

Mapping Built Heritage of Pune Urban City

Sanjay G Patil

Head and Associate Professor, Department of Geography, Modern College, Ganeshkhind, Pune, Maharashtra, India

Abstract

Heritage sites are the past of our culture, history, values, traditions and unique knowledge that have developed by a combination of genes and environment over time. Heritage sites help to pass the knowledge, ideas, art, values and culture to next generation year by year. Nowadays, the symbiosis in both heritage sites and tourist has become a major objective in the management and planning of historic areas.

Rapid socio-economic development and urbanization puts pressure on heritage sites. Every new development is going to put burden on environment and social aspect. Thus heritage sites are getting very little attention in urban development policy and urbanization neglect the importance of heritage sites which are also important part of the society. There was need to create a balance between the new development and the old urban fabric. This research paper focused on current situation of the urban heritage sites and historic monuments in the cities of the developing world.

The need of conservation and preservation of heritage sites in urban area is discussed with reference to a number of sites in Pune city. Some key aspects of conservation i.e., building condition, infrastructure encroachment, pollution, security, behavior of tourist and visitors and some economic aspects are also discussed with the help of Weighted Sum Method. Interview of tourists, shopkeepers, salesmen and administrative people have taken for better planning and sustainable development. The Key indicator was developed using the theoretical approach.

The paper concludes with considerations on the need for redevelopment of area, restructure the planning and outside infrastructure and reset the administrative system with support to local people as well as tourist. During the study it was found that there were need to new techniques to preserve the heritage sites through government. Awareness programmes should be arranged for every visit of tourists and make appropriate area homogenous, pollution free and safe which helps to increase the number of tourists.

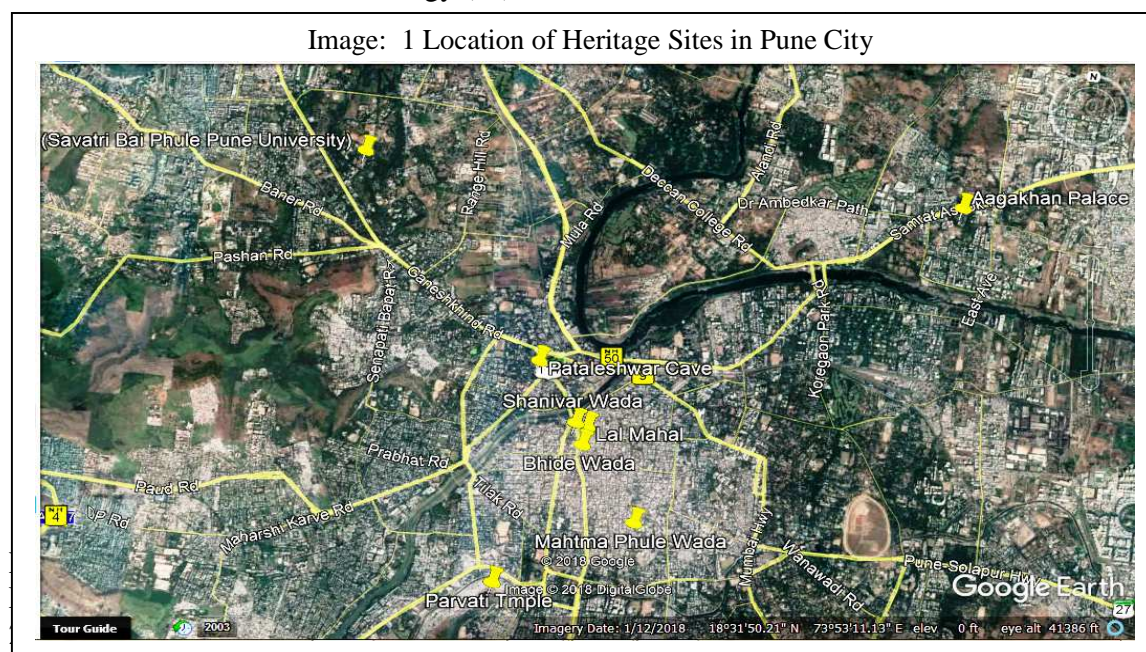
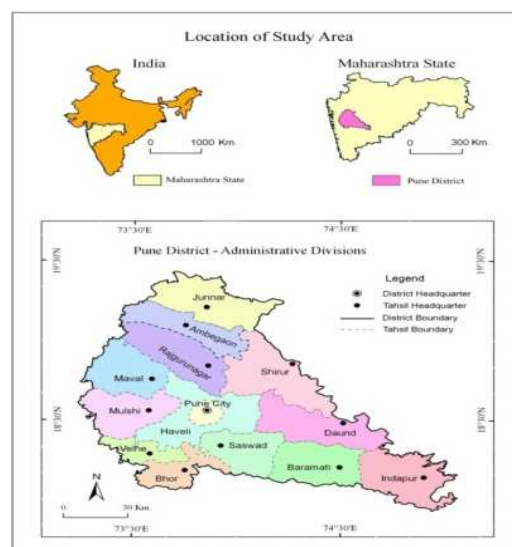
KEYWORDS-Heritage site, conservation, tourism, socio-economic aspects, urbanization.

Study Region

Pune district extends from 17° 54' and 19° 24' north latitudes and 73° 19' and 75° 10' east longitudes covering 15,642 square kilometers area and 94,26,959 population in 2011 Census (Fig.-1.1). Pune district is bounded by Ahmednagar district on northeast, Solapur district on southeast, Satara district on south, Raigad district on west and Thane district on northwest. It is the second largest district in Maharashtra state accounting 5.10 percent area. The landscape of study region is triangular in shape at the foothills of Sahyadri Mountains. Pune is the administrative headquarter of study region.

Pune city is the second largest city in the Indian state of Maharashtra after Mumbai and the seventh most populous city in the country. Situated 560 meters (1,837 feet) above sea level on the Deccan plateau on the right bank of the Mutha river. It lies between 18° 32" North latitude and 73° 51" East longitude. Central Pune is at the confluence of the Mula and Mutha Rivers.

The city's total area is 729 km². Pune is the administrative headquarters of Pune district and was once the center of power of the Maratha Empire established by Shivaji. In the 18th century. Considered to be the cultural capital of Maharashtra, Pune is known as "Oxford of the East" due to the presence of several well-known Universities, colleges as well as for research institutes of information technology (IT).



kingdom of Chhatrapati Shivaji. The temples with beautiful sculptures, forest with rich biodiversity and hilly zone also part of it.

Importance of Study

India has huge number of heritage sites in all areas like historical building, monuments, temples, cultural aspects, natural features and many more. Tourists are visiting these sites in different seasons. Sometimes these visitors, local people, shopkeepers create negative impact on these heritage sites. This study attempts to give solutions to reduce social and urban burden and increase values of the sites with economic development of the region. This study will be helpful for students, researchers and planners worldwide.

Objectives of the Study

The main objective of the study is to find out most effective aspect which are negatively affecting on heritage sites. The present research has been undertaken to make in-depth and comprehensive study of heritage sites and factor affecting on it in Pune city by evaluating following objectives:

- i) Examining the physical and social background of study area.
- ii) Find out the physical as well as social aspects weightage value of the component.
- iii) Suggesting remedial measures for conservation and preservation of heritage sites.

Database and Methodology

This study is based on primary as well as secondary data. The data of social as well as physical component has collected through visit to places and personal interviews. Some infrastructure data has been collected by personal visit. Secondary data has been collected from books and electronic media. Primary data has calculated for Social and physical component weights values. For interpretation these value are shown by compound bar graph. For this Study out of 8heritagesites are selected on the basis of number of tourist visited, socio-cultural aspects and architecture. For this study we used Weighted Sum Model(WSM) for simplicity and reliability with less quotative data.

At a glance -Heritage Site

1. Shaniwar Wada

Shaniwar Wada a 13 storey palace of Peshwas was built by Bajirao-I, in the year 1736.It was head quarter of the Peshwas and it symbolizes Pune's culture.The structure was built giving security the highest priority. The main entrance is known as 'Delhi Darwaja' & others have names like Ganesh, Mastani, Jambhal, Khidki. In side see Ganesh Mahal, Rang Mahal, Aarsa Mahal, Hasti_Dant Mahal, Diwan Khana and fountain. A light and music show is conducted every day showing history of Peshwas.The palace was the seat of Peshwa power and later was destroyed by a fire in 1828. All that remains are the walls that fortified this palace, with sturdy doors, studded with spikes for added protection.

2. LalMahal

The Lal Mahal (Red Palace) of Pune is one of the most famous monuments located in Pune, India. In the year 1630 AD, Shivaji's father Shahaji Bhosale, constructed theLalMahal for his wife Jijabai

Mahal for his wife Jijabai and son Shivaji stayed here for several years until he conquered his first fort. The original Lal Mahal fell into ruins and the current Lal Mahal is a reconstruction of the original and located in the center of the Pune city. Historically,

the Lal Mahal is famous for an encounter between Shivaji and Shahista Khan where Shivaji cut off the latter's fingers when he was trying to escape from the window of the Lal Mahal.

3. Bhide Wada

In Pune first school for girls was set up at BhideWada, on January 1, 1848. It was the courageous initiative of Savitribai Phule and her associate, Fatima Begum. Savitribai Phule with her husband Jyotiba Phule is a pioneer in women education in India. The aim was to free girls from social slavery and ignorance. They faced immense opposition and even abuse, but continued steadfast amidst adversity, and continued to run the school. That time as this education was not available for outcast people. Therefore, who made education possible for every girl, irrespective of any caste or social position. The school was operational for decades and gave education to many generations of intelligent women.

4. Agakhan Palace

Gandhi National Memorial Society's Agakhan Palace is the Italian arches and lawns. This place has been used as a prison by Britishers for Mahatma Gandhi, Kasturba Gandhi and Mahadeobhai Desai during the 'Quit India Movement'. Marble memorials were put later on in the memory of Kasturba and Mahadeobhai. as both of them breathed their last in this place.

5. Pune University Building

The lofty main building of the Savitribai Phule Pune University was once the residence of the Governor of Bombay in the days of the British Rule. It was built in 1864 when Sir Bartle Frere was the Governor. Designed by James Trubshawe, the magnificent edifice was built in Ganeshkhind, on the outskirts of what was then called Poona. Architecturally, it defies classification though its spiritual antecedents are Italian and the 80 feet flag tower has been described as an 'Victorian rendering of an Italian campanile'. The building was inspired by Prince Albert's Osborne House on the Isle of Wight.

The cost of residence was Sterling Pound 175'000 to build, nearly six times the amount raised by the sale of the Governor's previous residence. The building of such a palatial house in the aftermath of the cotton crash in Bombay was severely criticized and referred by the British Parliament as 'a typical instance of the extravagance and insubordination of the Governors of Bombay'. Sir Frere defended his action staunchly; the house was not habitable by the time he left India in 1867. His successor, Sir Seymour FitzGerald carried out the furnishing and decoration, and he in turn was criticized for being extravagant, especially for the sterling pound 500 chandelier in the ballroom-which still sparkles, adding to the grandeur of the Ballroom!

6. Pataleshwar Cave

Pataleshwar cave temple was carved out in the 8th century. The Pataleshwar cave temple was dedicated to the Lord Pataleshwar (God of Underworld). The most striking feature are cave temple is the unique sound of the bells. Pataleshwar cave temple provides the perfect example rock cut architecture. It has been hewn out from the single rock. The architecture and designs of the temple cave are quite similar to that of the

Elephanta caves. The main attraction of the cave are the shrine of the Lord Shiva and Nandi bull. The entire temple is the treasure house of the gigantic pillars. The temple also has the seating arrangements for the tourists along with the small rooms.

7. Parvati Temple

This is one of the most famous landmarks of Pune. Though the hill is in the Southern half of the city, it is visible from almost every part of Pune. A group of beautiful temples of Ganesh and Kartikeya which are from the 17th (At the time of Nana Saheb Peshwa) century are Parvati's attractions. The Parvati museum houses portraits of heroes of the Peshwa dynasty, besides old manuscripts, weapons and coins. According to records, the main idol was carved out of gold by craftsmen from Karnataka. Later on it was stolen in 1932, it was replaced by silver idols plated with gold.

8. Mahatma Phule Wada

Mahatma Phule Wada is the residence of visionary reformer Mahatma Phule. This is the place where Mahatma Jyotirao Phule stayed with his wife Savitribai Phule for a certain period in his life. It was built in around 1852. Mahatma Phule worked for the welfare of oppressed classes of society. His most noteworthy contribution were his efforts for the education and empowerment of women. The Wada has now been converted into a museum where visitors can know about the life of the reformer. On entering the Wada, one can spot a well which is important historically, it opened to people who are untouchable and other people are not to drink water from common well that time. This is the place where Phule addressed small meetings of the Satyashodhak Samaj. The construction of the Wada is quite simple. It's a good example of the architecture and lifestyle of the 19th century.

Discussion

Due to rapid development most of the cities of the world are having pressure of urbanization. It increase in urban generation has created problems for the heritage in the societies. Every new development and re development is going to tear down the old fabric and socio-economic character of towns and cities. Urban development was not only affecting the city fabric but also destroying the vernacular built environment, cultural values and collective memory of habitants. It also affect on the heritage sites which are very important socially, economically and environmentally. In faster developing world urban growth is important, but we need to reduce the interference by man. Man should think make sustainable development. Therefore urban planners and policy makers think about some practical way to solve this crucial problem. That is how to create a balance between the new development and the old urban fabric and townscape.

Heritage Sites are cultural and or natural sites considered as 'Outstanding Universal Value' and have special importance for everyone. The Universal Values is considered to transcend national boundaries and to be of importance for future generations. Pune City has been selected as a case study to explain the concepts because of its newly growing in tourism in heritage sites.

For this study 150 questionnaires were filled from visitors, management people, shop keepers and local people on physical, socio-economic and environmental aspects.

On the basis of opinion of people, physical, socio-economic and environmental component are selected. Selected physical component have been distributed in 3 parameters, socio-economic component are distributed in 6 parameters and environmental components are distributed in 3 parameters. On the basis of ranking of component, we calculate weights value.

Table: 1 Values of weights for physical, Socio-economic and environmental component.

Table 1: Weightage to Components		
Physical Attributes		Values
Rank 1 (P1)	Building conduction	0.5 (3/6)*
Rank 2 (P2)	Display of Information or Guide	0.33 (2/6)
Rank 3 (P3)	Infrastructure development	0.17 (1/6)

*Cumulative rank value: $1+2+3=6$

Socio-economic Attributes		
Rank 1 (S1)	Encroachment by Building Hookers	0.285 (6/21)*
Rank 3 (S2)	Job Opportunist	0.190 (4/21)
Rank 4 (S3)	Behave of Tourist	0.095 (2/21)
Rank 2 (S4)	Employment	0.238 (5/21)
Rank 6 (S5)	Sense of Security	0.047 (1/21)
Rank 5 (S6)	Sense of Local Identity of Heritage Sites	0.143 (3/21)

*Cumulative rank value: $1+2+3+4+5+6=21$

Environmental Attributes		
Rank 1 (S1)	Garbage and Pollution	0.5 (3/6)*
Rank 3 (S2)	Energy Efficiency	0.33 (2/6)
Rank 4 (S3)	Supporting Biodiversity	0.17 (1/6)

*Cumulative rank value: $1+2+3+4+5+6=21$

In study region selected heritage sites having some social and physical component different quality and quantity weights. On the basis weights, 5- points scaling of an individual cause has been framed. 1 refers to less effective and 5 refer as the highly effective component which should improve very strongly. These values are converted in lowest value 1 is as 0.2 (1/5) and highest scale 5 is as 1 (5/5). This scaling shown with colour range with white to black has been applied from 1 to 5 respectively with Very good to very bad condition.

Table 2: Interpretation of Scaling for a Sample component

Component	1 (0.2)	2 (0.4)	3 (0.6)	4 (0.8)	5 (1.0)
	Very Good	Good	Average	Bad	Very Bad

Source: Computed by researcher

The Table.3elaborates the present componentweights values. These values indicate the level of physical, socio-economic as well as environmental components of current situation of selected heritage site. And it represents to make development in respect to values. High weight values suggest that more efforts should be taken for this development of respective component.

In physical aspect Bhide Wada (1) high weight value indicates bad condition of the structure of this heritage site. Pataleshwar caves also shows high value (0.8) is indicator that work on building development or renovation. Weights value of display of information of heritage sites is high in high number of heritage sites as Shanivar Wada , Lal Mahal, Pune University (1) and 0.8 is in Pataleshwar cave and Mahatma Phule Wada. Heritage sites have not shown the detailed information of their sites. It also affect as decreasing number of tourist and visitor. Infrastructure development is less around Bhidewada, Lal Mahal and Pataleshwar temple shown by high values as 1, 0.8, 0.8 respectively. Tourism is an industry which runs the economy near the tourist places, number is high it may increase the trade near the sire and increase the economy.

Socio-economic component also helps to develop the economy of surrounding community. It was found that among these heritage sites mostly are overshadowed by encroachment of building and hookers. Out of 9 heritage sites seven are showing weighted value is more than 0.8. Very high (1) in four places namely Shanivar Wada, Lal Mahal, Bhide Wada and MahatmaPhule Wada and high values are found in Pataleshwar and Parvati temple site. It is negative sign of restriction on the development of heritage sites. Employment and job opportunities factor is also very important for preservation and conservation of heritage sites, management, research and hospitality. In study area related weight values except are high in Pune university and Aagakhan Palace.

Behavior of visitor or tourist is an social aspect which reduce the number of visitors. It was found that the behavior of visitors at Shanivar Wada and Pataleshwarwas not satisfactory. Some visitors are not to come visit these places but for time pass, some purpose meeting and some time for sleeping (Image 1). Security is the major concern at these heritage sites. Out of 9 Pataleshwar cave and Parvati temple and Bhide Wada have no security or less security. It showsthat the less importance has given to the security of tourists and for preservation of these sites. Social values of the heritage sites is the identity and important of the site. Graph 1 shows the weight values are high for Shanivar Wada, Bhide Wada, Pataleshwar temple and Mahatma Phule Wada. We need to express the values of these sites in society.

Environmental component are indirectly affect on development of heritage sites. Graph elaborate that the problem of garbage and pollution is high in Bhide Wada, Shaniwar Wada, Lal Mahal and In Pataleshwar temple. It is because of lacks of social values in both. Another environmental component is energy efficiency, which is not so goodin 6 places except Pune University and Mahatma Phule Wada. The greenery and bio diversity make the surrounding beautiful. It is also helps in reducing pollution.

Table 3: Weighted Values of Physical, Socio-economic and Environmental Components in Heritage Sites in Pune City

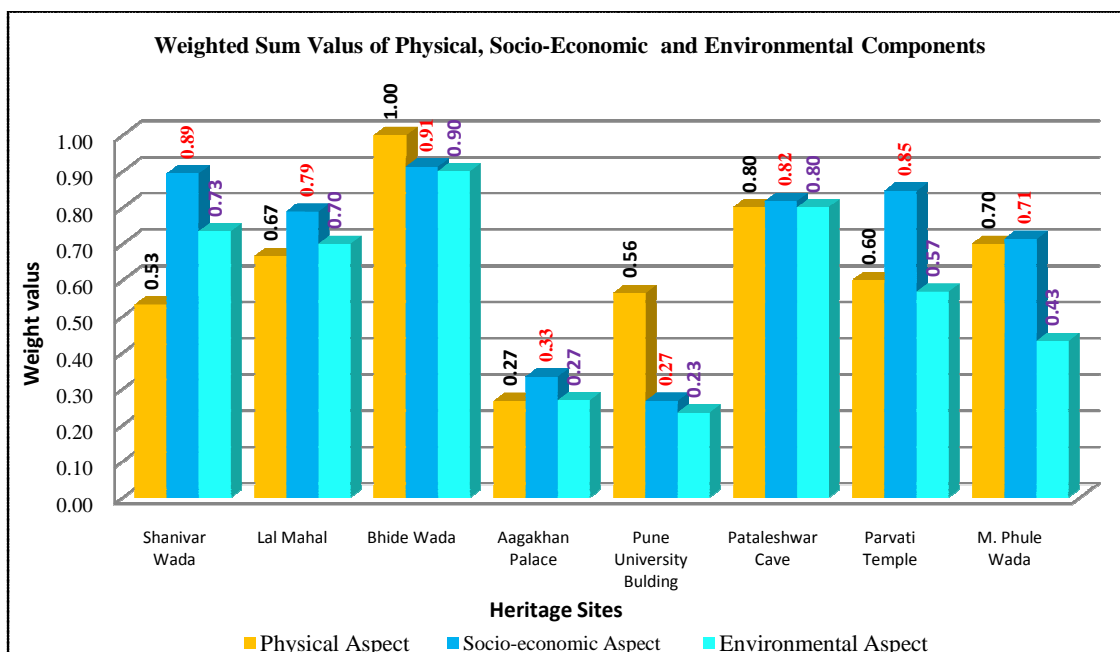
Heritage Sites	P 1	P 2	P 3	Vp	S1	S2	S3	S4	S5	S6	Vs	E 1	E 2	E 3	Ve
Shanivar Wada	0.2	1	0.6	0.53	1	0.8	1	0.8	0.6	1	0.89	0.8	0.8	0.6	0.73
Lal Mahal	0.4	1	0.8	0.67	1	0.8	0.6	0.8	0.4	0.6	0.79	0.6	0.8	0.8	0.70
Bhide Wada	1	1	1	1.00	1	1	0.6	0.8	1	1	0.91	1	0.8	0.8	0.90
Aagakhan Palace	0.2	0.4	0.2	0.27	0.2	0.2	0.2	0.4	0.2	0.8	0.33	0.2	0.6	0.2	0.27
Pune University Bulding	0.4	1	0.2	0.56	0.2	0.4	0.2	0.2	0.2	0.4	0.27	0.2	0.4	0.2	0.23
Pataleshwar Cave	0.8	0.8	0.8	0.80	0.8	0.4	1	1	0.8	1	0.82	0.8	0.8	0.8	0.80
Parvati Temple	0.6	0.6	0.6	0.60	0.8	1	0.6	0.8	0.8	1	0.85	0.6	0.8	0.4	0.57
M. Phule Wada	0.6	0.8	0.8	0.70	1	0.8	0.2	0.4	0.4	1	0.71	0.2	0.4	0.8	0.43

Source: Computed by researcher

The weighed values of physical components range from 0.3 inAagakhan Palace up to 1forBhide Wada. The higher weighted values are obtained in different heritage sites. Bhide Wada (1.0), Pataleshwar caves (0.8), Lal Mahal (0.7) and MahatmaPhule Wada (0.7). It shows that the physical aspects are negatively affect here. The major effect on Bhidewada. The political as well as property rights issues negatively affect on it. Pune University building and Aagakhan Place shows less values of Physical components. It reflect that the physical aspects are good.

The values indicate more than 0.8 that most of site Shanivar Wada, Bhidewada, Lal Mahal, Pataleshwar cave, Parvati temple are high in socio-economic component. It shows that the develop some new ideas for socio-economic development. Mahatma Phule wada shows the value is 0.7 it means there were also implement new programmers.

Environmental components are also very important for tourism development in heritage sits. It study region weighted value for environmental aspects is high in Bhide Wada (0.9) followed by Lal Mahal (0.8) and Pataleshwar Cave (0.8). It shows that reverse situation. It negatively affect on heritage building and also on number visitors. These values indicate that need to improvement in environmental factors in these heritage sites. Shanivar Wada (0.73) and Parvati temple (0.57) have developed the quality of environmental components.



Conclusion

With help of government trying to integrate heritage conservation, urban regeneration and tourism in the broader policy of urban planning. Urban heritage sites in Pune city are under a threat of encroachment, illegal construction around them, neglect from the government and also the local people. Local people must understand the importance of these heritage sites and must take initiatives in conserving them. Although some heritage spots in Pune city are in a better position but still constant efforts must be taken to preserve their beauty. As Pune is chosen by the Indian government under the scheme of ‘Smart City’, it is expected by the government that proper emphasis will be given in the development of these sites.

Suggestion

A best plan is introduced by involving, motivating, educating and encouraging the local people, visitors and shop kippers to give ideas, work and think of their heritage.

- New planning strategies for the for development in heritage sites.
- Control on pollution and garbage through community participation.
- Heritage sites management committee should plan to manage the Infrastructure and government.
- Make social awareness through government, NGO's and different media to increase awareness about heritage sites.
- Increase greenery and develop bio diversity in respected sites.
- Well and authentic information should display in each heritage site.

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