

Water, Heritage, and Community

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Abstract

The paper is trying to create a connection between water heritage structure, community, and urbanization. Many scholars have studied the importance of the revival of these water structures, focusing on the architectural value link to it. Their focus was always on the architecture of the stepwell (underground water structure), construction materials, functionality, and designs.

Another important aspect that needs to be considered while reviving the structure is its community. David Harvey's theory of the body as the driving machine can be applied to the community as a driving force in urban development. Here community also needs to be considered as the important infrastructure of the city. The modern perspective of urbanization is to make the city more livable, but the problem is the policies adopted are mainly making the community lose its culture and religious beliefs as well as the informal economy. The transformation of culture and value in present urban settlements concerning the people who are living there for a very long time is the reason for their criticism of the development proposed by the government. It's the dilemma that the community face force to choose between their space of hope and Hope of the future. On one hand, the proposal of new development is increasing the migration of people from their place, resulting in a massive demographic shift. Overcrowding, pollution, ethnic conflict are the problems that can be easily noticed. Whereas on the other hand it promises to give a new identity and vision of modernity to the community. People living around this historical underground structure have very bad living conditions, economically they are not stable because the traditional craft that they are skilled in is vanishing just like the heritage water structure. This urbanization is associated with these town's major social, economic, and cultural transformations. The question is how people are surviving in this urban context and how WILL they survive if changes take place in their surroundings. The paper also tries to shed light on how these urban changes are used as leverages to lead monetary value by people at power and how it affects the community and the heritage they are connected to.

Keywords: Stepwell, Water heritage structure, Community, Space, Water, Sustainable development, Crafts.

Methodology

- a. Data Collection: The following data is obtained from participant observation done on a selected site which helps to identify problems that need to be explored. Further data was collected from the interviews and surveys done during my Bachelor of architecture thesis which is now observed from an anthropologist lens. An attempt was made to use published research papers to support and analyze the statements, conclusions made in this paper.
- b. Data Evaluation Assessment of the paper is done by surveying the environmental, social, and economic aspects. These three categories need to be in a balanced situation for the welfare of the

community.

Content: The paper is carried out in three phases:

- a. The first phase: Understanding past and present of water heritage structure of India with community as the main subject of study. In this water and heritage structure's value and history will be explained followed by analyzing the perspectives of many scholars on urbanization. This will be used to understand the community situation.
- b. The Second phase: In this, a particular site of India is being reviewed with surveys and mapping of the present situation.
- c. The Third phase: A conclusion will be presented by critically reflecting the observation done through the eyes of conservation architect and knowledge gathered from the study of urban anthropology.

Research Question:

1. This paper uses a historical geographic approach with respect to the community to ask why the “community culture” needs to be conserved in the growing urbanization.
2. The paper will try to weigh which is more important, the identity of the community or the vision of modernity.
3. The paper will question the methods two power positions are using and how these methods effecting or improve community life.

1. Water and anthropologists:

Anthropologist considers water as a substance that connects many realms of social life, not just as a resource (Orlove and Caton 2010). Water is defined as an object to understand different aspects of society. It is not just a resource to many anthropologists. In Harold's terms, water connects different domains of life and it's important to integrate different domains to understand the connectivity between them (Harold W. Scheffler 2017). Water is an important element of earth, and it connects with different domains that are not haphazard or problematic because they depend on each other.

There are different values attached to the water with its community whose identity is connected to it. Water engages society with different senses that can be generated through social and cultural values as beautifully rendered ethnography of the “senses of water” in an Omani town by (Limbert 2001).

To further analyze the community when water is concerned the five central themes suggested by (Orlove and Caton 2010) are important to understand before moving forward. The author proposed 5 central themes in such a way:

- a. In Value: In this, he explains how nature (or environment) and culture (or society) intersect in water worlds.
- b. Equity: After deriving the value, how is it going to be shared among society and their inhabitant is questioned by the author. Where he further connects it to other issues like justice and political economy.
- c. Governance: It helps to question the working of an organization that manage and distribute water
- d. Politics: Water should be shared among people and localities, but here it's the question of power over the distribution that needs to be understood.
- e. Knowledge: Water management, whether old or modern, depends on various kinds of knowledge.

Conclusion: When we discussed water heritage structure and community, understanding of the anthropological approach is required to obtain a certain level of sustainable result.

Anthropologists are the best-suited people when water is in discussion and is used differently in a variety of social settings. (Amper 2015)

2. Connecting the dots:

• Historical water structure: First Dot

In ancient civilizations water always played an important part in the planning of the city. The Harappa and Mohenjo-Daro are said to be ancient civilizations, which also indicate that the religious activities at that time were more focused on water, which played an important role in the culturally rich heritage of India. In the classical language of South Asia, one of the meanings of “Jeevan” (Life) is water. In simpler words, water is as equal as life. In India water is linked with the life cycle, from the birth of a baby to the marriages and end rites of the funeral. As Indians, we were taught that the only difference between life and death is water.

Therefore, in Indian heritage, we can find exquisite architectural waterworks, which includes stepwell, ponds, tanks, river, and johads. It is to be assumed that any relationship between the structure and water is to be considered as a connection between the secular and the sacred. Baolis (Water heritage structure) or vavs as they are called in various parts of the country are a building typology that is unique to the Indian subcontinent.

Stepwells is a structure that consists of broader steps leading to underground water. The steps could be divided between 2 - 10 floors below the ground. It was built to provide two functions first- providing water and respite to the travelers as well as a place for many.

They are traditional water harvesting systems developed in ancient.

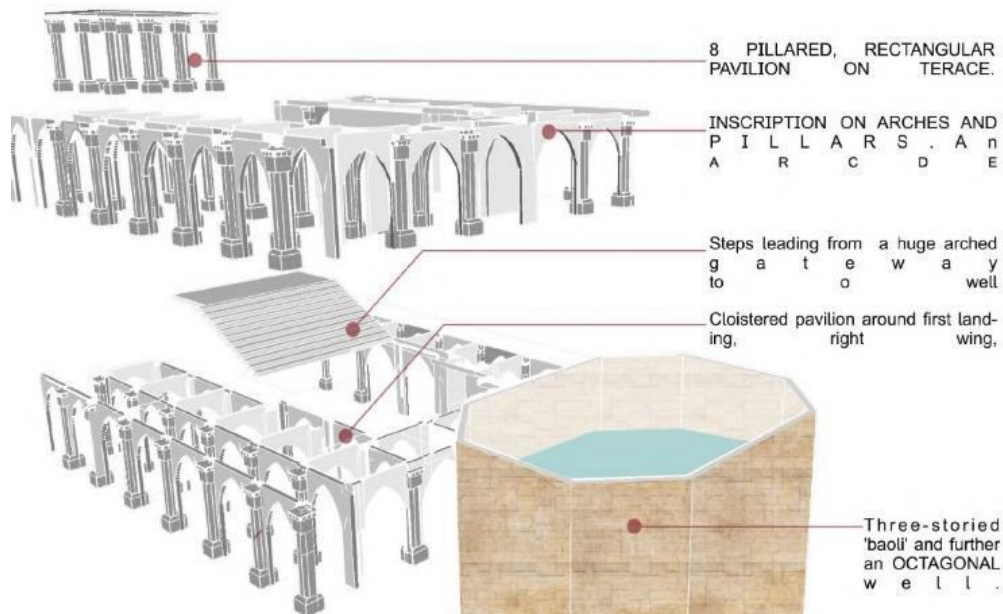


Figure 1: Typical stepwell structure (Yadav, 2020)

• Urbanization and Changes: Second Dot

Urbanization defines the level of the city in terms of development. The development that seems important with the changing world, the growing demand of the growing population. It can be defined by different perspectives by different professionals concerning their profession and their domain. Such

different meaning is described by Amit Kumar Bhandari in his paper to provide different perspectives. One of them (Champion, T. (2001), ‘Urbanization, Suburbanization, Counterurbanization and Reurbanization’, in R. Padison (ed.) 2001) quoted, urbanization has been conceived its meaning in the physical sense of the increasing area of land being developed for urban use, while others view urbanization as a social process of people adopting the attitudes and behavior traditionally associated with living in cities and towns, irrespective of where they might be living.” As an architect, I would like to describe the place that goes through urbanization is basically a transformation that has been done for the improvement of the life of that community. The negative side is this urbanization may also be the transformation consciously of the historical layer to the concrete layer. Anthony Orum tries to explain how during the urbanization process large people settle together and develop social institutions, such as businesses and government, to support them.

Furthermore, it is claimed, they sometimes originate from the effort by authorities to concentrate power, capital, or both at a particular site. (Bhandari 2011)

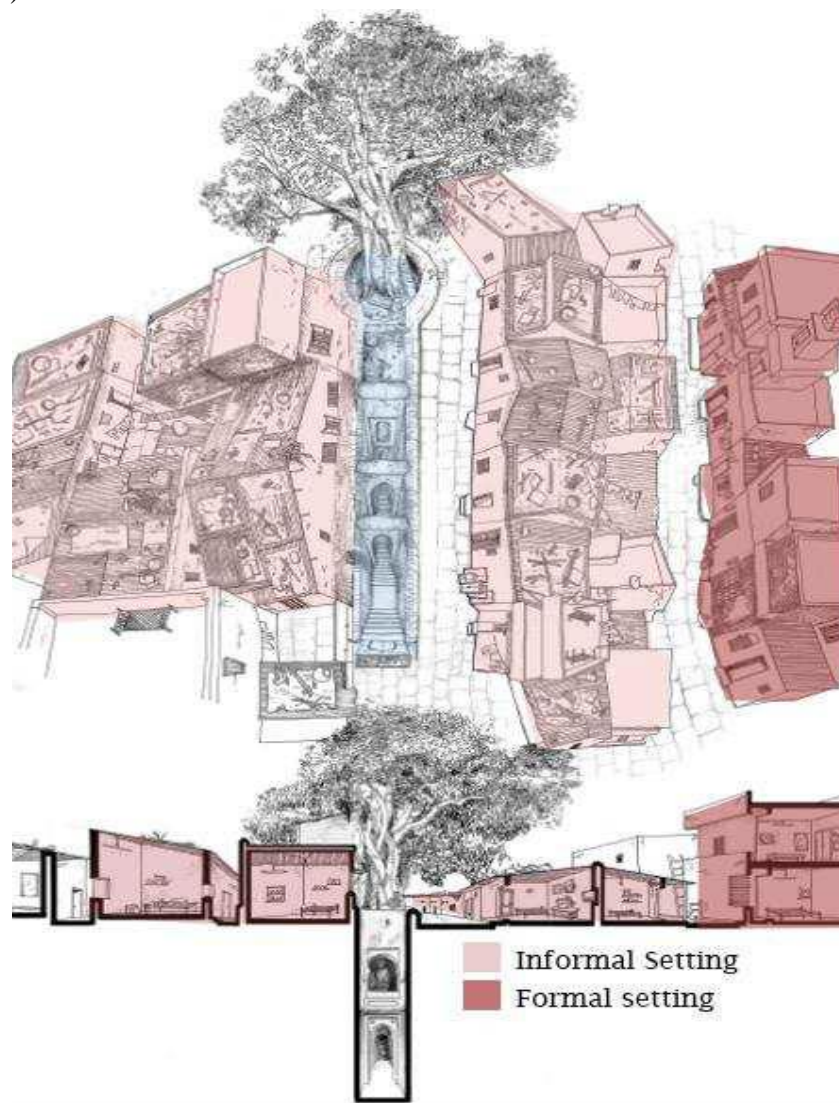


Figure 2: Khodiyar maata stepwell at Vasn, Gujarat has been surrounded by an informal settlement. This stepwell is accessible through a roadside shop selling recycled furniture. (Priyanka Sheth, 2020)

It's important to understand that change is constant, all rural and urban area will lose their present essence and evolve with time. Hence urbanization is important to act as a catalyst in socio-cultural evolution, to help places to become developed and be able to adapt to the changes. As Smart pointed out that urbanization is just not limited to the growth of cities but also the transformation of existing urban places. (Smart and Smart 2003)



Figure 3: Overtaken by the vertical growth of its neighborhood, Kaali Mata vav now houses a shrine of goddess Kaali and access to its good shaft has been blocked. (Priyanka Sheth, 2020)

- **Community and culture: Third Dot**

As discussed above these magnificent Stepwells represent the marvelous example of underground structures that keep on inspiring hymns and folklore for centuries. But during the British era, the use of such structures was stopped as it was considered unhygienic. The historical water structure serves the community, not only as a primary source of water but also as a relaxing zone where they gather and share their thoughts and life. They were formerly popular gathering spots for social gatherings on special occasions. Not just this, it also holds spiritual and religious importance to these people. It is to be believed that these structures are the homes of various water spirits or deities' connectivity with fertility and creation and various aspects of the mother goddess.

Traditionally, these places were mostly used by women to offer prayer to the goddess for the wellbeing of their families. The reason people believe in religious activities is linked to it because of the spiritual aura designed in the architecture of it. After understanding the cultural and historical significance of these structures in community life it's essential to protect this legacy, especially for the coming generations.

But with urbanization, this cultural and religious activity is vanishing. The community started losing their culture without even realizing it because the main source that is connected to their culture is being looked like a hindrance during urbanization.



Figure 4 Some stepwells become deeply integrated into the life of their community, and it has become the embodiment of a living well. (Priyanka Sheth, 2020)

- **Interrelation of 3 dots:**

Industrialization is growing, as a result, it can be noted that increase in the consumption of goods and services. This has led to the large-scale depletion of earth resources, and we are not having a proper balance through a revival. This problem is visible in our global climate.

Humans are facing a lot of different problems and some of them are co-related to each other or born due to each other. The people dealing with them are considering them separately. In this paper, I am focusing on three disconnected dots. It is required to observe these three different themes under one microscope. Such disconnection is also mentioned by Gautam Bhan, where he detailed the disconnection between theory, practices, and open secrets of people in power. (Bhan 2019)

In present urban sprawl, some of the water heritage structures are still noticeable with growing construction around them. Some of the populations also have migrated and abandoned the surrounding. The reason for migration is first is the need for jobs and also new urban projects of government which changes the space environment of the community. This shift from the water structure not only ends the value of the structure but also ends the core image of these communities. The structure and community both are connected. One cannot survive without the other as their value is connected. However, almost most of them are cut off from their initial inlets and outlets resulting in a change in the ecological cycle and cause is the expansion of the urban core, engulfing the community and their water structures. Water is connected to many things. It connects the domain of life. Therefore, connectivity with other resources to get better use of water integration ability. The term connectivity of water to a different is coined by Ben And Orlove. (Orlove and Caton 2010)

The scholars are looking for such integrations and therefore even after the conservation, the government is able can save this structure for a short period because new boundaries around this structure cut their link from the community. The author of Hydraulic City when talking about the partiality by the city agencies over the distribution of water based on social identities reflects light on how power play an important role in determining the quality of life of the community. (Anand 2017).

It explains how the community presents itself in public through their interaction with our infrastructure is categorized by political power. This kind of relation is stated as “Hydraulic citizenship” by Anand which he thinks is incremental, intermittent, and reversible. There’s a need to recognize the community itself as an infrastructure for development by political parties and planners.



Figure 5 A labyrinthine mesh of narrow streets with growing informal settings makes it difficult to find and reach the stepwell. (Priyanka Sheth, 2020)

The question that is also important to understand is these water heritage structures hold that much value to be saved or it's better to use this space otherwise. The structure must have some cultural value as heritage when it is considered under the context of the urban landscape. Many factors help to determine such values such as archaeological, historical, and mainly the immaterial or intangible. Community as itself an important commodity is linked with the intangible value of water heritage structure.

As noticed in many water structures, there are many illegal occupants near to it. Some of them might be living there for about 20 years or more. They are the intangible historic value of these structures. Their activity and connection to the structure determine the importance of these water structures. But now with development, they are relocated or removed from the vicinity of the water structure.

The water structure alone is not worthy as a heritage, it is the presence of a web of meaning that the community provides to it, which is noteworthy, therefore worthy of protection. We are talking here about an unnoticed part that offers a lot more knowledge and solution to many "urban problems."

As we can notice, only the preservation of the water heritage structure is not the ideal method of promoting positive results. These heritage without intangible support are more vulnerable than being surrounded by them. But it's also important to feasible solution by creating a space to alienate for a better future. The historical cities are not the only sites where past events should be preserved. It is also necessary to recognize that life will continue in these places. So, a proper solution needs to find where community hopes can also reside.

Anthropologists suggest many methods to find possible ways. Some of them can be used in such places of development.

1. Analyze the city's everyday life and observe the changes
2. It's important to identify the main actor of these places and their relationship with these spaces.
3. The effect of new development to be observed by understanding the heritage also with the community as the main objective.

As discussed, this strategy cannot be successful for its technical approach alone, since in this context is always dependent on political aspects and power negotiations that are involved in this development

3. Power play:

In Notes of Southern practice, Gautam Bhan discusses the government squatting process. He mentions the dilemma of southern megacities about the overlap of geographies of new construction with those of formal settings to make land scarce. The government's decision to use public resources to expand access to healthcare for the poor is a big social transformation. But for this government face many challenges. One of them was demolishing informal settings from their site and then defending their action by stating one's occupation on moral and ethical grounds (this is after all is proposed for public wellbeing) as well as technicalities. In his paper, Gautam Bhan was in favor of the government practice of squatting as it helps them to reach a certain outcome in a specific spatial context. (Bhan 2019)

Due to the increase in population, more land and infrastructure is needed for the community. Therefore, the government is playing a crucial role in any decision regarding any changes in society. There's also one more agenda behind the government proposal. Ruling parties can easily debate clearing more land for monetary purposes under the name of development for the community.

Nikhil Anand an environmental anthropologist study about the politics related to Mumbai water infrastructure. In his Social work chapter, he highlighted how proper action and subjectivities are fractalized and how political society is entangled with civil society. This explains how the people, whether in a formal setting or informal must engage with politicians to secure their space and therefore their identity. It's all depending on their behavior and any personal relationship they can develop. We can conclude that political and society will never separate, but co- Political and civil society are never separate, but compromise with each other in the community search of their hopes.

Another power position is held by architects and planners. Architects and planners are said to be constructive intellectuals in society. But this doesn't seem in this reality if we investigate this situation. But in this situation of demolishing old water structures for proposal of highways or acquiring land, it always reflects how legitimacy is preferred over legality. The community intangible heritage and water structure as immovable heritage, if restored and their values are calculated, then it will be hard to demolish the heritage by rule. But due to logic presented by the government for public benefits and in the name of urbanization these values are not in consideration.

Community losing their culture, their art, income sources and ultimately migrating to other cities. The abandonment of the historic town lead government to introduce more urban projects stating to revive these towns which effecting the rest of the community still around.

It has become common to assign each one of the dimensions of heritage – whether architectural, historical, artistic, archaeological, or immaterial – to a specialist in the field who oversees defining the criteria, setting the norms, and establishing the proper delimitations. The last to enter the conversation is usually the anthropologist, who is always attentive to the knowledge, festivals, celebrations, practices, and other aspects of traditional culture. It's the spatial, historical, sociopolitical, and economic, and cultural analysis that can be proposed through the eyes of anthropologists so that an experiential meaning could work out with the theoretical agenda. This will put stop to the framework formed intentionally through architectural plans and landscape designs to retain the power through a different urban process

4. Example: Area of study



Introduction: Social apathy is visible in the rural area of north and west of India. Walking on the labyrinthine mesh of narrow streets makes the stepwell difficult to reach, and the old big majestic where people use to gather is now abandoned. I can observe little vegetative plants coming out from the crack of the walls of water structures tree. Whether abandoned or dilapidated, stepwells are at risk of being forgotten as the providers of the basic need for water. When contemplating the future of water heritage structure legacy and heritage with shifting notions of function and identity, it is important to remember the larger ecological patterns of the water harvesting structures were images of these regions.

Present situation of the capital of India: Delhi: `During my dissertation on traditional water bodies of India, I gathered data reflecting that Delhi data show only 6,11,750 mm average rainfall fall on the ground, out which some of the amounts go down the drain. The observation shows that rapid urbanization is the major reason behind this, the concretization does not allow enough water to seep into the ground, and exploited groundwater extraction already depleted enough water table across the city.

Extreme groundwater extraction has already depleted the water table across the city. Now on the other hand if we look back in ages there were marvelous architectural structures that were used for storing water and to meet up the people's requirements. The city has very few surviving steps well, lakes, etc. nowadays. These little-known, infamous water bodies were used for drawing water from groundwater and storing it creating a soothing environment around us. The vanishing of these structures not only will be affecting heritage but also the community. Water has always been important to Indian culture. As an Indian, I understand these structures hold a special place in the surrounding community. This structure is a place of prayer, a place that provides basic needs to them and where they gather and celebrate life. Currently being neglected and vanishing directly affecting these factors. (Yadav, Modern Techniques for Rejuvenating Traditional water bodies, 2019)

Location: After understanding the importance and history of traditional water structures, I proposed a design solution to revive the historic town, Narnaul, Haryana, India. The selected site has more than 5 water bodies and a very deep history in form of structure, social, culture and crafts are present. The core of the town is still trying to protect its historical values and their spaces but the change in these spaces is already started from the periphery of this town and slowly moving inside.

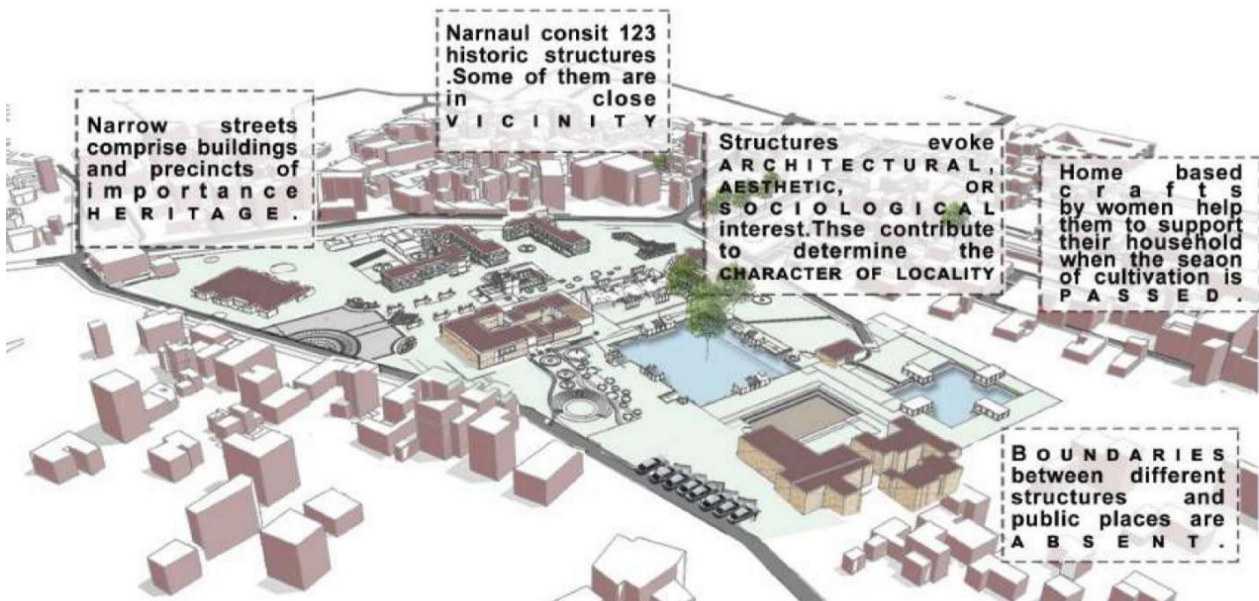


Figure 6 The context of the Narnaul (Yadav, HERITAGE EXPERIENCE CENTRE, Revival of stepwell precinct, Haryana, 2020)

Site survey:

1. As an architect I was drawn more toward the structures and observed the following data:
 - Heritage value: These traditional water structures are time-tested, scientifically proven, and adapted to the ecosystem within which they function. Such systems had significant characteristics:
 - The physical structure suited the terrain in which it operated, all the distributed structures are connected through the different slopes,
 - Water resources were used and managed as common property resources by the community, and There are community-based institutions set up which practices to ensure that water was not only used, distributed fairly but also conserved wisely.
- 2 **Community perception survey:** A survey is conducted to record the perception of the community regarding condition, engagement activity, culture, and economic situation. Along with their expectation when development is proposed.



Observation:

1. Majorly residents are agricultural, laborers, and cultivators. Rest has the home base industry of local craft.
2. Most of the residents are house owners only 20 % are tenants. There are only a few newly built structures as people are not leaving the town.
3. Residents like to live here as Narnaul is a close-knitted community, but government and planners will

create a rift in the present dynamic between the community and their surroundings.

4. In a rural society depending upon agriculture as the source of income, water is the dividing line between poverty and plenty. Most resource-poor regions have fragile ecosystems, where farmers still depend upon time-honored irrigation practices passed down through the generations. Certain practices have been modified to suit the present situation. Some are used in conjunction with modern irrigation systems.
5. Village is still trying to have their COMMUNITY INTACT but lacks in public spaces and the heritage sites are now closed by the government resulting in changing of community way of living.

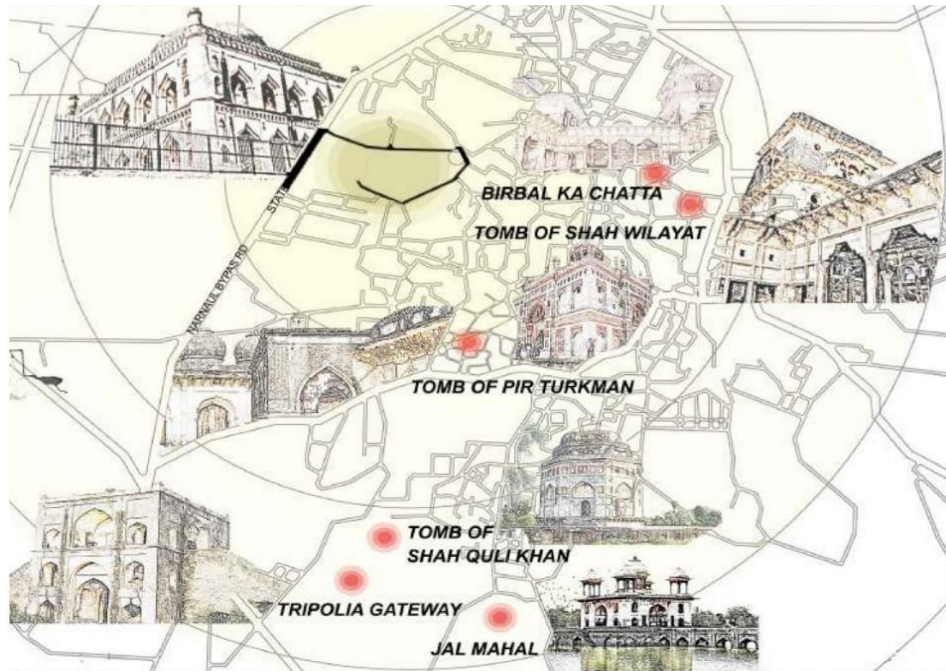


Figure 7 Many known heritage structures are located within a 5 km radius. (Yadav, HERITAGE EXPERIENCE CENTRE, Revival of stepwell precinct, Haryana, 2020)

Stories from the ground.

- 2 Architectural Fabric: Mix of traditional with New Concrete built Due to highway connectivity new development is taking place along the road belly but the inner side of town is intact.
- 3 Vehicular Mix: As the number of vehicular traffic increases in pre-urban areas existing infrastructure is coming Insufficient With heritage monument is close ty there's a need of how for such places for transport facility
- 4 Social Mix: Mix of social structure where the original Inhabitants continue to live in both traditional housing.
- 5 Mix Of Urban: In heritage town, temples networked with the courtyards space public and private interaction development courtyard planning is longer no used
- 6 Economic Mix: Economic activities also have a large degree of variation from a smaller number of the main worker to few marginal workers large of non - workers because the population is engaged in agriculture

Conclusion of the survey:

After looking at the structure and proposing several conservation proposals, the chance of its failure in the next 10 or 20 years is possible. These byelaws we follow to save a structure is only on the structure,

with buffer zones around such structure will remove the informal settings and people resulting removing one of the main elements of the space (Yadav, Modern Techniques for Rejuvenating Traditional water bodies, 2019)

Ending Statement:

We gather that there is a varied range of people, agencies, scholars, and policies involved in addressing the water and heritage problem. The improper distribution of water supply, rising population, rising demands, effects of climate changes on the environment, government decisions for their goals have brought water, heritage, infrastructures to the forefront for the future developments of society. There are great ideas that require different approaches while addressing problems in conventional ways.

There are scholars like climatologists, environmental activists, urban planners, conservators of today who have come forward once again to stress the importance of traditional water harvesting strategies for the continuance of balanced life in the future. Regardless of whether the strategy is focusing on highlighting the importance of traditional methods, water significance, religious or cultural links, it's also important for everyone to include the community evolutions within the study context. This will help to preserve the precious community with heritage and effectively introduce urbanization factors within the site.

When we consider community evolution within context, we are discussing the social scenario that has been shifted. The communities have already witnessed many changes and try to adapt them with their lifestyle. There have been little transformations, like a change of occupation for farmers to the working class, or doing craft production with day jobs. Women of some parts of the north who are not allowed to work outside were the ones who were running the home-based business now also working outside to contribute to their home. This transformation of getting little freedom and realizing what they are capable of is one of the positive effects of urbanization. Reviving the space as it may affect these women so it's important to introduce solutions within the society understanding the positive changes this society has adapted. The space which has social, cultural, spiritual values need to be claimed again as a unique space for them, but with the integration of new changes. A place continuing to provide space for the performance of rituals, worship for their community health and fertility, and family prosperity but also a space for workshops where women can work and learn.

Now as we can propose different ways in which such evolution of community can be included, and then it can be questioned by whom this can and will be done, and with what outcomes will it be more ensured for the different desired urban change.

As stated, Although the issues examined above maybe just be one of the easily visible changes in the lifestyle of such a community attached to deep cultural structures. By no means it doesn't deflect from the water resource issue. To look upon human manipulation of the land for further development and then depletion of water resources is viewed in its entirety, this truism becomes hard to ignore. There are people involved in addressing water issues in the global context. Too often in the past many seminars, workshops are conducted for discussing such delicate matters.

The mindsets of these people are no longer sufficient when one realizes the importance of community evolving nature with changes. Therefore, it's important to make anthropology of water connect with other specific, community analyses, political agenda, policies, material cultural studies, and with the broad group, the analysis and result will be more efficient.

In this paper, I have on purpose sought to mention the disconnect separately which will help to propose

an experiment with unlike tools from the study of a specific site. These methods will benefit in the following way.

Method/Tools:

Any Revival of water underground structure by government authority will introduce the boundary around the structure that will cut off the connection of community with the structures. It might save the structure for some time but in long term, it's not the most effective solution.

Connecting the community with the structure is important. The structure and its precincts need to conserve and revived by introducing the new changes of community with the old structure. A new meaning to old should be the main idea behind water and heritage conservation. The dying craft, water scarcity, and degraded state of structure should be linked and several activities, space should be proposed for the community. In this way, the community will have a sense of responsibility toward the structure.

In Anand hydraulic city it forces you to think beyond the formal/ informal, planned/unplanned methods. He explains how the urban process takes place within the city. It also analyzes urban development concerning political, social, or spatial ways. In conclusion, he compares Global North and Global South mainly focusing on the water problem and then letting the reader sit on a question about how they can gather their thoughts, tools and design the new space for future life. These Initiatives are the tools for local groups that will help them to celebrate their legacy and heritage of water structure and their precinct. These can be the new ways of engaging with these underground water structures. It's the approach that will minimize the superfluous and materialistic lifestyle which is added with the increasing population and rapid development of technology. (Anand 2017)

In the ending statement, I would like to recall Zeiderman's endangered City, where he talks about the right to life which was considered with other rights of citizens such as the right to housing. This was discussed when the transformation of Bogota from its global image of a violent city to a model city. Zeiderman endangered city and Hydraulic city both highlight the analytical study of political dominance on the development of the city. It is also important to read about the city from this point of view. This will help to understand the city and the community of today. (Pérez 2016)

The tools suggested talk about the proposal but political power will influence the final proposal which they are benefitted the most. It's important to include some positive ideas from the government that benefits the community in the best way. Tourism is one of the main factors governments suggests most of the time. If the community can teach their crafts to the visitors not only the knowledge of heritage will increase but their skill also will spread.

Benefit:

- a. Social: Traditional crafts not only give opportunity to women but also the male to earn livelihood with their traditional skills and also to practice it within their space, not affecting the social pattern of the community.
- b. Economic: The material of the craft community is skilled is usually locally available. This will reduce transportation costs or the craftsman to dislocated from their homes. It's helpful for the women, to continue their jobs within their community and not worry about family and their children.
- c. Environmental: This will influence people not to migrate to already overcrowded cities and help to maintain their social setting. Some activities also will be eco- friendly, consuming minimum energy on different levels.

As a result, we will be able to create a constructive dialogue of how India might employ heritage water structures in its urban centers, given current problems such we discussed many times - all set against a backdrop of community nonparticipation, cultural significance, and political tension. Heritage water structures can become a place maker within a city as opposed to a space occupier. Community will be able to interact with their environment as they always have. Their urban space needs to be developed but not at the cost of their space of hope.

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