the canal and route with region M1 and M2 where rainwater goes from Aravalli M=mountain and TR1, TR2, and TR3 show the respective path. TR=Tributary

Gundolav Lake, the canal, and the perimeter wall built by Seth Gunda Shah Agarwal in AD 1470. These canal tributaries include the Old Canal, Hamer talab ki aaw, Spruit, and merge in Gundolav Lake. The old canal, which started at the edge of Aravalli Mountain named M1, distributed water throughout the city and merged into the Gundolav Lake TR1(tributary 1) in figure-3.



Fig. 3 Showing path of old canal passing through city and merging with the Gundolav =M1 and TR1

Spruit TR3 (tributary 3), which starts from Aravalli Mountain M2 and then mixes with Hameer Talab Ki Aaw TR2 (tributary 2), is shown in fig -4.

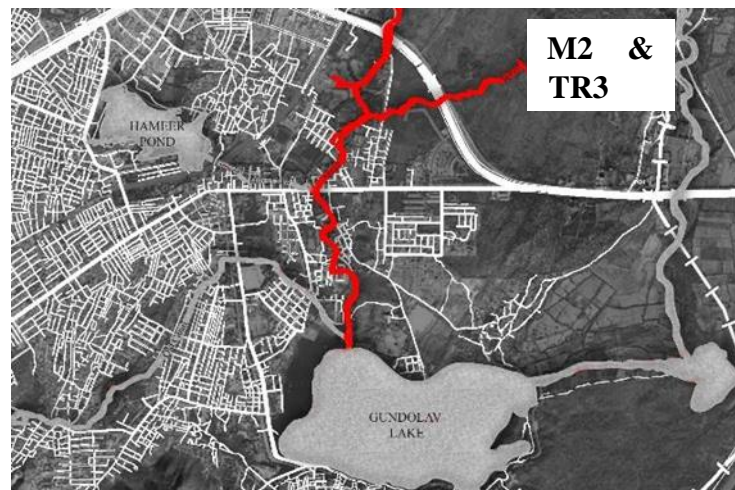


Fig. 4 Hameer Talab Ki Aaw path passing through city and merges with the Gundolav

Hameer Talab Ki Aaw: starts from Hameer Talab, TR2 (tributary 2), and then mixes with spruit, TR3 (tributary 3), and then merges with Gundolav Lake as per Figure 5.

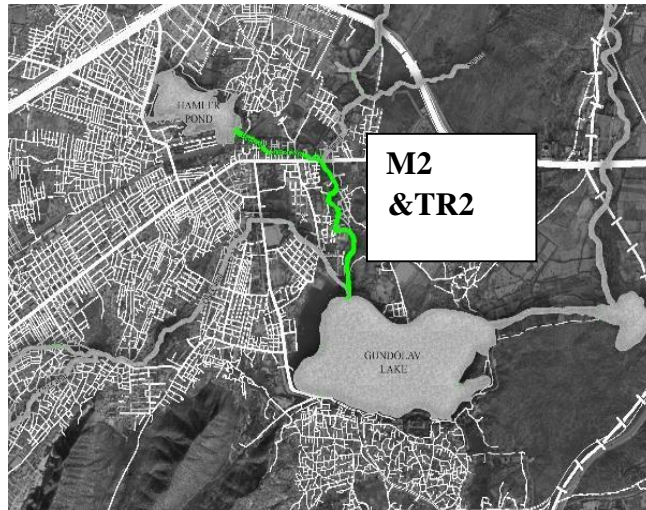


Fig. 5 Hameer Talab Ki Aaw path passing through city and merges with the Gundolav

Mountain ranges and tributaries schematically are becoming a “part-to-whole” strategy and affirmatively can be translated as a system of water connectivity in the city.

3.2 Government scheme impact

Later in 2018, under the Amrut Mission Kishangarh scheme, the underground sewerage system and sewerage treatment plant work bill were passed and completed in some regions, so these canals in some areas are being abandoned and developed into wildflowers, and the entire city's sewage system will be changed sooner or later as per the information received from official's interviews.

3.3 SWOT analysis proposal

The three proposals come out of a SWOT analysis, which was framed with interviews with government officials, meeting local people, and observation. The proposals outlined are:

3.3.1 A Transportation Route

The climate of Kishangarh has changed, and now the average rainfall has increased in 2013 average precipitation was 9.67mm and increased to 19.28mm in 2020. As a result, we can retrieve the canal's actual goal. As this canal also connects us to the city, it can also be used as a transportation facility within the city (fig 6). The urban streets are wider as 20 mts at entry and get as narrow as 3 mts. as you inside the core city. This creates havoc in residential areas as people park their vehicles outside due to the residential area's pool of vehicles.



Fig. 6 AI render of canal proposal

3.3.2 Irrigation for Locals

The canal can be made an integral part of the irrigation system for the local farmers. To acquire water from canals and make the process of irrigation more convenient and efficient. By doing this, the water quality of ponds will get better, and eventually, it will attract more migratory birds throughout the year.

4 Conclusion and Discussion

The canal is a priceless resource for the surrounding communities. The history of canals is an ideal example of a water management system followed by our descendants; and it surfaced in the best way which could help to balance the environment, flora, and fauna. Examples such as this give an insight into the concern for local heritage initiatives thus by restructuring and preserving, protecting, and conserving our environment. In the absence of major schemes by the government, implementation of a community-based approach to conservation can be helpful. “Local environmental governance can help provide ideas that can be further reframed and analysed by experts for its possibilities. Material authenticity and universal heritage values should be preserved for the future generation, as the main scopes for conservation.

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