

Urban Impacts of Revitalization of Waterfronts: The case of Vishwanath Dham, Varanasi

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Abstract- Water has since inception of civilization, been a major factor for the basis of settlement. 'Revitalization of waterfronts' refers to giving a new life to a part of land which is located adjoining a waterbody. The new emerging waterfronts not only affect the curb, but can also make a paradigm shift on their city structures. Identifying the effects of revitalization of waterfronts with respect to city fabric, is crucial to analyse and foresee the project outcomes. Research method adopted, will be in format of comparative analysis of Vishwanath Dham, Varanasi pre and post revitalization. Comparison will be based on certain determined parameters, with reference to the factor of time. Research paper will explore this pre-existing waterfront along with questioning its phenomena, in the realm of its urban implications.

Keywords- Urban impacts, waterfronts, revitalization, Vishwanath Dham, city fabric.

I. INTRODUCTION

A city/ town has its own identity determined by community influence, terrain, local features, culture and other demographic criteria. In a country with such variable user group such as India, an urban space maybe used variably by different user groups. This can not only give rise to conflicts, but also negate the usability of space. In order to bring about harmony and design a space which makes the identity of the city, certain factors need to be kept in check. [1].

A waterfront is not only a mirror to reflect the historical and cultural endeavours of a city, it is rather a portal to environmental and civic concerns of the same. Construction along riverbanks, or near/ on other waterbodies may hinder various aspects like water velocity, direction, quality and also raise issues like public accessibility, security, etc. A whole lot of these concerns seem to be at a smaller level, but these can over time may expand in magnitude. To avoid any such chaotic and unwanted developments, a broader study needs to be conducted on an urban level. [1].

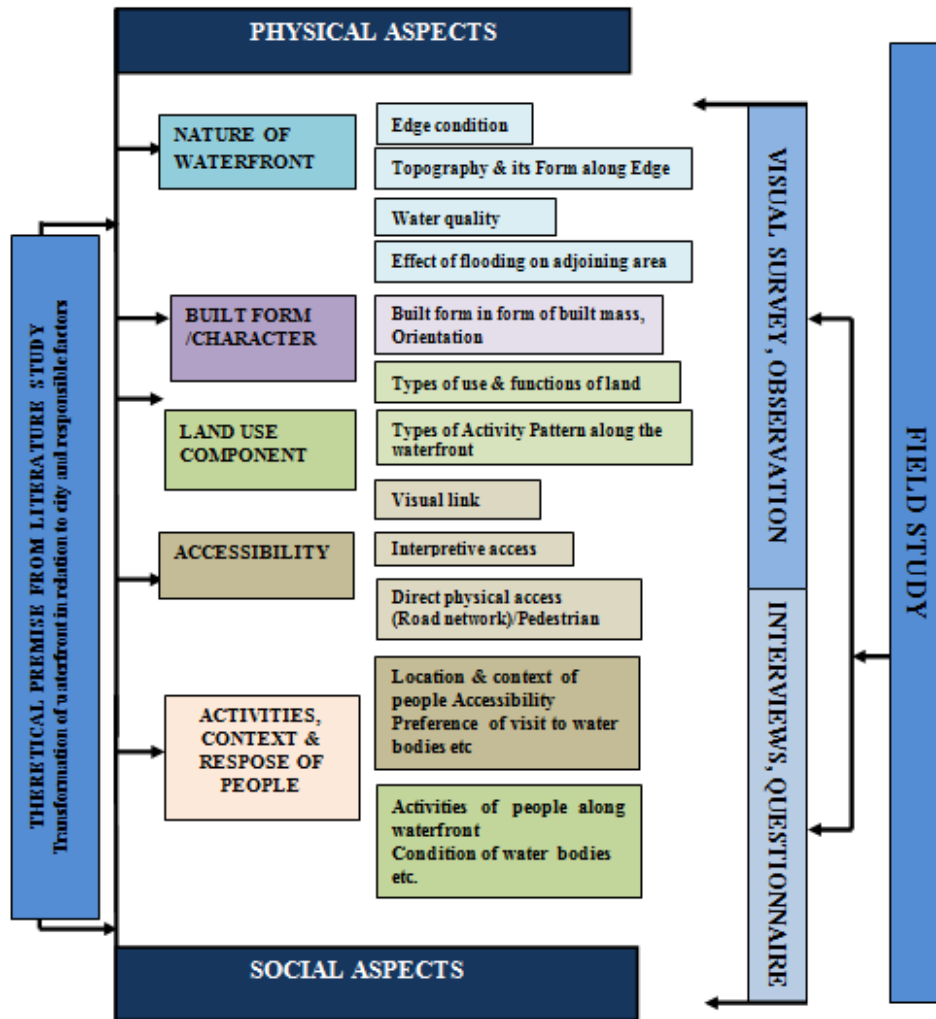


Fig 1. Aspects of a Waterfront Design [2]

II. WATER-CITY RELATIONSHIP

Looking back in time, the genesis of most ancient and medieval civilizations has heavily depended on waterbodies. It has not only created opportunities for agriculture and trade, but also created a harmonious relationship between human and natural environment. The waterfront and city relationship have altered with time and varying functions. Urbanisation, and need for outdoor recreational spaces forged the idea of waterfronts like beaches, lakes, ponds, etc. These served as leisure grounds either for general working class or were designed specifically for the aristocrats. The generalised idea of a waterfront had therefore created monotony in cities, which once were quite distinct. *Cities are all becoming uniform; they are losing their identity, their soul.* [3].

Phenomenon of waterfront is quite diverse in case of Indian context. Waterfront, in Indian culture is not only manifested as an area of recreation, rather, holds importance in religious beliefs. Due to harsh tropical climate, the socio-cultural practice preferred a pronounced water

culture, characterized by elaborate rituals of bathing. The physical accessibility to water is the main feature which leads to particular response of the water edge. Evolution to water promenades like Ghat, (large steps leading to the water body), step wells and bathing pavilions are all a result of such climatic, cultural and social needs. Hence, city structure also contextually changes making the Indian waterfronts unique from the rest of the world. [4].



Figure 2: Chand Bawri Stepwells

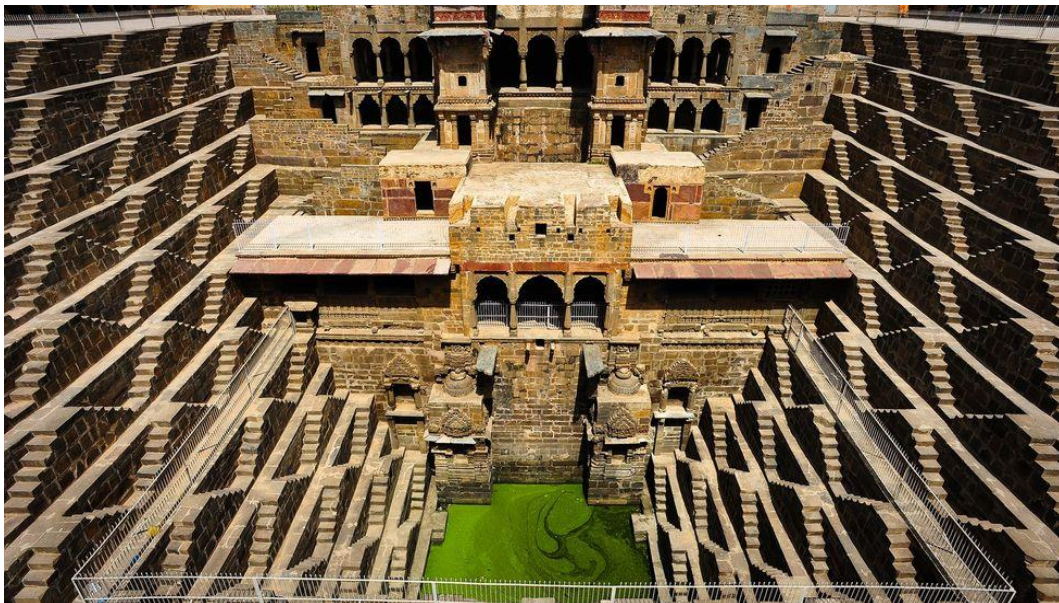


Figure 3: Chand Bawri Stepwells

III. REVITALIZATION ASPECTS OF A WATERFRONT

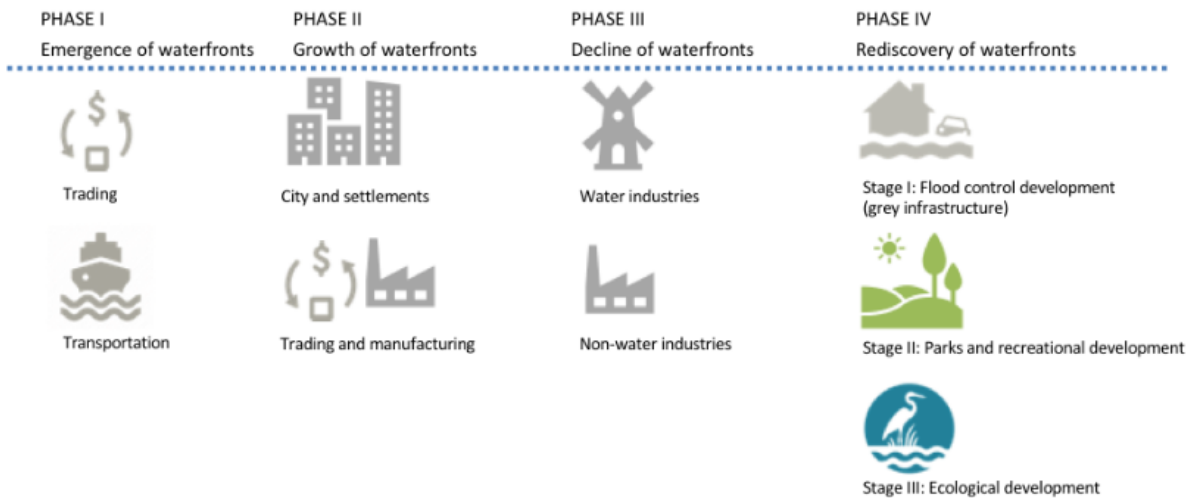


Fig 4. Phases of a Waterfront Design [5]

Waterfront developments are of great concern in many countries due to the need of their environmental protection, shoreline access, water quality, historic preservation, tourism and economic development. The growing potential for recreational, commercial and residential uses, is another feature. Moreover, the growing need and investment in festival and water sports (the most visible public oriented activities), have also played a key role in the rediscovery of waterfronts.

Overtime, the needs of masses have shifted and therefore, so have the functions occurring on the curb. This calls for the need to redesign the pre-existing water promenades. Taking the example of cities with heavy spiritual and religious stronghold, there lies a need to re-design the waterfronts which not only keep these values intact, but also respond to changing scenarios. This can create opportunities like tourism, economic upliftment, ecological shift (for the better), etc. [1].

Revitalization of waterfronts in itself is a reshaping project, which needs to consider and cater to all aspects of development, to minimise future corrections. Therefore, looking beyond the scale, priorities and stakeholders of the project outline, is a necessary step. These can be done in form of:

- i). Conducting public surveys (specific to & beyond the project).
- ii). Running urban design simulations.
- iii). Referring to credible data for interventions.

IV. WATERFRONT AT VISHWANATH DHAM, VARANASI

A. Banaras City Profile:

Varanasi also known as Kashi (City of light) is a city of 1.19 million inhabitants (as of 2011). It is a place of pilgrimage and a holy site for sacred baths in Ganga River. Varanasi or Banaras, is situated along the left crescent-shaped bank of the Ganga river in the middle Valley. [6].

The city considered as the microcosm of Hindu pilgrimage, is visited by thousands of Hindu, Buddhist and Jain pilgrims and foreign visitors each day and known the world over as the “sacred city”, is rich in architectural, artistic and historical buildings (temples, palaces, maths, mosques, ashrams, etc.). *“Besides being an indelible mark in heritage, these buildings, along with the local religious and cultural life, constitute an immense resource for tourism (domestic and foreign), one of the major economic activities of the city”.* [6]. [7].



Fig 5. Kashi

Source:Unsplash

B. Historic Implications:

Varanasi is famous for its Ghats. Ghats are steps that lead down to River Ganga. The bank of river Ganges houses 84 Ghats provide magnificent gateways from the river to the interior of the city on the western bank spread over a distance of 6.8 km.

Eastern side of Ganga, where heritage zone is flanked by the strip of a green belt of trees along the sand belt of the river. The 84 riverfront Ghats Western side heritage zone. These Ghats are characteristic, with a unique expeditions of stone steps emerging from the river and leading towards the city- steps incomparable in the world for their magnificence. [6].

The Manmandir Ghat has a magnificent palace, with exquisitely carved hanging windows. On top of this palace is an observatory built in the 17th century CE by Savai Jai Singh II. The Scindia and Bhonsle ghats also have very imposing and impressive masonry facades, with prominent temples at the top. The Scindia ghat is particularly striking because of the picturesque old Shiva temple which is tilted and partially submerged in the Ganges, at its edge. [7].

On the Southern Ghats there are heritage precincts along the river which are being underused and under maintained. Due to this lack of maintenance and conservation the historic or heritage buildings are in a degenerate state. There are also lack of basic amenities like toilet facilities leading to unhygienic environments and health hazards. [6].

C. Role of Waterfront in City's History:

The ghats are a centre for several rituals and religious ceremonies like prayers, holy dip in the river Ganga, cremation, religious offerings, etc. The most important Ghats are Dasaswamedh, Harish Chandra, Manikarnika, Panchaganga, and Assi ghat. [6].



Fig 6. Evening aarati at Ghat *Source:Unsplash*

D. Religious and Cultural influences on Ganga Waterfront in Varanasi:

Varanasi, the sacred corridor is the embodiment of living sacred heritage and hosts a large number of fairs and festivals throughout the year. The Ghats act as a hotspot for all the religious and spiritual activities, hosting as many as 2500 people arrive per hour, at peak festival periods.

Festivals	Venue	Period of Occurrence
Paush Poonmima	Ghats	January
Makar Sankranti	Ghats	January
Mauni Amavasya	Ghats	January/February
Magh Poonmima	Ghats/Ravidas Mandir	February
Ganga Water Rally	Ghats	February
Dhrupad Mela	Tulsighat	March
Mahashivaratri	Ghats & temples	March
Navratra (Chaitra)	Ghats / Temples	April
Ram Navami	Tulsi Manas Mandir & Ghats	April
Sankat Mochan Music Festival	Sankat Mochan Mandir	April
Buddha Poonmima	Sarnath	May
Ganga Dussehra	Ghats	June
Ramlila, Ramnagar	Ramnagar	September-October
Dhanush Yagya	Ramnagar	September
Ram Vivah	Ramnagar	September
Nakkataiya	Ramnagar	September
Pitra Visarjan	Ghats	September
Navaratra(Ashwin)	Ghats & Temples	October
Vijaya Dashmi / Dussehra	Ramnagar D.L.W Vidyapeeth	October

Table 1. Festivals along Ghats [4]

As a culture of the rituals performed during these festival timings, Ghats of the river are exposed to the load of religious offerings and activities associated with the river, namely, offerings of flowers and lamps, bathing, washing, cremation. These activities add to the pollutant content in the river, which requires regular cleaning. Religious activities like cremation, bathing performed on the banks of the river contribute to the high pollution of river. [4].

E. Significance of Revitalization of Waterfront:

Along its water frontage and miles of ghats, Varanasi also houses the Kashi Vishwanath Mandir, built in 1780. Engulfed by dense urban development, the precinct is interwoven amid narrow, winding streets, and an array of shrines and temples. Overtime, this part of the city has been continuously built over by dense, ad-hoc, low-rise development, encroaching public spaces and severely constraining the access to the Mandir. Lack of infrastructure and amenities hamper movement and daily life of locals and tourists in equal measure. In 2018, Shri Kashi

Vishwanath Special Area Development Board was constituted to implement its redevelopment. The Mandir, and its precinct extending up to the three ghats, *Lalita, Jalasen and Manikarnika*, are together envisioned to be a part of the comprehensive redevelopment project called the Vishwanath Dham. [8].

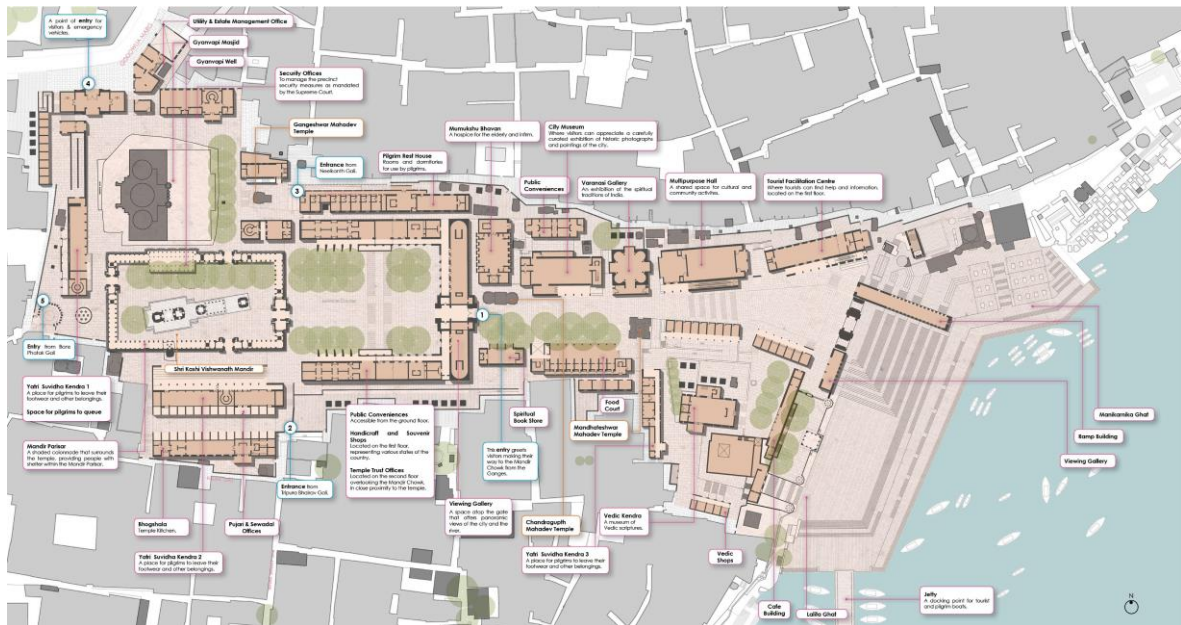


Figure 7: Vishwanath Dham Comprehensive Plan [8].

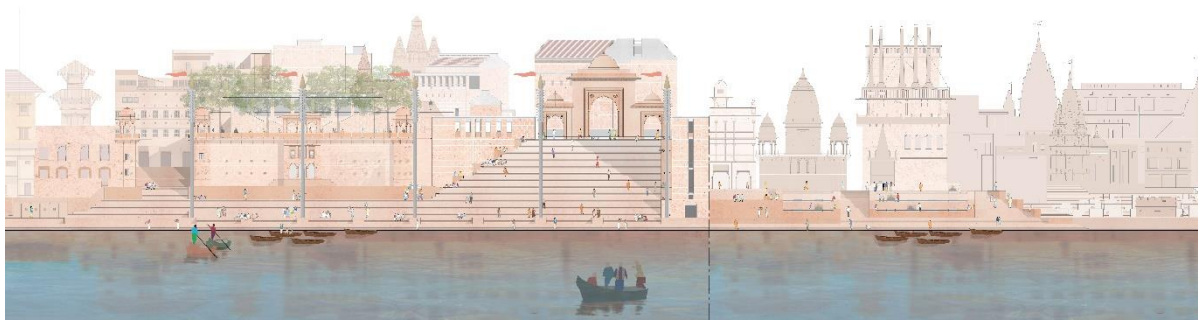


Figure 8: Vishwanath Dham Elevation [8]

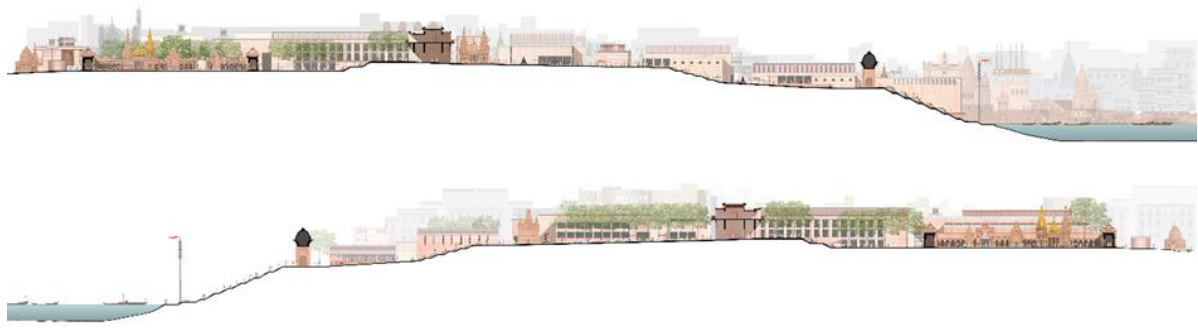
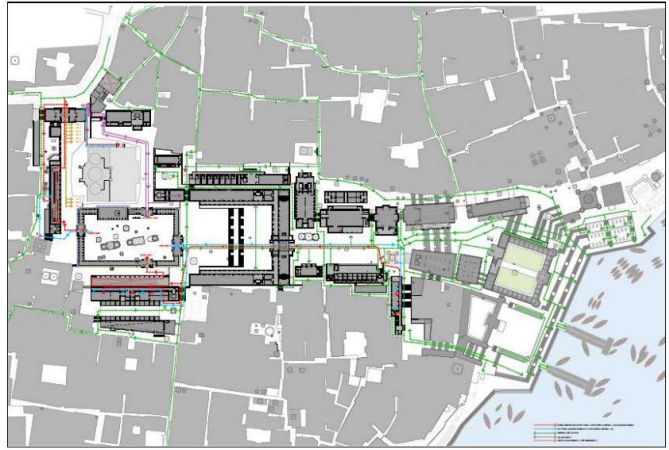
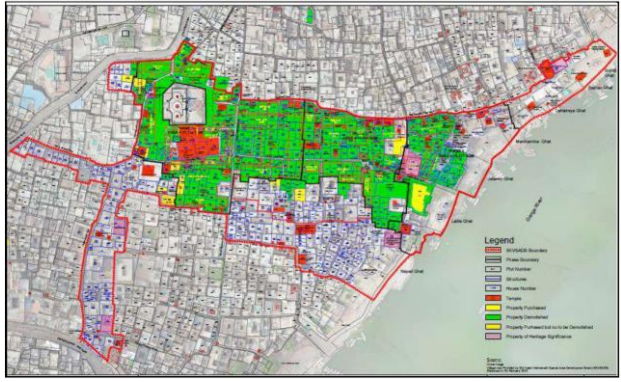


Figure 9: Vishwanath Dham Section [8]

IV. URBAN IMPACTS OF RE-DESIGNED WATERFRONT AT VISHWANATH DHAM, VARANASI

Parameters	Pre-Revitalization	Urban Impact post revitalization
Public Response	a). Pre-revitalization, the temple was always overpopulated, causing problems to locals as well as pilgrims. [6]. b). The city, known for its congested narrow roads, made it difficult for people to navigate through the temple complex. [7].	The temple complex can now accommodate about 75,000 people at a time. It also has amenities like lockers, communal kitchens etc, which allow pilgrims to engage in such activities. Younger age group (19-25 yr olds) have also shown interest in temple campus after its re-development. [8].
Environment	NRCD (National River Conservation Directorate) studies under GAP (Ganga Action Plan) have revealed that a major contributor to the pollution load on river Ganga is untreated sewage (90%), which is discharged into the river from the open drains of the Varanasi city. [9].	a). Varanasi is also the epicenter of the Swachh Bharat Mission, had also been named as the best Ganga town in Swachh Survekshan 2021. b). The government aims to have zero sewage discharge in the holy river. The government even aims to create a wide network of sewerage plants in the city and to its adjacent locations. Two sewage treatment plants, namely Ramana and Goitha are also being developed to treat 412 million liters of sewage per day. c). Water may not be as deeper as it used to be due to construction of a dam like structure (the dock). It may make the riverbed muddy, pushing Ganga rather away from the ghats. [6].
Traffic nearby	The congested streets and encroachments right outside temple complex made navigation difficult.	Multiple exits have made dispersion of pilgrims easier. It has also simplified the circulation by directing visitors to either ghat or temple as per need, rather than creating chaos and confusion. [8].

	Wayfinding around the temple became a time taking task. The haphazard movement of pilgrims disturbed the city dwellers day to day passage through the same routes. [5].	 Figure 10: Traffic near Vishwanath Dham
Settlement patterns nearby	Low rise settlement nearby. 100-year-old residences right in front to temple entrance. [5].	Nearby residences & shops demolished to extend temple campus. Temples in the houses restored as a part of the same project. Planning for multi-transportation hub in the city as part of its face change growth. A connection between ghats also established as opposed to earlier. [7].  Figure 11: Settlement near Vishwanath Dham
Tourism	Data not available.	“We have witnessed a 10% growth in traveller interest to visit the holy Kashi Vishwanath corridor since its inauguration. In addition to spiritual tourists which remain the majority, we have also witnessed strong interest amongst millennials and young professionals to explore the destination,” Daniel D’souza, President and Country Head, SOTC Travel (Jan 2022)

Impact on water body	Mirzapur district sewage treatment plant located more than 60 kms away from Lalita Ghat, which has led to the growth of the dirty green algae. [9].	** The jetty construction (100’ long & 150’ wide) has interrupted the free flow of water. the building activity at the ghats may also be the reason for the stagnation and discoloration of the water. Construction debris maybe added to riverbed.
City Image	The city dates back to the 11 th century BC and over the centuries, a sharp rise in population led to haphazard construction, making the city highly congested and unorganised. Today, Varanasi counts over 1.2 million people living in a mere 82 sqkm area. Added to that are millions of pilgrims and tourists that come here every year. [5].	Kashi underwent a grand makeover after 1780 AD, when Maratha queen Ahilyabai Holkar of Indore last time renovated the temple and the area surrounding it. The construction of the corridor has intended to improve the overall experience & feel of Kashi. Project has also led to restoration of approximately 40 other temples to their original glory, hence adding history to the city.

V. CONCLUSIONS

- i). The Urban Project was undertaken with vision of conception of a new Banaras, in cleanliness, safety and economic realms.
- ii). Although, it has appealed to masses soon after its inauguration, the long-term tourism viability is uncertain.
- iii). The environmental impacts on Ganga and furthermore on the neighbourhood can be in form of stagnation of water and discoloration.
- iv). The traffic considerations made serve purely the campus and do little for the settlements nearby. Rather, the diverted traffic flow hinders the daily life of the residents and overlooks their privacy.
- v). The man-made promenade not only reduces the man- environment relationship, but also destroys the essence of the typical “Ghats.”

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