Sponsored Thesis Project Competition on
"RE-IMAGINING URBAN RIVERS"
(2021)

SOCIO-RELIGIOUS TOURISM
+
RIVER TOURISM
+
SUSTAINABLE TOURISM
=
"INTEGRATED SUSTAINABLE TOURISM"

Image Credits: UP Tourism

Image Credits: Ayodhya: The Imageability and Perceptions of Cultural Landscapes; Mr. Sarvesh Kumar and Prof. Rana P.B. Singh

Project Title   : Planning for Integrated Sustainable Tourism Development:
                        Case of Ayodhya
Creator   : Muddukrishna A S
                        Master of Planning (Urban)

CERTIFICATE OF COMPLETION

This is to certify that this thesis project titled "**Planning for Integrated Sustainable Tourism Development: Case of Ayodhya** " was carried out by Sh./Smt. **Muddukrishna A S**, a student of **Master of Planning (Urban)**, at the **School of Planning and Architecture, New Delhi**. The research for this project was undertaken under the guidance of the afore-mentioned institute and completed during the period of **1st January 2021** to **30th June 2021**.

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This report has been submitted by the student as a final deliverable under the competition. All parts of this research can used by any of the undersigning parties.

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ABSTRACT

Tourism across the globe has evolved as an activity that was viewed from a preview of leisure to a tool of comprehensive development, attributing its role towards achieving 17 SDGs. However, the sector has transformed its approach drastically over the past few decades from an **issue-based approach** that ponders on a principle that addressing existing infrastructural gaps would automatically develop tourism. Only to be challenged by the **Thematic approach,** which gained the forefront in the post-modern era. It came to the forefront of a thought process that the theme/character of the destinations holds the highest gravity in people's decision to visit, acknowledging that addressing infrastructural issues/gaps in destination development is not just a need but a necessity.

Although the approach of developing tourism based on character/theme established a broader tourist base instilling greater market capitalization. The approach failed to encompass the social and environmental dimensions of the destination, bringing in a need for an inclusive, sustainable approach that collates 5A's (Accessibility, Accommodation, Attractions, Activities, Amenities) and travel trade of Tourism through an **integrated approach** to envision destination development through tourism veraciously. Based on which the concept of integrated sustainable tourism has been derived and applied to the city of Ayodhya.

Study area - Ayodhya, located on the eastern bank of river Sarayu, is perceived as the memoir of civilization and prelude of faith, attributing to its significance across Hinduism, Jainism, Sikhism, Buddhism and Islam. It is regarded as the first one of the seven most important pilgrimage sites (Sapta Puri) in Hinduism; the city is growing as a mass religious tourist hub with a rapid rise of tourist influx, Since the last decade. With a projected rise to 1 lakh tourists /per day by 2023. The river Sarayu being the epicenter of beliefs, sculpts not only the rich natural landscape of Ayodhya but also encompasses historical and cultural landscape. The city confers an opportunity to channelize the growth of religious tourism with river tourism under the line of sustainability through an integrated tourism approach upon which the project will be probing into. The study's purview would be to develop an integrated approach of different thematic tourism, namely religious and river, under the lines of sustainability.

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Contents

1. **Introduction**

Tourism as a concept derives its nature from the evolution of homo sapiens. Travelling once viewed as an essential tool of survival that served the crucial needs of food, water and shelter, has transformed into a need driven by the desire to experience in the modern-day world, attributing to the psycho-sociological proponents. The ingress of the middle class across the broader spectrum of consumer market post-neoliberal era has given rise to a significant multisectoral industry. It generates 8.9 trillion USD globally (i.e. 10.3% of global GDP) with one out ten people employed in tourism affiliated industry, depicting the need to channelize the sector through planning for a sustainable world. It is defined as persons travelling and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes (UNWTO). It is classified in its elementary form based on visiting pattern as depicted   below   :
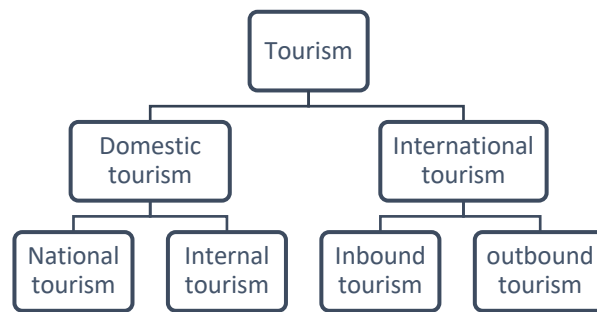
Figure 1 Categorization of Tourism

Source- Author

1. **Domestic tourism**- is tourism involving residents of one country travelling only within that country.
2. **Inbound tourism**- refers to the activities of a visitor from outside of the country of residence. Ex- American visiting India.
3. **Outbound tourism**- refers to the activities of a resident visitor outside of their country of residence (e.g. an Indian visiting an overseas country).

Which is further categorized as :

- **Internal tourism-** which comprises 'domestic tourism' and 'inbound tourism'.

- **National tourism-** which comprises 'domestic tourism' and 'outbound tourism'.

- **International tourism-** which consists of 'inbound tourism' and 'outbound tourism'.

1.1 Need Of Study
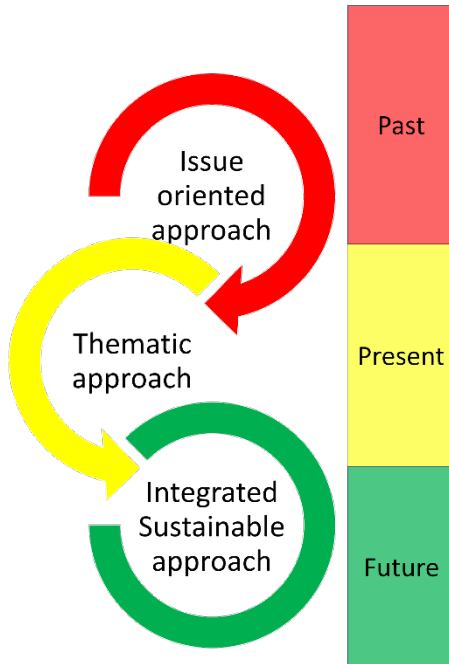
Figure 2 Evolution approaches in tourism

Source- Author
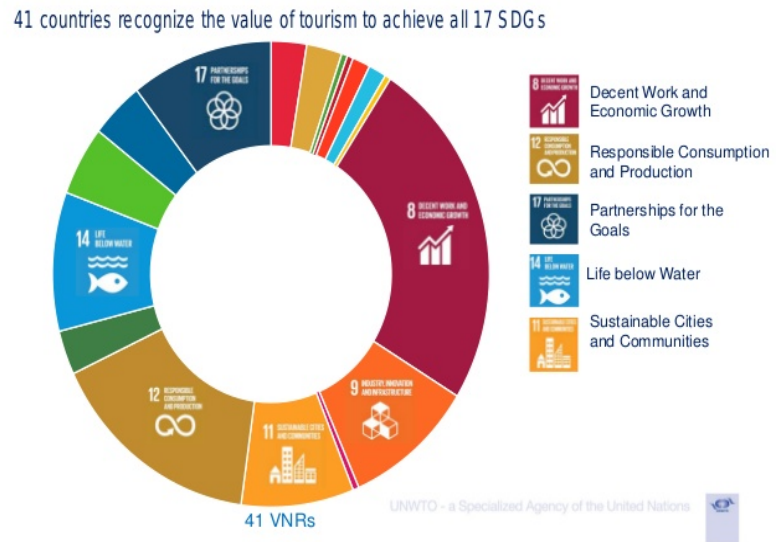
Figure 3 Value of tourism and its contribution towards SDG's

Source-VNR,UNWTO

The Figure 2 depicts the evolution of tourism approaches in modern planning, which began with an issue-oriented planning approach. It assumed that by just solving the core infrastructural issue, tourism would spontaneously develop. But it failed to stand over the period, attributing to growing dynamism in the sector. In the later stage, it was realized that there is a need to encompass and emphasize approach based upon character which the tourist pull factor was transpired leading to the development of thematic approach post-1990s. wherein the market caters to demand created by special interests. (Gunn, 1994; WTO, 1994; Wilkinson, 1997; Timothy, 1999; Tosun and Jenkins, 1998)

The thematic tourism targets to achieve market capitalization in terms of **Access, Accommodation, Attractions, Activities, and Amenities** and travel trade. But in several cases, it has considerably failed to collate, missing out on comprehensive development. The significant issues in the approach being the maximum emphasis on financial benefits only while ignoring social and environmental costs. Secondly, the approach prioritizes to cater market demand driven by tourist wants over destination area development pattern missing out on the local community and other stakeholders. Further, it turns to be exploitative in the long term as it fails to encompass factor of sustainability as its market-driven without a

cap/threshold.with the sector being acknowledged for its valued contribution towards achieving 17 SDGs as per a UNWTO report Figure 3 submitted by 41 countries, it becomes even more crucial to develop a perspective which is comprehensive, leading to the formulation of integrated sustainable tourism development approach in planning. Wherein components of sustainability is achieved by integration of 5A's (**Access, Accommodation, Attractions, Activities, and Amenities**) through enabling actions.

Source: Residents' Attitudes towards Overtourism from the Perspective of Tourism Impacts and Cooperation–The Case of Ljubljana
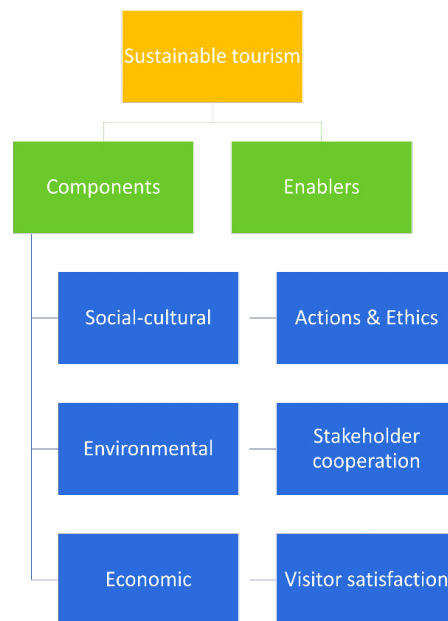
Figure 4 Sustainable-responsible tourism (SRT) model.

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1.2   Concept
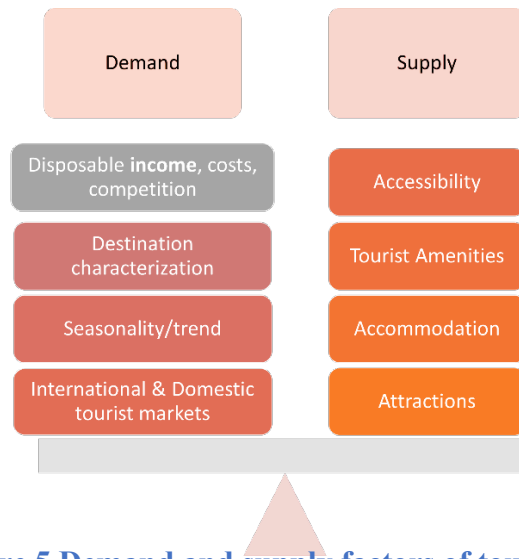
Figure 5 Demand and supply factors of tourism
Source-Author summarized from contemporary research

The tourism industry, like every other industry, too operates on the microeconomic principles of supply and demand as depicted by Figure 5, wherein supply is determined by factors such as tourist attraction, accessibility, tourist amenities and accommodations, whereas aspects such as disposable income, cost competition, Seasonality/trend Destination characterization comprises of demand which frames tourist choices at a broader level.
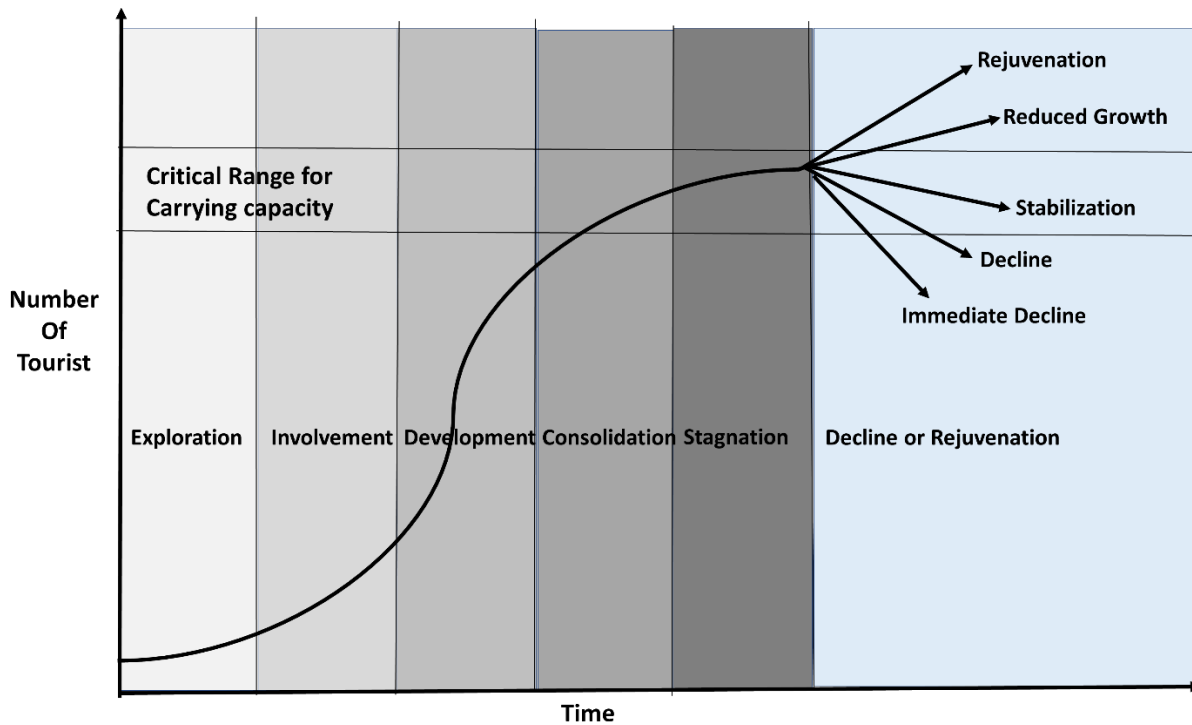
Figure6 Butlers tourism development model
Source-Developed by Author based on Butlers model

The Butlers model (Shown in Figure6) tries to capture tourism's life cycle through phases from exploration to decline/rejuvenation through analyzing its relationship with time and number of tourists visited. It is depicted that when a destination evolves itself, there comes a stage where intervention is required to sustainably channelize the tourism development under the lines of criticality based on carrying capacity. Wherein it is depicted that the future of destination towards rejuvenation or decline is determined by the approach that would be adopted prior.

Such approaches have cognitively evolved over the history of tourism development in various forms, predominantly in modern times can be classified as shown in the image below. Before the 1990s, an **issue-oriented approach** was adopted wherein it was assumed that solving the issues pertaining to amenities and infrastructure would automatically develop tourism wherein course of time, its approaches shifted from an **issue & impact-oriented approach** to a **thematic approach** wherein it was realized that market caters to demand created by special interests. This is because the character/theme of the place generates special interest that needs to be conserved and boosted alongside addressing the issues.

Source: United Nations World Tourism Organization - World Tourism Barometer (2019)   OurWorldInData.org/tourism/ • CC BY
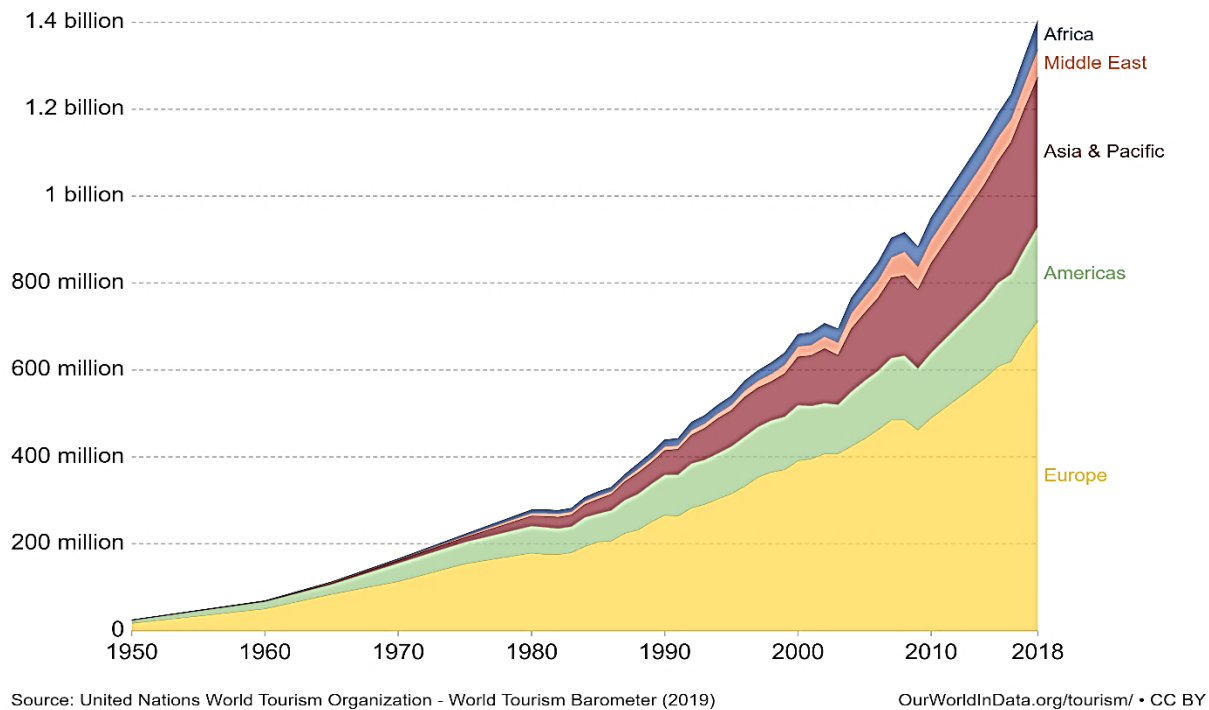
Figure 7 Global tourist footfall
Source-ECO Lint

Adoption of thematic approach alongside other factors leading to an increase in tourist footfall across the globe (as depicted in Figure 7) brought in economic benefits through market capitalization in terms of **Accessibility, Accommodation, Attractions, Activities, and Amenities and travel trade**. But in several cases, it has considerably **failed to collate,** missing out on comprehensive development.

• The primary issue in the approach being

• **Maximization of only financial benefits** while ignoring social and environmental costs.

• The approach **prioritizes to cater market demand driven by tourist wants** over destination area development pattern ignoring the local community and other stakeholders.

• It turns to be exploitative in the long term as it **fails to encompass the factor of sustainability** as its market-driven without a cap/threshold.

1.3 Problem statement

The challenges aroused out of the **secluded thematic tourism** approach have ingrained the need for a new inclusive, integrated approach that would be derived over the course of research **acknowledging interdependencies** underlining the aspect of **sustainability**.
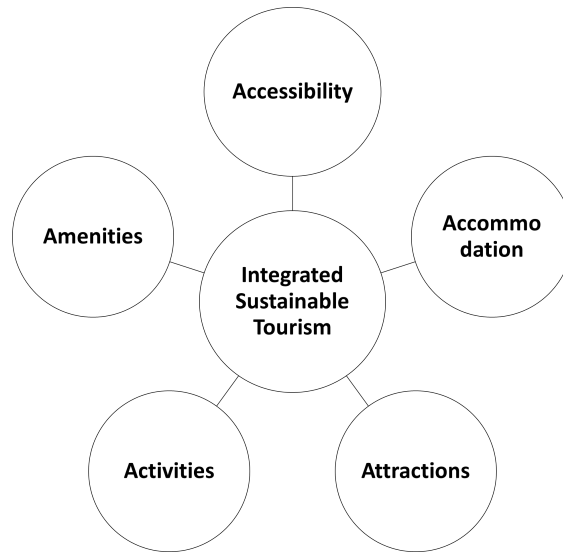
Figure 8 Image depciting interdependecies between 5A's
Source-Author

1.4 Aim

The thesis intends to develop a planning approach that would **channelize the mass religious tourism potential of Ayodhya with river tourism adhering to the aspect of sustainability through an integrated tourism approach** through empirical methods.
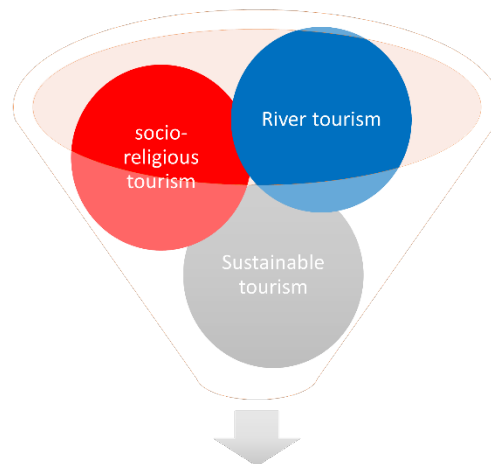
Figure 9 Ayodha's context of channelization
Source- Author

1.5 Objectives

- To **assess baseline conditions** with an emphasis on the interaction between the city of Ayodhya and river Sarayu underlining the articulation of cities :

a) Environmental,

b) Socioeconomic,

c) Religious-cultural,

d) Heritage profile,

e) deriving opportunities and constraints.

f) To Develop sustainable river-based tourism **strategies enumerating the tangible and intangible cultural heritage** across the river stretch

- Through a conservation-based approach to Reimagine the wetlands and water bodies, prepending value addition concept to river tourism simultaneously protecting the ecosystem.

- To Develop a scenario-based analysis through gap **identification of Infrastructural, institutional structure** deriving incremental threshold capacity need.

- To Formulate financial models based on **Value capture** and development of **capacity building module** through a community-based approach in the form of a strategic plan.

2. Literature Study

literature constituting overview of policy reviews, theoretical & empirical case studies, sustainable practices, analytical techniques, community inclusivity in tourism was reviewed to gain a comprehensive perspective on tourism's evolution and how tourism could be utilized as a tool for achieving Sustainable development goals.

2.1 Tourism Policy Development In India

(1951-1956)
FIRST PLAN
➤**Tourist division** was formed under the transport.
➤Opening of **tourists offices** within India & world with majorly emphasizing on international tourists.

(1985-1990)
SEVENTH PLAN
➤National Committee on Tourism**(NCT)** and Tourism Finance Corporation of India **(TFCI)** was set up.

(1956-1961)
SECOND PLAN
➤Provision was made to develop **tourism** as a **central & state sector**

(1992-1997)
EIGHTH PLAN
➤Tourism as product was **diversified**
➤**"special tourism areas"**
➤National action plan (1992) for tourism.

(1961-1966)
THIRD PLAN
➤**Developing & building accommodation facilities, transport** and improvement of accessibility.

(1997-2002)
NINTH FIVE YEAR PLAN
➤**Special task force**
➤Development of tourist circuits.

(1969-1974)
FOURTH PLAN
➤Recognized as important **means of earning foreign exchange, improving tourist facilities.**
➤Creation of **ITDC** and provision of **loans to hospitality and transport sector.**

(2002-2007)
TENTH FIVE YEAR PLAN
➤Integrated development of **tourism circuits.**
➤Work partnership was done with development agencies, **NGO's and private sector.**

(1974-79)
FIFTH PLAN
➤Development of selected archaeological sites & sanctuaries and construction of youth hostels & tourist bungalows **recognized for middle income groups.**

(2007-2012)
ELEVENTH FIVE YEAR PLAN
➤Assistance to **Hotel Management Institutes**
➤**Capacity building, overseas promotion** and publicity, market research, assistance for large revenue generating projects, **computerization**

(1980-85)
SIXTH PLAN
➤the **first tourism policy** was drafted in 1982. the prominence was given to the **domestic and cultural tourism.** Also, the **Janta hotels** began in four metros.

(2012-2017)
TWELFTH FIVE YEAR PLAN
➤tourism growth contributes to **poverty reduction**
➤It also aims to improve **tourism infrastructure** and develop **niche tourism products.** Tourism is a **multi-sectoral activity**,

Figure 10 Tousim sector in Five year plans

Source-Developed by the author based on literature

India's tourism development journey has evolved from a perspective of viewing tourism as an activity of an elite and a stream for generating foreign revenue when it was placed under the transportation ministry initially. Over time, as the tourism sector started getting decentralized between state and centre tourism, specific infrastructure began to develop. It lead to the creation of ITDC, development of accommodation,

accessibility to tourist destinations. In a later stage, with increasing, middle-income groups alongside disposable income started to broaden the consumer base tourism and hospitality industry. Thereafter recognizing the significance of middle-income groups resulted in the creation of a budget-oriented market base, Janata hotels were introduced, financial support was provided to encourage private sector participation. Multiple stakeholder approach was adopted with government bodies, NGOs, and private players collectively coordinating to develop tourist circuits.Post-2000s emphasis was laid on capacity building, market research, marketing and digitization. In recent years tourism's role as a multisectoral activity is acknowledged as a tool for destination area development and poverty reduction.

2.2 Policy, Planning, And Management For Religious Tourism In Indian Pilgrimage Sites (Shinde, 2012)

Research pertaining to the planning and management of religious tourism was analyzed in which case studies of European church-based tourism and Hajj was overviewed concerning several prospects and issues of this tourism.

European church tourism

Figure 11 Contextual image depeicting european church tourism

Source : Genuinetourism.com

Origin- Across **Europe, churches.**

About- Emerged out of an intent to **maintain their religious vitality.** They realized that tourists and visitors who visited churches provided them with a **captive audience and opportunities for mission activities and for generating revenue.** In tapping this potential, churches began to promote, organize and manage such visitation formally as a religious tourism activity (Nolan & Nolan, 1992). Recognizing that churches and cathedrals provide resources, including rituals, festivals, and events, the state also promoted religious and cultural tourism to boost **the local economy** in religious places. **Approach-** a clear understanding exists between different stakeholders of their engagement in religious tourism economies: **religious actors** (churches and religious guides) are **specialist suppliers** of religious experience, the **state** ensures **availability of infrastructure** and **private** businesses, including **tour operators and hotel industry, provide accommodation and transport facilities** leading to a **synergy between church, the state and private enterprises.**

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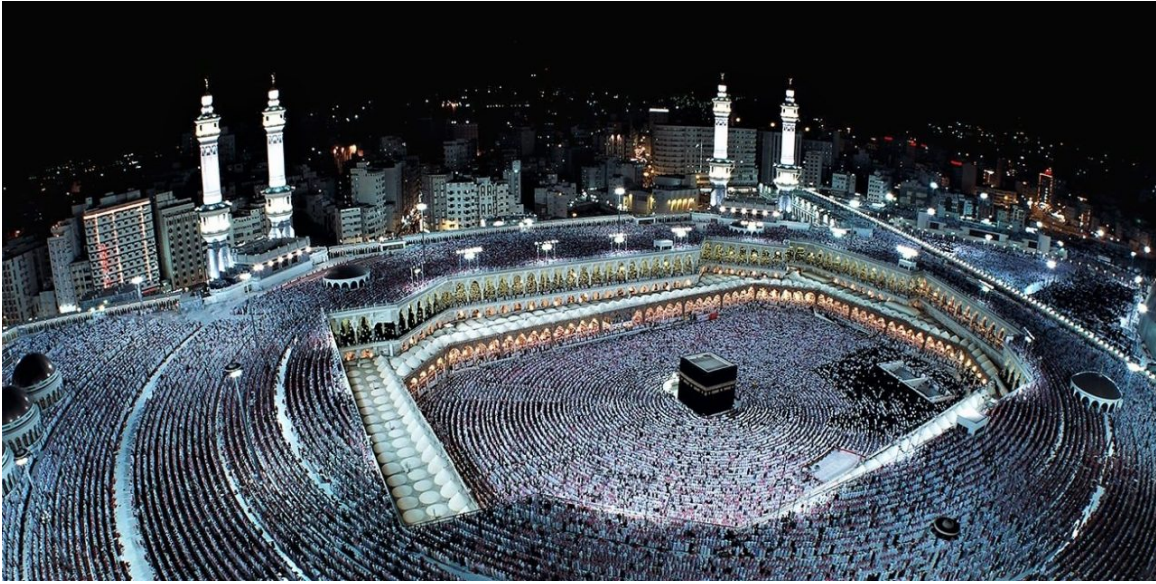
Hajj

Figure 12 Contextual image depeicting Hajj piligrimage

Origin -Hajj

Source : insidearabia.com

About- Visite as an obligatory religious ritual and one of the largest congregations. The government of Saudi does its management. **Approach-** Ministry of Hajj represents an institutional structure in which both the state and religious authorities is collapsed into one. The aim is to provide both religious services and tourism infrastructure, wherein the approach can be classified under a single stakeholder approach. The state has spent considerable sums on the modernization of airports, seaports and road networks, and apartments and hotels, transport, health care, and sanitation facilities for pilgrims. **Methodology-** included in-depth **interviews and surveys, the observance of public behaviour, and participation in various festivals, events, rituals and ceremonies.** The common themes covered in the interview included views on pilgrimage, visitors, rituals, contemporary trends, and environmental change.

Comprehensive issues

The issues of religious tourist cities in common were identified as Infringement of carrying capacity, Waste management issues, and overcrowding, which can impact fragile environments that attribute to the nature of mass tourism. In addition, heritage trafficking also remains a significant concern predominantly expressed by the locals in changing destination character.

2.3 Thematic Tourism; A new concept for developing tourism (Case Study: Rural Areas Of Meyami County) (Ali Asghar Shalbafian, 2020)

The above study described how the aspiration of place could be naturally integrated to promote the concept of thematic tourism; the study classified the themes as below Table 1-

Table 1 Thematic grouping based on nature of aspiration

Theme groupings	Nature of the aspiration
History	An activity of experiencing the past through historical structures can be in the form of artefacts ,buildings, , reconstitutions, or other material or immaterial traces and memories.
Pilgrimage	Spiritual experience through travel.
Landscape	To Experience natural and man-made transformations constituting terrain-based elements such as coastal, mountain, rural, river landscapes.
Natural systems –ecological and geological	It is discovering nature by exploring the lifeforms and appreciating the forces that form exceptional places.
Cultural icons	Consist of touristic enthusiasm to yearn for tangible and intangible cultural elements
Urban life	It captures the essence of urban life by experiencing the city's character by Participating in urban activities, strolling, nightlife, shopping, and local interaction.
Rural life	Lifestyle-based tourism captures the essence of the rural way of life through a rural setting, a temporary adaption of customary practices, and local interaction in rural areas.
Marine life	To experience sea-based recreational activities. Ex- scuba diving, yachting, surfing etc.
Artistic excellence in visual and performance arts	Engaging and appreciating activities relating to visual and performing arts and travel intended to experience the above in a destination, ex-Music festivals, fairs and other events.
Traditional crafts	To Experience the activities about traditional crafts in a destination.
Food and Drink	Also known as culinary tourism, discovering and experiencing food and drinks is a vital component of destination expectations. Ex- different

	countries,regions,cities across cultures in restaurants,markets, farms,locals and festivals
Physical activity	Pursuing physical activities where physical activities, sporting remains the prominent backdrop of experience, includes cycling, hiking, trekking, running etc.
Industrial tourism – modern and traditional	It is intended to Engaging in activities that demonstrate peculiar experience of expertise and practices in industries—Ex- power plants, manufacturing industries etc.
Well-being	Travelling based on lifestyle to experience the health stimulation through activities ex- spa treatments, meditation, yoga.AYUSH based tourism etc
Roots	It is the concept of connecting back to ancestors' roots to experience the heritage and lifestyle of their own people.
Medical tourism	It is defined as the process of travelling for receiving treatment and medical care outside the country of residence.
Agri-tourism	travel organized to experience farming techniques, small-scale food production or animal husbandry.

Wherein it is observed by the study that the themes are essentially character-centric wherein purpose can be gradually imbibed or trend-based. The author tries to extract and boost the natural characteristics of the place instead of artificially inducing.

2.4 The Singapore river thematic zone: sustainable tourism in an urban context
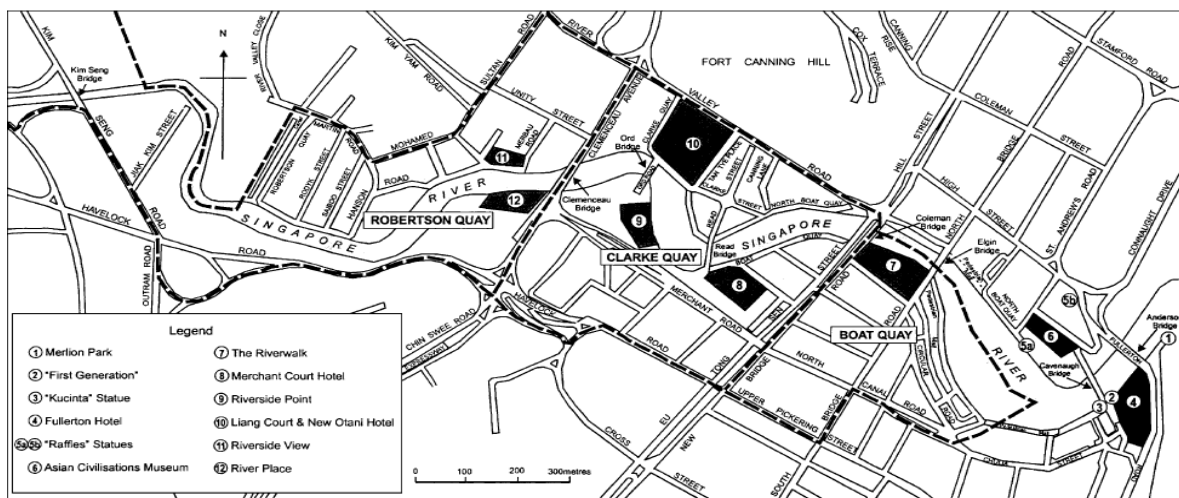
Envisioning to make the city a tourist capital, Singapore came up with its T21 plans. It elaborated on using a thematic zone-based approach to tackle tourist concentration issues wherein it was ensured the limited land resources of this city nation are best utilized. The plan classified the city into 11 zones wherein each zone consisted of different touristic character catering to varying tastes of tourists. The intent behind the approach was to ensure sustainability through **redistribution by integrating activities(**engineered on the lines of *Local authenticity ensuring economic sustainability)* with Commemorating history and culture. It brought in intended results as redistribution contributed to economic development, which spread across the city. the very nature of boosting the character of Singapore through cultural commemoration conserving the social fabric consisting of Malay, Chinese and Indian culture with a backdrop of British history. Environmentally and aesthetically, the city got a boost due to the redistribution of tourist places across a broader space.

2.5 Relative- Case Studies

Relative case study cities of Varanasi and Ramehwaran were reviewed based on the nature of tourism. The cities approaches had adsorbed the touristic theme to come up with tailored solutions such that it not only addresses the existing issues but also turns the challenges to resource for development

1.1.1 Varanasi

Figure 13 View of the riverside heritage of Varanasi

Source:www.andbeyond.com

Varanasi is also known as Kashi, being part of 7 sacred cities, its tourism strategies were reviewed attributing to its similarities with it being a riverine settlement with a religious character. An approach strongly based on historical links paved on socio-religious landscape catering to tourists with diverse prospectives. The destination characterization is mainly based on religion, culture, spirituality, and heritage, which has been given an enhanced boost through cooperative marketing along with several other strategies as depicted in Table 2

Table 2 Tourism development strategies of Varanasi

City	Theme	Methodology Variables	Inferences
Varanasi	Religious tourism River tourism	To create a cultural awakening that could strengthen the historical links between social networks.	Develop cooperative marketing associations with specialized tour operators Debt utilization of religious tourism

			Develop links from surrounding destinations around pilgrimage sites to attract tourists.
			Development of policies and strategies to overcome the seasonal problems and overcrowding
			International linkages with global institutes and media were used to promote the city as a spiritual destination.

Rameshwaram

The coastal town of Rameshwaram, Located in the south-east state of Tamil Nadu, is noted as one of the holiest city in the Hindu religion. The city's tourism is an epicentre to its tourist sites associated with Ramayan. The administration came up with strategies to diversify the destination characterization based on the cultural connection. Wherein conservation and promotion of landscapes of Dhansushkodi, Yoga centres were few such steps that broadly projected Rameshwaram's tourist profile, catering to a range of tourists with diverse taste. The tourist influx increased along with stay duration, attributing the tourist exploring more place. The administration transformed the mass influx to resource in coordination with other stakeholders to frame out a volunteer-based approach as depicted in Table 3. They adopted an innovative and inclusive approach catering tourist amenities underlining the concept of sustainability with a system emphasizing **efficient resource management as briefed in** Table 3

Figure 14 Devotees taking holy dip near Rameshwarnath temple

Source:Makemytrip.com

Table 3 Tourism development strategies of Rameshwaram

City	Theme	Methodology Variables	Inferences
Rameswaram	Religious tourism Ecotourism	Tangible and intangible impact assessment.	Voulenteery approach making the pilgrims participate in the maintenance. Ecological Indicator Boards. Pay, Use and Redeem concept of Lootel (Hygienic washrooms, with shower and IOT based storage at 10rs). To use kitchen waste based biogas plants for reducing carbon footprint. Promoting Yoga camps. Establishing Kitchen Garden and Herbal Garden.

2.6 The tourism destination competitiveness evaluation of by topsis & information entropy e:

A case study of using a multi-criteria decision-making model in tourism planning was studied to understand character affiliated competitive index formulation to frame destination competitiveness.

The Evaluation framework intends -

- To reduce subjectivity and arbitrary elements.

- Increase the accuracy and focuses.

- Weights are asserted using the information entropy method

- The service quality in tourism is evaluated using this model.

  Wherein methological approach depicted in Figure 15 briefs out the fevelopement of a quantitative model based on topsis in tourism studies.
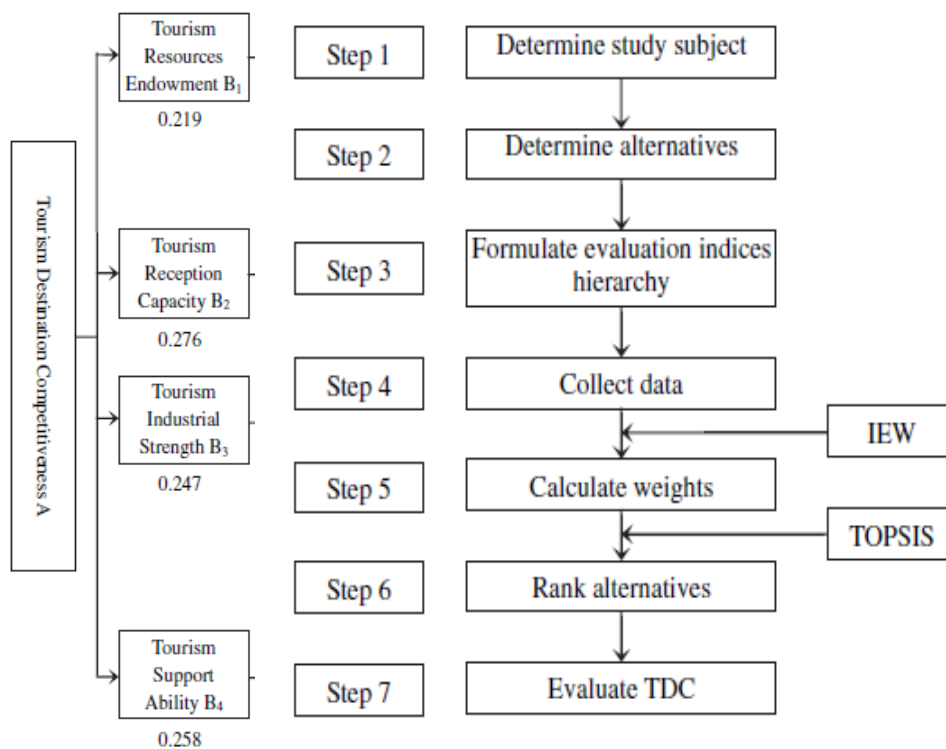
Figure 15 Methologocal approach of TOPSIS in tourism

Eloborated as Technique for Order Preference by Similarity to Ideal Solution ie TOPSIS approach defines solutions from a finite set of given alternatives based on the working principle that the alternative should be having the shortest distance from the positive ideal solution (PIS) and the farthest from the negative ideal solution (NIS).

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An ideal solution is composed of all the best indices, whereas the negative ideal solution is made up of all the worst attainable indices.

Objective	Aspect	Attributes	
	Tourism Resources Endowment B₁ 0.219	Number of National A Tourism Area (unit) X_{11}	0.080
		Number of National 5A Tourism Area (unit) X_{12}	0.132
		Number of National 4A Tourism Area (unit) X_{13}	0.072
		Number of World Heritage (unit) X_{14}	0.128
		Number of National Scenic Spot (unit) X_{15}	0.090
		Number of National Historic City (unit) X_{16}	0.097
		Number of National Historic Town (unit) X_{17}	0.080
		Number of National cultural protecting unit (unit) X_{18}	0.087
		Number of National Intangible Cultural Heritage (unit) X_{19}	0.073
		Number of National Nature Reserve (unit) X_{110}	0.074
		Number of National Forest Park (unit) X_{111}	0.087
	Tourism Reception Capacity B₂ 0.276	Number of Travel Agency (unit) X_{21}	0.205
		Number of International Travel Agency (unit) X_{22}	0.232
		Number of Star-rated Hotel (unit) X_{23}	0.187
		Number of Room (unit) X_{24}	0.186
		Number of Bed (unit) X_{25}	0.190
	Tourism Industrial Strength B₃ 0.247	Number of International tourism (10000 person-times) X_{31}	0.259
		Number of Domestic tourists (10000 person-times) X_{32}	0.231
		Receipts of International tourism (USD 10000) X_{33}	0.260
		Receipts of Domestic tourists (100 million yuan) X_{34}	0.250
	Socio-Economic Support Ability C₁ 0.409	Gross Regional Product Per Capita (yuan) X_{41}	0.223
		Total Investment in Fixed Assets (100million yuan) X_{42}	0.159
		Passenger-Kilometers (10000 person-km) X_{43}	0.172
		Paved Roads Area Per Capita (sq.m) X_{44}	0.125
		Possession of Public Vehicles per 10000 Persons (unit) X_{45}	0.162
		Possession of Taxis per 10000 Persons (unit) X_{46}	0.159
	Eco-Environment Support Ability C₂ 0.591	High Air Quality Days (day) X_{47}	0.093
		Rate of Waste Water up to Discharge Standard (%) X_{48}	0.065
		Percentage of Area of Dusts under Control in the Land Area (%) X_{49}	0.123
		Percentage of Area of Noises up to Standards in the Land Area (%) X_{410}	0.159
		Rate of Consumption Wastes Treated (%) X_{411}	0.069
		Rate of Consumption Waste Water Treated (%) X_{412}	0.087
		Public Green Area in Urban Districts Per Capita (sq.m) X_{413}	0.105
		Rate of the Public Green Space in Constructed Area (%) X_{414}	0.062
		Forest-coverage Rate (%) X_{415}	0.237

Figure 16 Evaluation indices of TOPSIS model

The consisted of two-step procedures with three hierarchies, four aspects and 35 evaluation indices depicted in Figure 16. The information entropy weight (IEW) was weighted based on significance to derive rank analysis .

2.7 PASLOP Model :

Developed in 1977 by Baud-Bovy and Lawson,it was one of the intitail effort looking to integrate the interdependencies in tourism through a linear planning model.It ackwoledged **interdependencies between the tourism industry** and socio-cultural,econonomic,political sphears of the destination.

The model intends to develop case scenarios based on tourism resources available.based on human,socio-cultural and envirronamental resources of region derived based on tourism market demand which broadly encompasses **economic,socio-political** factors.By making use of **extensive monitoring and feedback systems, it permits flexibility and adaptability as depicted in** Figure 17
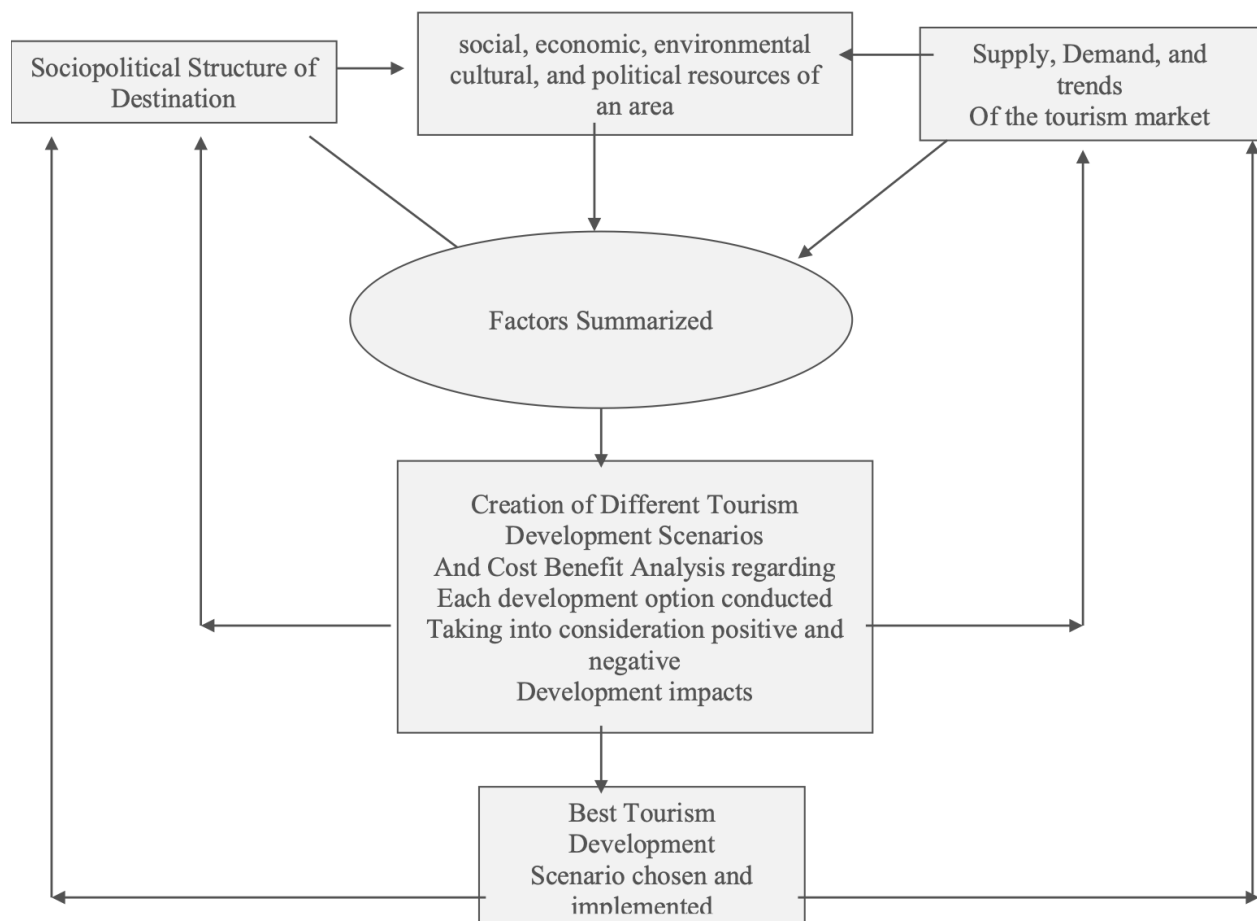
Figure 17 Conceptual Representation of the PASLOP Model

2.8 Boo's model - Expert driven-local participatory planning

Step 1 Assessment of tourism Environment- using specific questions	→	Step 2 Goal Setting Best case scenarios	→	Step 3 Expert led Community oriented strategic planning	→	Step 4 Print and distribute Finalized plan to potential collaborators
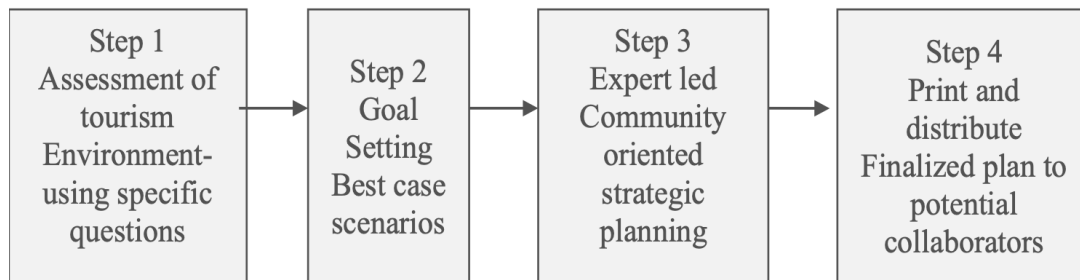
STEP 1 - The tourism environment is assessed with experts answering comprehensive questionnaires regarding :

- The current condition of tourism & availability of natural resources,

- level of tourist demand & availability of facility

- Cost-benefit of current tourism.& Presence of cultural resources

- Visiting purpose & Origin of a tourist trip.

**STEP 2 –** The planners are to **set goals using a best-case scenario model with respect to** :

- Objectives & Strategies on how could tourism management can be improved?

- If there is a scope to start from scratch, what can be done uniquely? & How could the tourism experience be enhanced?

- How the negative impact of tourism be minimized? & What are the lost opportunities?

- The above discussion should be in considerations of local communities, development experts, government bodies, private players and NGOs, etc. (Boo Cited in Ceballos-Lascurian, 1996)

STEP 3 – The **Strategic planning process is based on community orientation and is Expert-driven,** which uses outside facilitators alongside group processes.

The plan highlights the **significance of delineating the desired level of tourism by a community. It is during action strategies that can be** correctly identified for implementing the desired level of tourism development.

STEP FOUR

To Publicize the formulated **which describes the planning processes**. Action strategies are identified simultaneously, as mentioned in step 3, wherein step4 gets in specific with respect to identifying **potential technical/financial contributors.**

3. Ayodhya

3.1 Why Ayodhya?
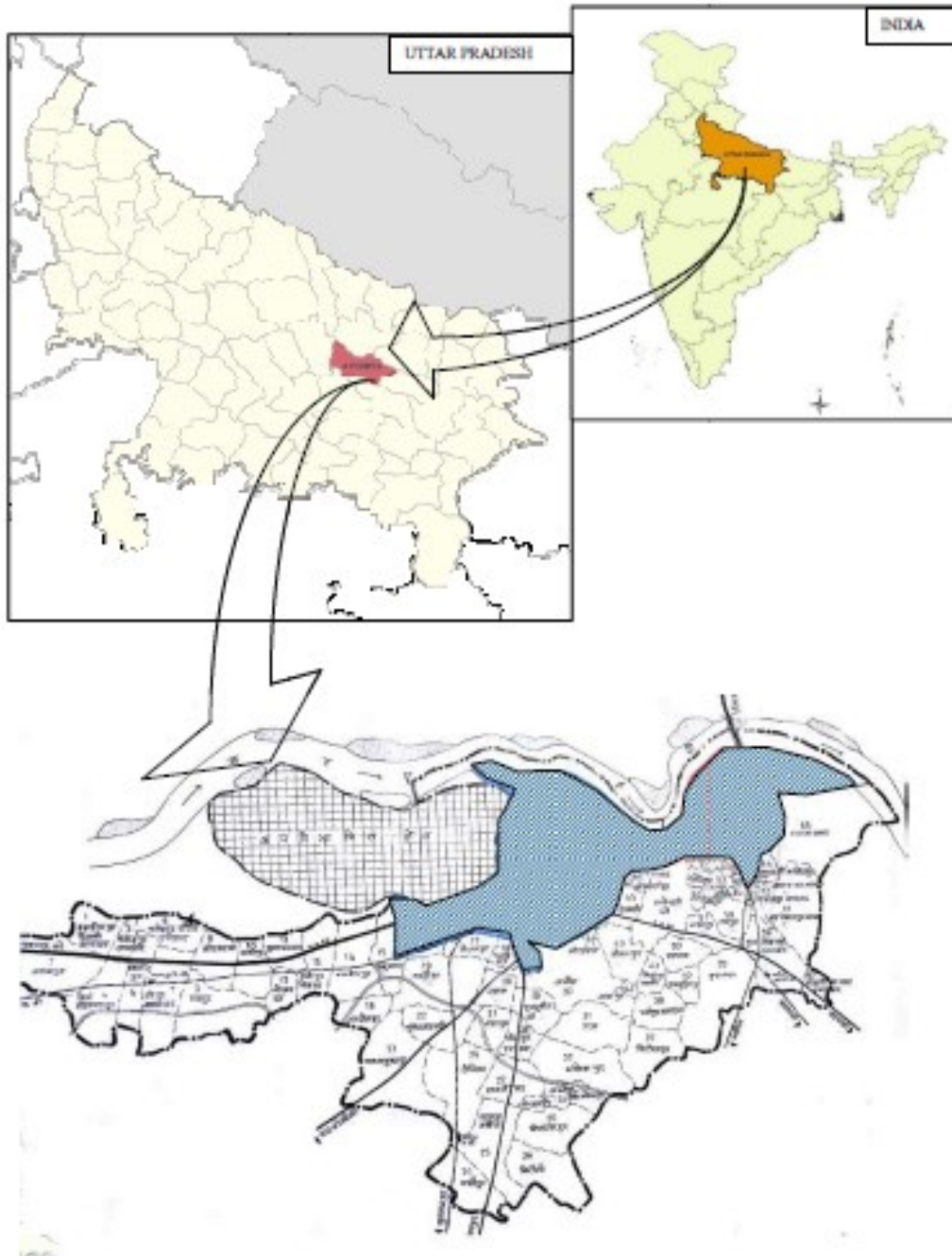
Figure 18 Ayodhya Location

Source-(Ayodhya Development authority)

The City of Ayodhya, located in the state of Uttar Pradesh on the bank of river Sarayu(depicted in Figure 18), stands out to be the major blooming tourist destination attributing to its significance in the socio-economic & environmental spheres -

Socio-cultural significance

Ayodhya, reckoned as one of the 7 (Sapta puri) sacred cities of Hinduism, lies as the gateway of the government of India's most ambitious Ramayana circuit. Being an ancient historic capital of the Kingdom of Kosala and Nawabs of Awadh, it ranges its significance across faiths and cultures.

The destination consists of more than 105+ Hindu religious/Historic heritage structures majorly concentrating in the core zone. (UP tourism). It is the birthplace of 5 Jain Tirthankaras, and the visit of Mahaveer withholds Jain heritage of 2500 years.

Faizabad-Ayodhya, built upon as the first capital of Nawab of Awadh, enshrines as a key destination of the Sufi sect of Islam encompassing major places such as Bahu Begam ka Maqbara, Gulab Bari, Imam bara and others.

Bramha Kund and Nazarbagh gurudwara trace back their roots to Guru Nanak ji and Guru Tej bahadur Ji aligning the destination's prominence in Sikhism.

Cultural bondage between Ayodhya and Korea dating back to 48AD through Queen Huh Hwang-Ho initiating a potential to develop an intercultural repository expressed in the form of memorial and Korean cultural centre.

Economic significance

It has been projected to be the epicentre of mass religious tourism with an expected tourist foot to be around 1 lakh/day by 2023 as per UP-tourism attributing to the construction of Ram temple.

With an intent to comprehensively develop Ayodhya as a religious-cultural hub and epicentre of the Awadh circuit, the government of UP has proposed to spend 2000 crores due to the expected growth of tourists by three-fold by the next 11 years, increasing the feasibility of implementation.

Environmental significance
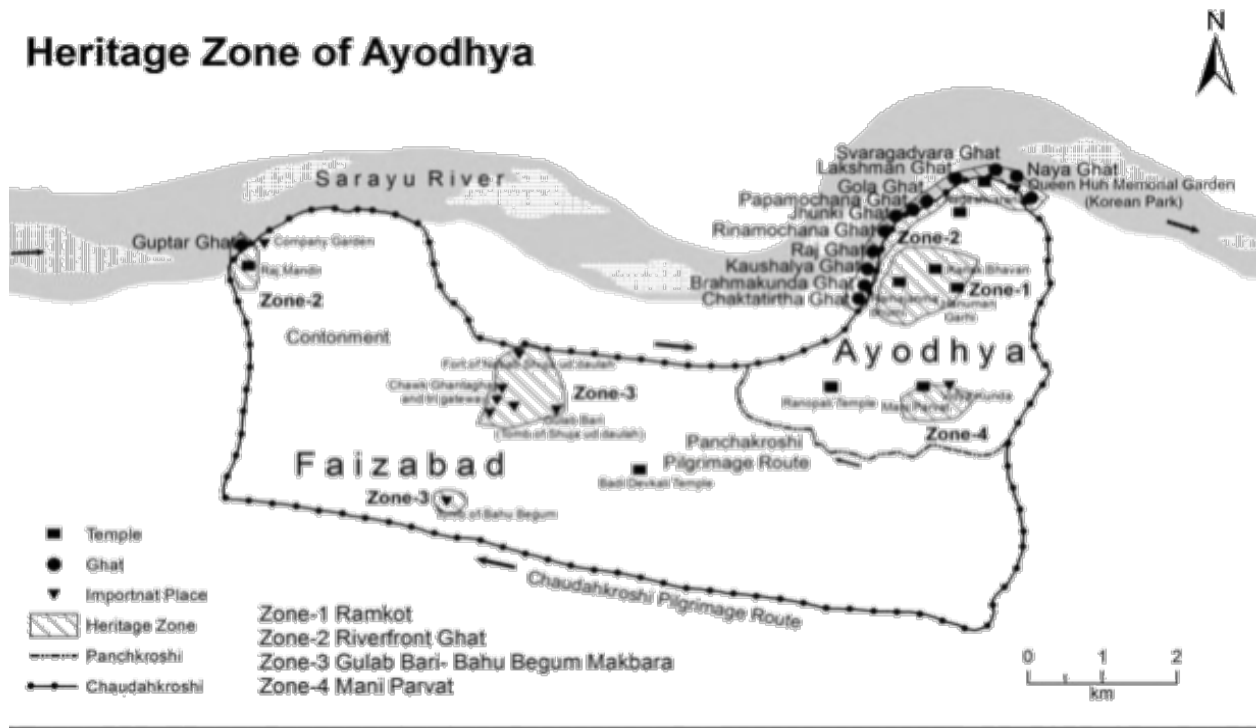
Figure 19 Heritage zones of Ayodhya

Source-(Ayodhya imageability Rana PB Singh)

Ayodhya being the first major city over the banks of river Sarayu and set to urbanize at a tremendous rate, attributing towards its mass tourist influx creates a necessity to frame action plans towards sustainably channelizing these resources.

River Sarayu's rich natural landscape across which heart of beliefs and heritage of cities cultural and historical landscape with more than 25 ghats(as depicted in Figure 19) engulf historical and spiritual significance, increasing the potential of developing river-based tourism.

Transforming at a stage of development and consolidation on the Butlers tourism development model requires looking into critical range for carrying capacity.

3.2 Regional connectivity of Ayodhya
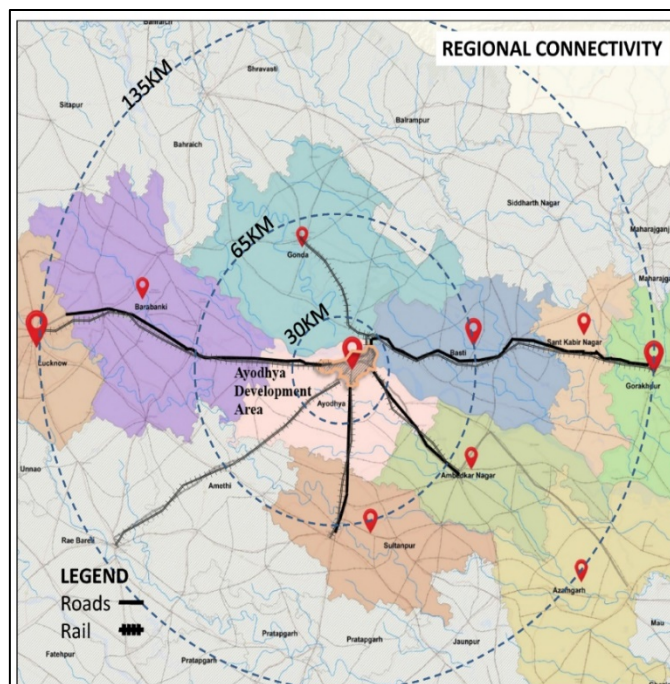
Figure 20 Ayodhya Regional connect

Source-(Ayodhya Development authority)

Attributing its historical and concurrent significance, Ayodhya has emerged as a **regional hub** concerning the transportation sector. Its location is in the cross junctions of roadways (as depicted in Figure 20) connecting Lucknow. Gorakhpur, Prayagraj and Varanasi(connectivity briefed in Table 4. The city has well-established connectivity through **Road and Rail, and its emerging international airport** sculpts out the town to be an ideally connected tourist destination. It has frequent services of Bus and Tempos, catering to not just tourism but also industries which include Industries and agriculture. With rapid **urbanization** to be set in the cities, connectivity can act as a boon for not just **tourism** but also for **investors**.

Table 4 Connectivity to Ayodhya

Place	Distance	Duration (hrs) by Road	Duration (hrs) by Rail
Lucknow	135km	2.5 to 3	4.30
Gorakhpur	142km	2.5 to 3	3.30
Prayagraj	167km	3.30 to 4	5 to 8
Varanasi	216km	5 to 5.30	4.5 to 5
New Delhi	663km	10 to 12	11 to 17
Kolkata	870km	19 to 22	20 to 23

3.3 Ayodhya – study area
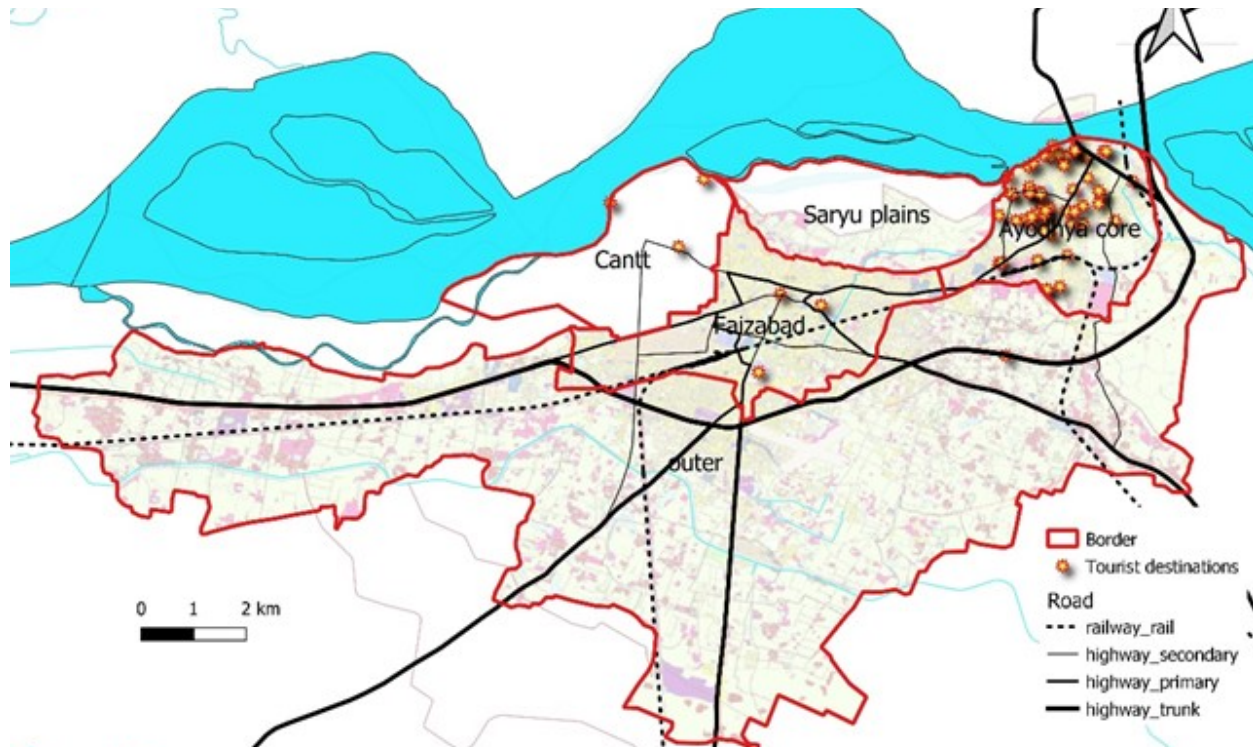
Figure 21 Ayodhya study area

Source: Author

The study area encompasses the jurisdiction of Ayodhya Nagar Nigam and the cantonment area. It is classified into five different zones (depicted in Figure 21) with varied characteristics for the study is briefed below -

Ayodhya Core

Located on the Northeastern part of Ayodhya, the zonal boundary was previously administered as Ayodhya. The zone consists of most tourist spots and heritage structures, and built structures can be majorly categorized under High-density Low Rise development.

Faizabad

Administered previously as Faizabad Nagar Palika Parishad, the zone encompasses major Islamic shrines, commercial spaces, and Awadhi style structures. Wherein built structures are noted to be High-density medium Rise development in nature.

Cantt

Located on the Northwestern boundary of Ayodhya, the zone encompasses touristic places of religious & cultural significance with serene landscapes such as Guptar ghat and military mandir. They have a restrictive entry with all rights reserved with the army.

Sarayu plains

The zone consists of the lowest population density among all others and is located in the central stretch of the study area alongside the sarayu river.It can be noted that the attribute of sparse agricultural landscape with village settlements is linked to the fact that zone not previously being under development area.

Outer zone

The outer zone consists of newly added areas to Ayodhya Nagar Nigam, previously under the Ayodhya development authority. It is majorly agricultural in use, and increasing urbanization is prominently observed attributed to Commercial, , industrial uses across transits.

3.4 Landuse

EXISTING LANDUSE
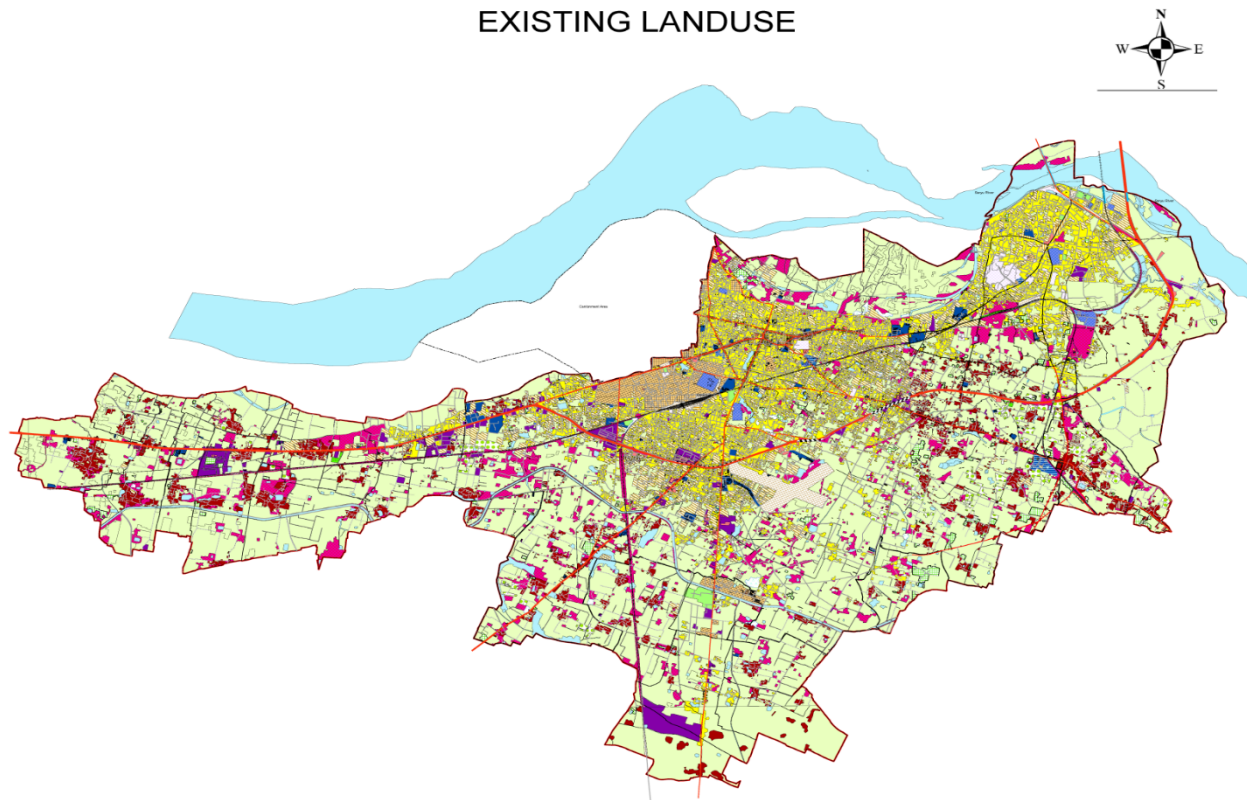
Figure 22 Ayodhya Land use 2020

Source-(Ayodhya Development authority)

In the year 1985, Ayodhya-Faizabad Development Authority was notified, and its area was 133.67 Sq Km. This was renamed as Ayodhya Development Authority in the year 2018. Existing land use of development area which was undertaken in 2020 is depicted in above Figure 22 A qualitative analysis based on Ideal developable area % (URDPFI) was done wherein the impact of tourism on urbanization and required land-use intervention was derived.as depicted in Table 5:-

School of Planning
and Architecture,
New Delhi

National Institute of Urban Affairs

Landuse analysis

Table 5 Landuse analysis based on URDPFI ideal developable scenario in a tourist city

LANDUSE	AREA (in Ha)	Percentage	Ideal developable area % (URDPFI)
RESIDENTIAL	1531.2	11.4	35-40
COMMERCIAL	21.1	0.1	5-7
INDUSTRIAL	216.5	1.6	4-5
INSTITUTIONAL	299.3	2.2	
PUBLIC & SEMI PUBLIC	37.1	0.2	10-12
RECREATIONAL	254.4	1.9	10-12 (includes water bodies)
PUBLIC UTILITIES	2.1	0.02	
TRANSPORTATION	583.6	4.3	12-14
OTHER	107.7	0.8	
AGRICULTURAL	7417.2	55.4	
RURAL	605.9	4.5	
SPECIFIC LAND USE	4.7	0.04	7-10
VACANT LAND	870.6	6.5	
WASTE LAND	842.6	6.3	
WATER BODIES	539.1	4.03	10-12 (Includes Recreational use)
WETLANDS	33.1	0.25	
Total	13367.	100	

In the above analysis of land us, Agriculture stands out to be the significant land use primarily due to new areas depicting the state of urbanization and future scope of expansion. Specific land use can be increased to conserve the core heritage zones, which is currently not covered under zonal restrictions. Wetland degradations attributing to rapid expansion remains a crucial concern attributing to rapid urbanization. Existing Recreational use classification is limited, and a larger influx expected. Hence, increasing recreational land use would not just cater to the existing population but also diversify tourism in the city. It would expand the stay and trickle-down economic benefits to a larger local economy, with traditional water conservation existing in the forms of kunds gradually declining. Kund rejuvenations and reconstructions would add environmental benefits along with socio-cultural value.

With accessibility being a concern across Sarayu plains, the outer zone being a negative factor in increasing transportation use would be a positive change with respect to tourism.

3.5 Geophysical character

An objective analysis was done based on Geophysical components, which has a passive impact on the city's ecological and touristic character encompassing elevational analysis, state of thermal discomfort, along with an overview on solar potential and rainfall trends to derive sustainable strategies to cater to drastic demand which is predicted to emerge.

Elevation –
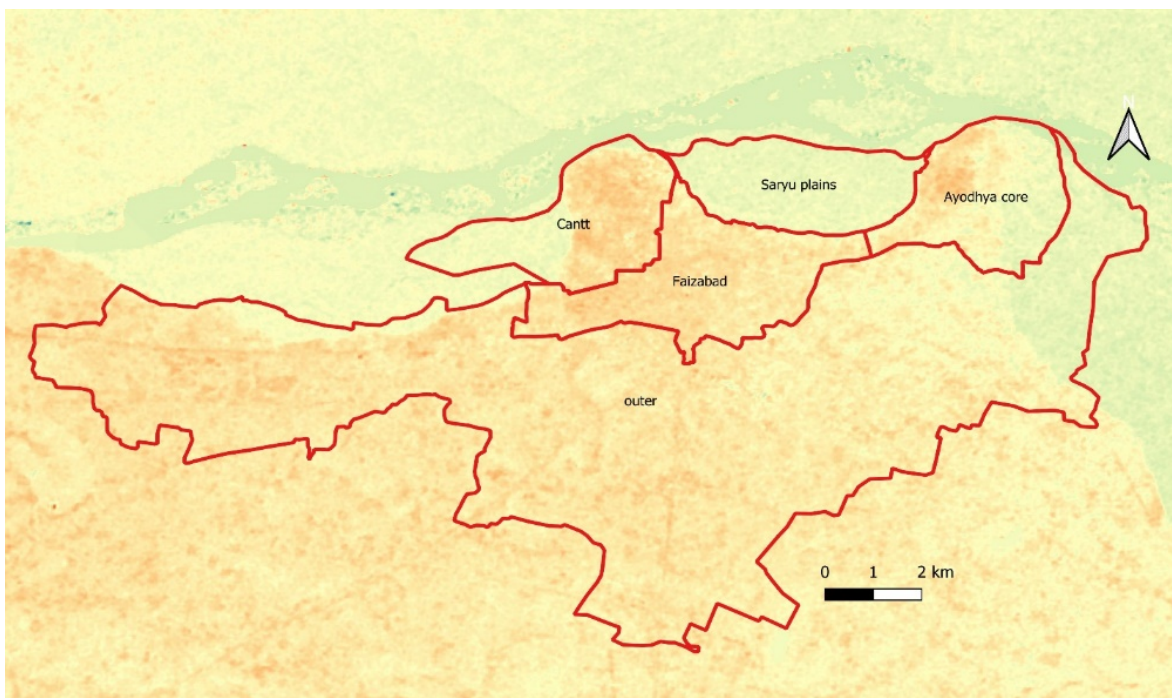
Figure 23 Elevation map

Source-Author

The city slopes from west to east, as depicted in Figure 23 where the eastern part of Ayodhya and Sarayu plains prone to flood due to its lower elevation, consist of major tourist spots. Hence a need arises to develop a flood-resistant strategy to conserve the tourist destination alongside maintaining the beautiful landscapes.

Temperature
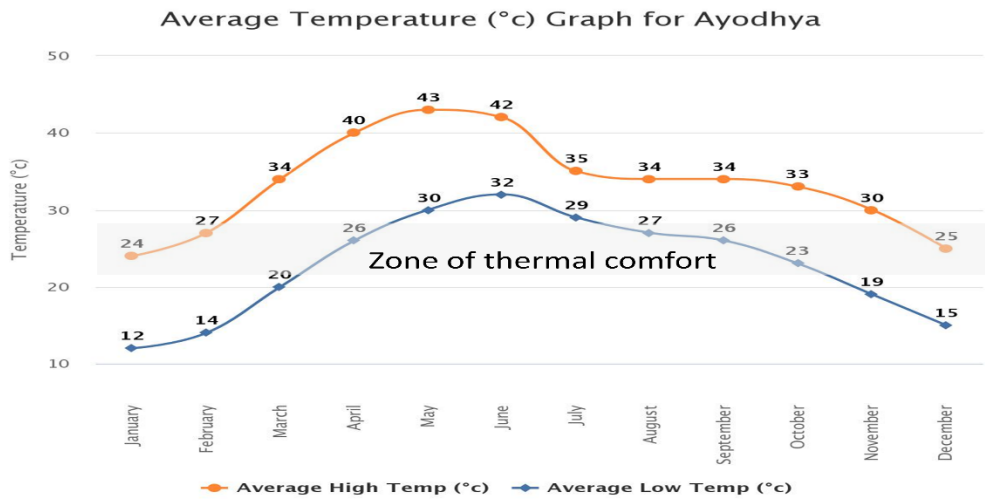
Figure 24 Average temperature graph of Ayodhya

Source-worldweatheronline.com

The average temperature is analyzed over the thermal comfort zone to derive inferences based on the correlation between thermal comfort and tourism. As a cognitive impact persists on tourist decision on visiting season, duration of stay, mode of intracity travel.

The tourist influx and thermal comfort are analyzed to have a mutual relation where tourist influx depleted during months with higher temperatures. During April to June, high temperatures and humidity rose up to 43 C, aligning with the tourist season (Ram Navami, Hanuman Jayanthi, Holi, causing thermal discomfort, deriving a need for Dynamic shading and heat proofing techniques.

Sun hours
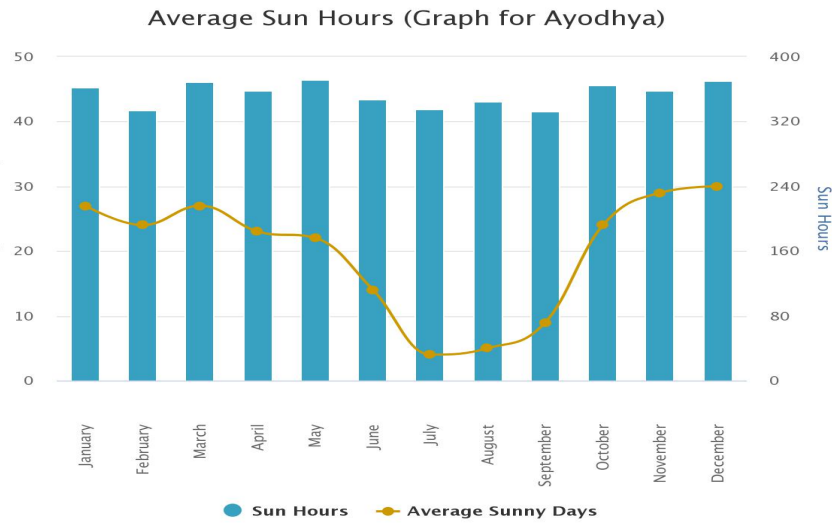
Figure 25 Average Sun Hours graph of ayodhya

Source-worldweatheronline.com

There exists a high potential to tap solar energy attributing to its sun hours up to 240 hours in correlation with higher sunny days distributed across the year is inferred as per Figure 25

Rainfall
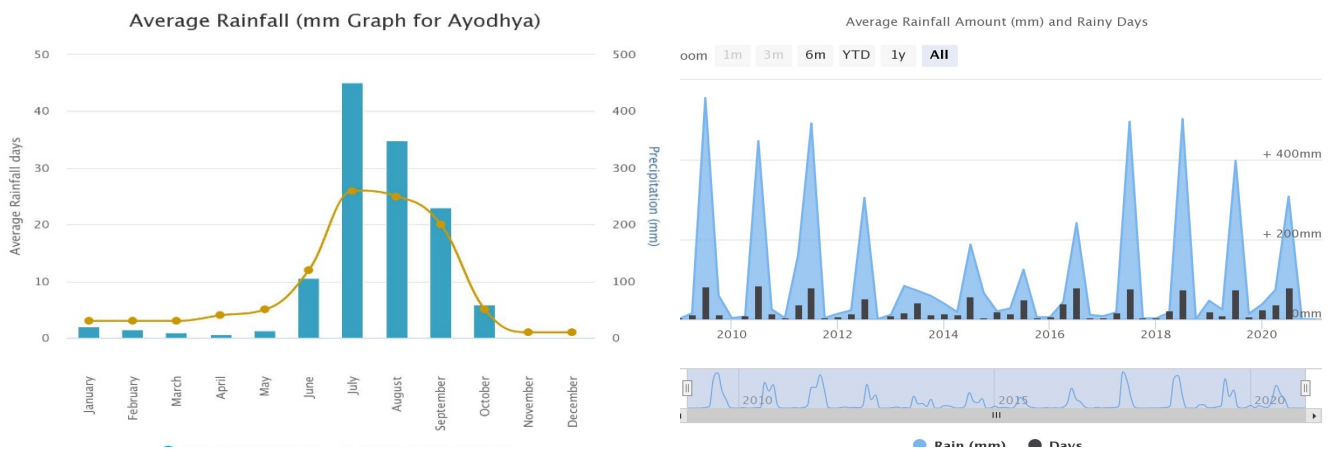
Figure 26 Rainfall trend in Ayodhya

Source-worldweatheronline.com

An inconsistent and decreasing rainfall trend is observed, where July and august have the highest precipitation followed by flood-like scenarios emerging across Sarayu plains. The increasing dependency on groundwater. Alongside increasing water demand puts in a need to conserve rainwater as a sustainable practice.

3.6 Administrative stakeholders

Functional profile of administrative organizations involved in Ayodhya's touristic development was profiled wherein crucial issues pertaining to Administrative, Organizational, Financial cohorts were inferred.

The administrative stakeholders involved in order to develop Ayodhya as an international tourist destination range at varying organizational levels, as depicted in Table 6

Table 6 Adminitsrtive stakeholders of Ayodhya

Source: Author

Central	State	City
• Ministry of Tourism, Government of India. • Namami Gange • Archeological survey of India. • Department of civil aviation & AAI • NHAI • Indian Railway.	• UP tourism. • Department of religious affairs & Dharmarthkarya Vibagh. • PWD • Transportation department. • Forest department/Van vibagh. • Housing and Urban planning department. • Urban Development Department. • Irrigation department. • UP state bridge corporation / Setu nigam. • UP energy department/UP Power corporation limited. • Directorate of Medical Education and Training Utter Pradesh. • Department of medical health and family welfare. • Department of Women and child development.	• Ayodhya Nagar nigam • Ayodhya development authority. • District administration Ayodhya.

The functional, financial and organizational character of the organizations working at the city level, namely Ayodhya Nagar Nigam and Ayodhya Development authority is analyzed

Ayodhya development authority
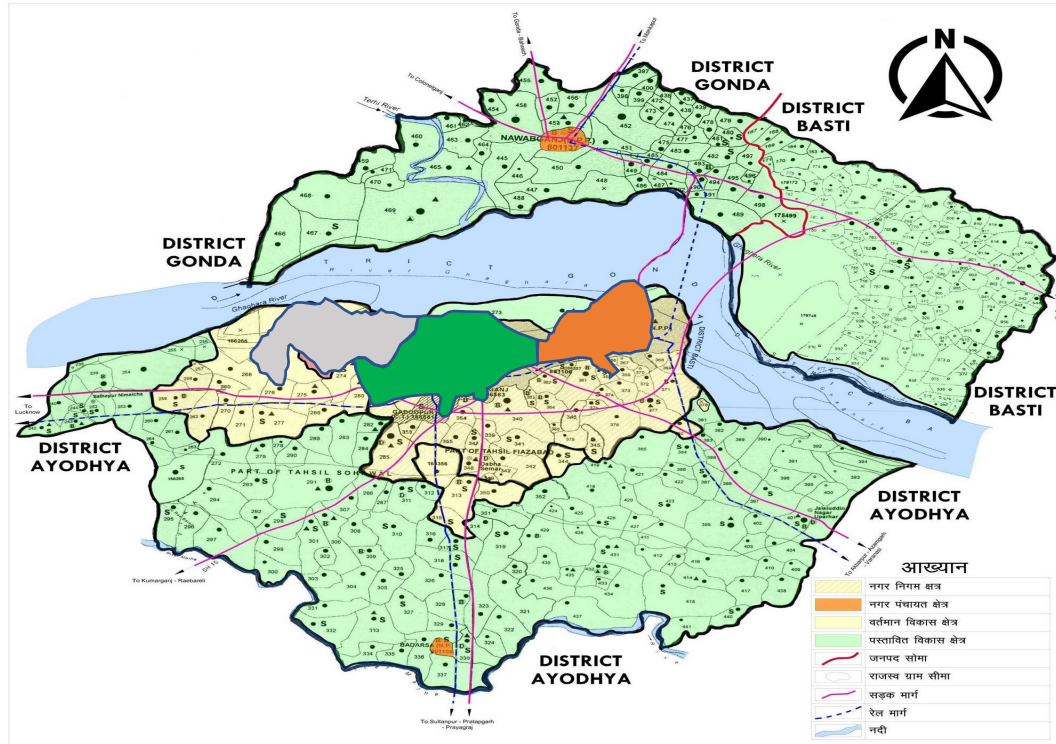
Figure 27 Administrative boundary of Ayodhya development authority

Source: ADA

This parastatal body of ADA looks into the assessment, planning, and construction of development activities in the above jurisdiction depicted in Figure 27, including tourism-based infrastructure. It encompasses a **Population of 4.64 lakh(2021)**. An **area of 133.67 sq km with 41 Villages merged in Nagar Nigam** + 24 Villages in the Present Development Authority = 65 Villages were newly included in Development Authority. Some of the issues inferred were as follows-

- The authority is excessively dependent on grants due to lower own revenue generation.due to which there is a need for newer revenue-generating models.

- The zonal regulations/restrictions were absent in and around heritage sites.

- Land acquisition issues & a need for dynamic pricing models had arose primarily due to rapid expansion. acquisition of land in and around the city.

Ayodhya Nagar Nigam

आख्यान

▨	नगर निगम क्षेत्र
	वर्तमान विकास क्षेत्र
━	जनपद सीमा
	राजस्व ग्राम सीमा
━	सड़क मार्ग
┄	रेल मार्ग
	नदी
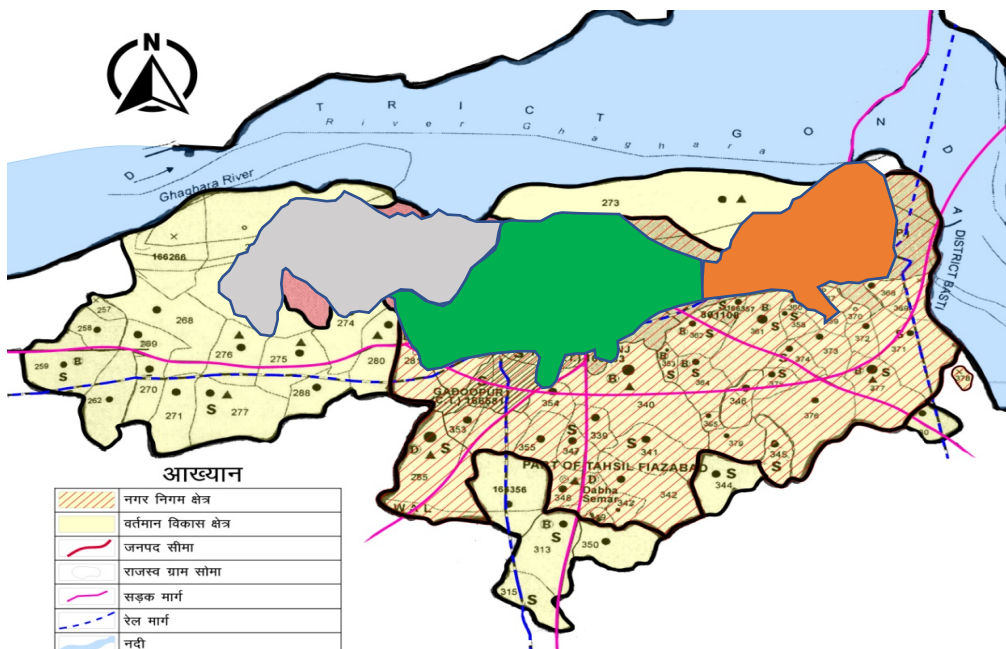
Figure 28 Administrative boundary of Ayodhya Nagar Nigam

Source: ADA

Ayodhya Nagar Nigam was formed recently in 2017 by merging Ayodhya Nagar Palika Parishad and Faizabad NPP along with villages previously under development authority. It encompasses 60 wards and five administrative zones with a population of 4.01 lakh(2021) and an area of 94.618 Sq.km (41 Villages merged in Nagar Nigam) yet to be classified as wards).

Functions

Assessment & Collection	Building	Engineering (Civil)
Health	Lighting	Market & License
Parks & Squares	Planning & Development	Project Management Unit
Sewerage & Drainage	Solid Waste Management	Water Supply

Interdepartmental coordination issues and higher dependency upon grants depicting the need for newer revenue streams are significant issues.

Project management unit

Project Management Unit (PMU) , an interdepartmental body, is formed with an objective to achieve efficiency, transparency and coordination across departments regarding the projects.

The platform currently sets out to depict the project status & progress of Ayodhya Nagar Nigam, Ayodhya development authority and Jal Sansthan.
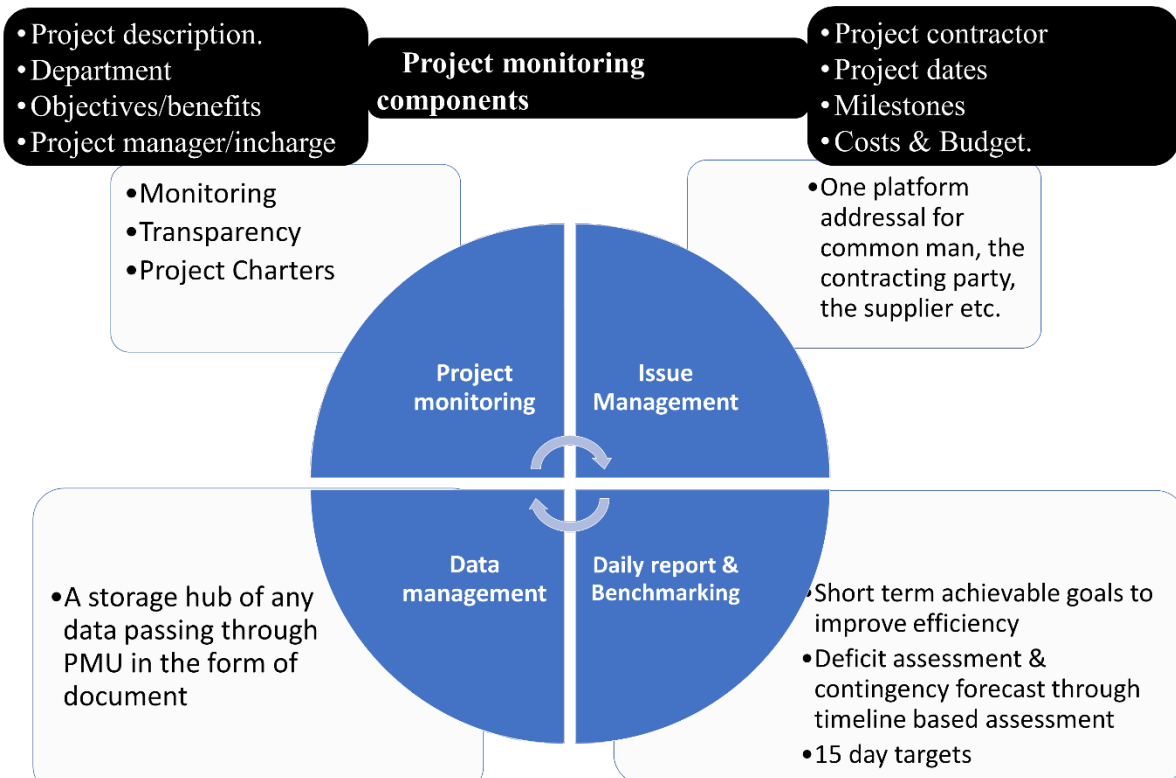
Figure 29 Functions of PMU

Source-Developed by the author based on literature

Some of the major inferences post functional analysis of PMU was Management had primarily been limited to monitoring, and there needs a requirement to enhance assessment and pragmatic solutions through an innovative approach.

The purview of the PMU has to be extended, increasing the stakeholders as currently its been functionally active with respect to only three departments. There is a need for centralized interdepartmental database management, which stores data and processes it.

3.7 Demographic & tourist trends

Ayodhya population   R² = 0.9835

	1961	1971	1981	1991	2001	2011
■ Population of Ayodhya Nagar Nigam	83177	102835	132373	165079	194122	221118
■ Ayodhya rural areas(Under Development area)	NA	NA	NA	90500	134292	167216
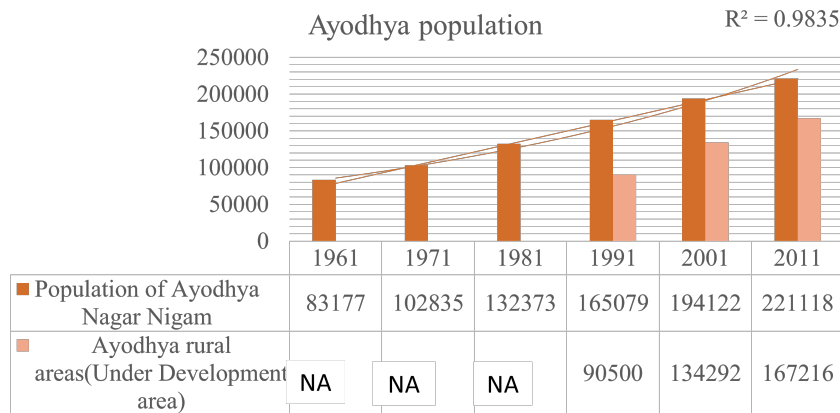
Figure 30 Ayodhya population trend

Source-Town and country planning department.UP

The analysis is capitulated based on census and UP tourism data shows the drastic growth rate of local and floating population perpetuated by tourism reflecting potential which exists in terms of international tourists. Activity-based strategy for tourist redistribution and quantum of challenges which would be emerging in future.

The city of Ayodhya has witnessed gradual growth up till 2011 (as depicted in Figure 30) and is set to increase its growth rate in the upcoming years, attributing to opportunities the urbanization would be providing. According to census 2011, the existing population of 65 villages within the Ayodhya development authority boundary is 167216. Wherein 41 villages have been merged into the Nagar Nigam.Steady growth of 8.2% can be observed from 2009 to 2019 in tourist influx, as depicted in Figure 31. A sudden dip by -234% can be observed in 2020, attributing to the COVID-19 pandemic. It is said to recover.

TOURIST FOOTFALL   SOURCE : UP TOURISM R² = 0.1748

Figure 31 Tourist footfall

Source: UP Tourism

International tourists comprise less than 0.2% (Figure 32), wherein the cities' tourism is entirely driven by domestic tourist-driven by religious purpose, but an average rise of 11.1 % adds a huge potential to tap, where regional integration of varnasi and mainstreaming of existing locations with diverse character would provide a boost.

Figure 32 International tourist footfall

Source: UP Tourism

The tourist spike is majorly observed across the months of Feb-march(Attributing to Holi, Mahashivaratri and Ram Navami), September to November (Dussehra, Deepotsav & Parikrama) as depicted in Figure 33. The in-between dip months can be attributed to lesser events and scorching heat.

Source: UP Tourism

	January	February	March	April	May	June	July	August	September	October	November	December
2019	83102	87263	3537092	106172	91026	91252	93006	1334413	4266728	4014345	5376325	163890
2018	91144	96987	3933456	58241	62165	93204	96464	1336184	4267362	4227782	5721155	165248
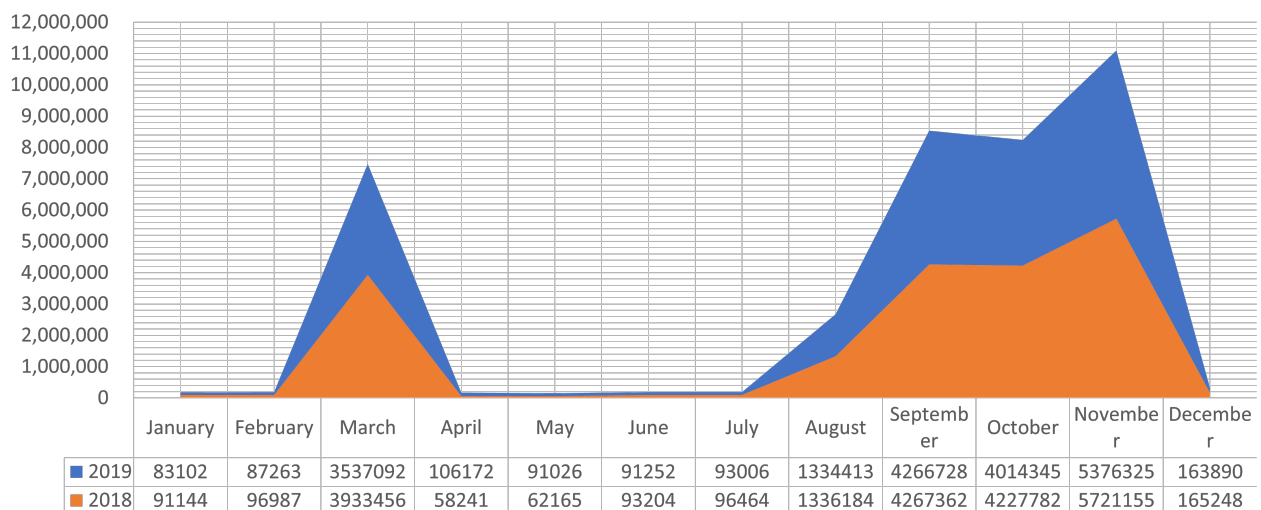
Figure 33 Tourist influx - Monthly variation

4. Tourist destination profile

Destinations were profiled with respect to the zone in the line of intracity travel pattern. The places were characterized with respect to zones based on – Nature of the place, Issues Potential opportunities. It was noted through a lens on how tourism centers around the Sarayu river attributing to the socio-cultural character of Ayodhya and not river just being a component in city's tourism.
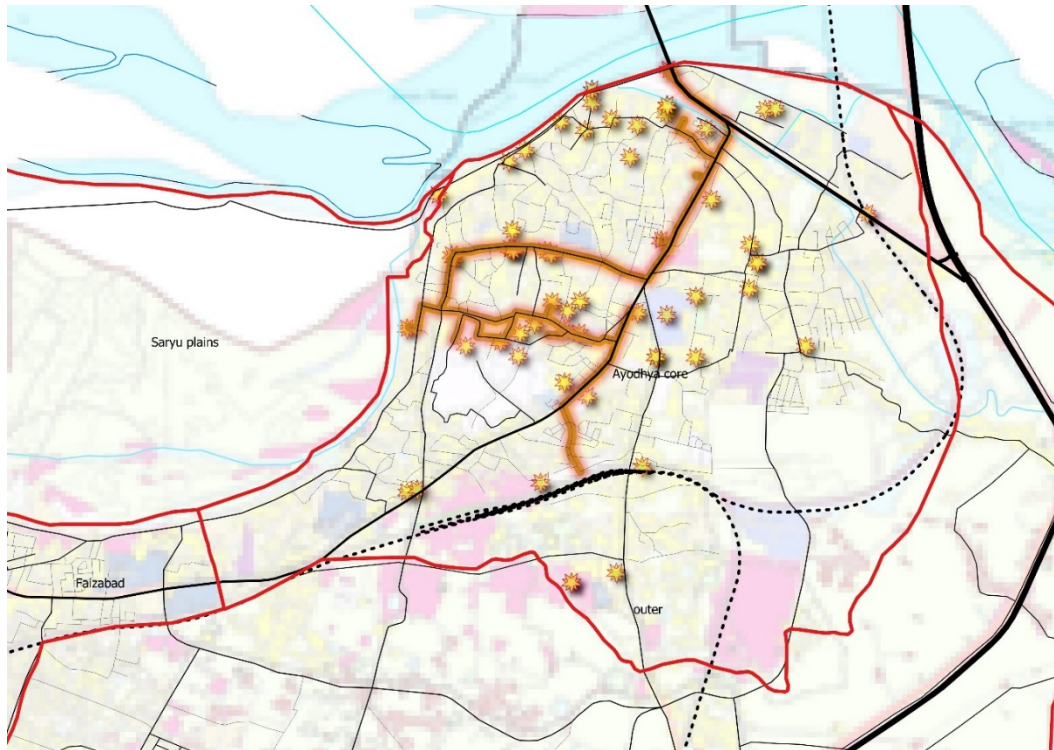
Map 1 Ayodhya core – Tourist routes and spots

Source: Author

Tourist Destinations in the study area categorically profiled based on their character into Ayodhya core, Faizabad zone, cantonment, outer zone and sarayu plains.

4.1 Ayodhya Core

Located on the Northeastern side of Ayodhya on the banks of Sarayu.This zone acts as an epicentre of tourism with major places of touristic. religious and heritage significance. With the religious and cultural character being the factor of attraction, new development along the river stretch also caters to the leisure activities of localities along with other tourists.The profile of tourist movement and destination characterization is captured through primary surveys which is briefly explained.

Ram ki paidi-Hanuman ghari- Dashrat bhavan

Figure 34 Ram ki paidi

Source: Author

Located parallelly on the banks of river Sarayu, the tourists start to begin their journey by bathing at Ram ki paidi or Nayaghat, usually at morning hours, attributing to the socio-cultural beliefs. Located at the **centre of the zone Hanuman ghari acts as a**.the **starting point** for a person who wants to visit Ram Janam Bhoomi. It is believed to be where **Hanuman Ji started living when Lord Rama returned to Ayodhya and is** administered by **Nirvani akhada**

Figure 35 Hanuman ghari

Source: Author

Dashrat bhavan acts as a intermediary destination between Ram janam bhoomi Located 100m away from Hanuman ghari it is also known as Bada stan. Being a place where Maharaja Dashrath ji resided it is visitied by most of the tourist who visit RJB and is administered by Bada akhada.It **encompasses goshala with 70-80 cows and reflects the ashram culture of Ayodhya.**


Figure 36 Dashrat Bhavan

Source: Author

Ram Janam Bhoomi
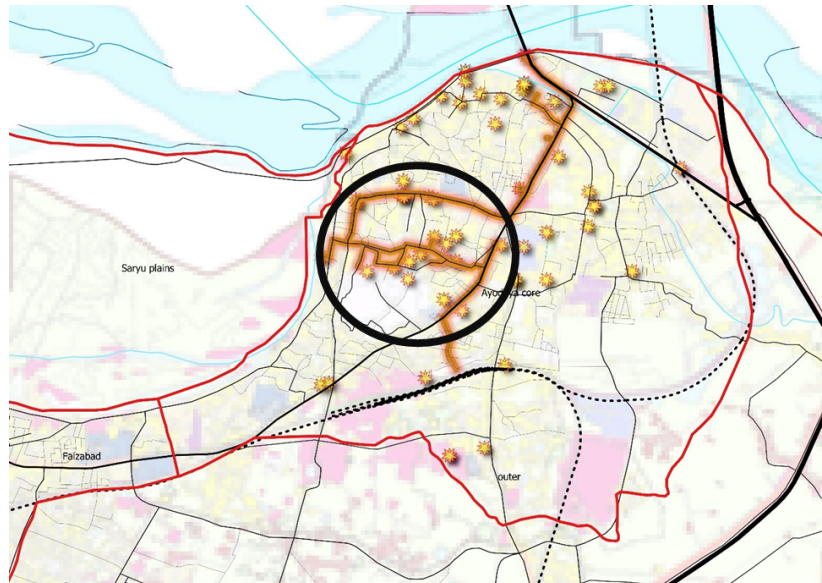
Map 2 RJB zone
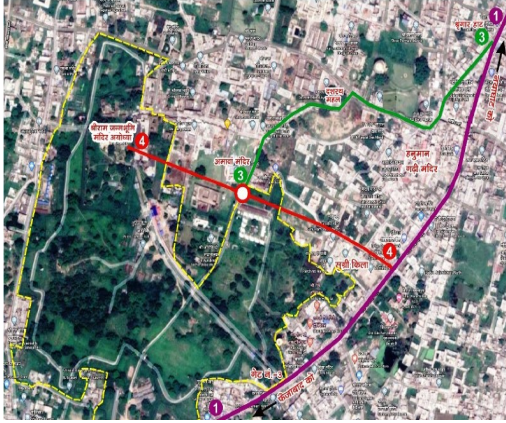
Map 3 Temple region

Figure 37 Proposed Ram Janam Bhoomi temple

Source: RJB Trust

Ram Janam Bhoomi stands out to be the epicentre of Ayodhya's tourism, being the primary reason behind the majority religious tourist influx. The main temple is constructed on the site of 2.7 acres consisting of 3 floors, expected to be completed by 2024.

Around 70 acres has been classified as a temple region of comprehensive development, consisting of a

- Visitor management system and a Solar energy generation centre.Ramps/risks/escalators for elders.Essential public amenities in 15 mins, Multilevel car parking facilities.Three-level tree plantation.

- **Along with structures such as Shri Ram Kund (Yagnashala), Karam kshetra (House of holy rituals), Hanuman ghadi (Statue of lord hanuman), Ram Keerthi (House for mass prayer), Janam Bhoomi sanghrahalay (Display of archaeological evidence), Karam kshetra (House of holy rituals), Hanuman ghadi (Statue of lord hanuman), Guru Vasishta peethika (Center for Vedic research, multistoried boarding/lodging/lounge), Adarsh goshala,** Lilypond and musical fountain**,** Lav kush Nikunj/activity area for children and youth, Maryada Khand/special guest accommodation/cottage**,** Bharath prasad mandap (Food offerings)**,** Mata Sita rasoi annakshetra/large food shelter for devotees. Singhdwar sammukh deepsthamb Lamp tower, **Bhakti Teela (Deep meditating zone)**, Ramlila centre/open-air theatre, Ram darbar (Lecture and communication centre), Exhibition hall.

Kanak Bhavan

Figure 38 Kanak Bhavan

After visiting Ram Janam Bhoomi, tourists visit Kanak Bhavan. A place with religious and architectural significance is believed to be built of Gold when it was gifted to Devi Sita by Kaikei immediately after her marriage to Lord Ram. The Kingdom of Orchha from Bundelkhand rebuilt the structure post destruction.

Categorized as a private space of Lord Rama and Sitaji where uniquely Hanumanji is located outside the palace, it's known for beautiful architecture; the calmness of this place acts as a major factor of attraction.

Issues

The significant issues inferred from the primary surveys were-

- Parking issues
- Pedestrian & vehicle conflicts
- Accessibility issues for elderly & differently-abled
- Concerns of shop vendors regarding road expansion with many of these shops being part of temple ecosystem
- Lack of public toilets
- Public Drinking water facilities are absent, leading to an excess dependency on bottled water.

Ram ki Paidi- Naya ghat

Figure 39 Ram ki paidi, Sarayu aarti and Naya ghat

A conventional tourist who typically visits Ayodhya for Ram Janam Bhoomi spends his evening enjoying the lightings of Ram ki paidi and scenic beauty of Sarayu river along with leisure-based boating activity along with a holy dip. Sarayu aarti as depicted in Figure 39, ends as a major event with a tourist congregation based on belief.

It is at these places major events such as Deepotsav and Ram navami's congregations take place. They symbolize the inclusive public spaces of Ayodhya. Ram ki paidi has also been recorded in the Guinness book for lighting maximum Diyas of 4.5 lakh.

Issues

- Since many devotees take a dip at Nayaghat, although Ram ki paidi has been developed, there exists an overlap between ghats and boat docks.

- The primary survey reflects cleanliness issue in public toilets to be of major concern.

- Lack of changing room facilities at Ram ki paidi forcing ladies to use only Naya ghat, negating the use of ghat, which is primarily constructed for holy bath.

- Design elements such as steep steps and lack of ramps at Ram ki paidi lack inclusivity towards differently-abled.

4.2 Faizabad ,cantonment and outer zone

Map 4 Tourist spots of Faizabad ,cantonment and outer zone

Away from the core zone the Faizabad caters to tourists seeking **heritage/leisure/shopping** through its places such as Gulab bari, Bahu begum ki maqbara.

Tourist is often to be spill out of the core with an interest to explore the cultural heritage character combined with leasure.

The **Cantts gives out special provision** of entry with all rights reserved with army.it consists of Guptar ghat, military mandir and company gardens along catering to religious, nationalistic and leisure audience.

The Sarayu plains consists of **25+ ghats** and different heritage structures in the form of ashrams, Dharamshala's, havelis remains to be most under explored place of the city.

Issues

With only Faizabad zone easily accessible through IPT, the areas inside cant and outer zone is highly dependent on private transport. Sarayu zone being the most inaccessible.

Lesser trickle down of tourist from Ayodhya zone to rest although they remain culturally integrated.

4.3 Non Mainstream Places

It was noted that with greater influx comes greater challenges henceforth which redistribution should be adapted as a strategy for destination development wherein- Many of these non-mainstream places were derived through primary surveys, which were left out in a mainstream tourist itinerary. There exists an excellent potential to redistribute and retain tourism to ensuring social and economic sustainability, simultaneously acting as a tool for conserving heritage and boost tourism.

Destination is predominently characterized by non main stream places at local and regional level which plugs in high potential for expansion of internary provided recquired intervention is done.

Figure 40 Galis of Ayodhya

It consist of Galis Of Ayodhya,Heritage ashrams of Ayodhya, Korean Park, Tomb of Bani khanam,Gumnami baaba resting place across the zones along the river along with Mani parvat and Chowk mosque (Was base of Ahmadullah shah known as maulavi of Faizabad was spearhead of revolt of 1857 within the city limits and Kamakhya temple and imambara at regional level bridging gaghra and gomti rivers.

4.4 Sarayu characterization
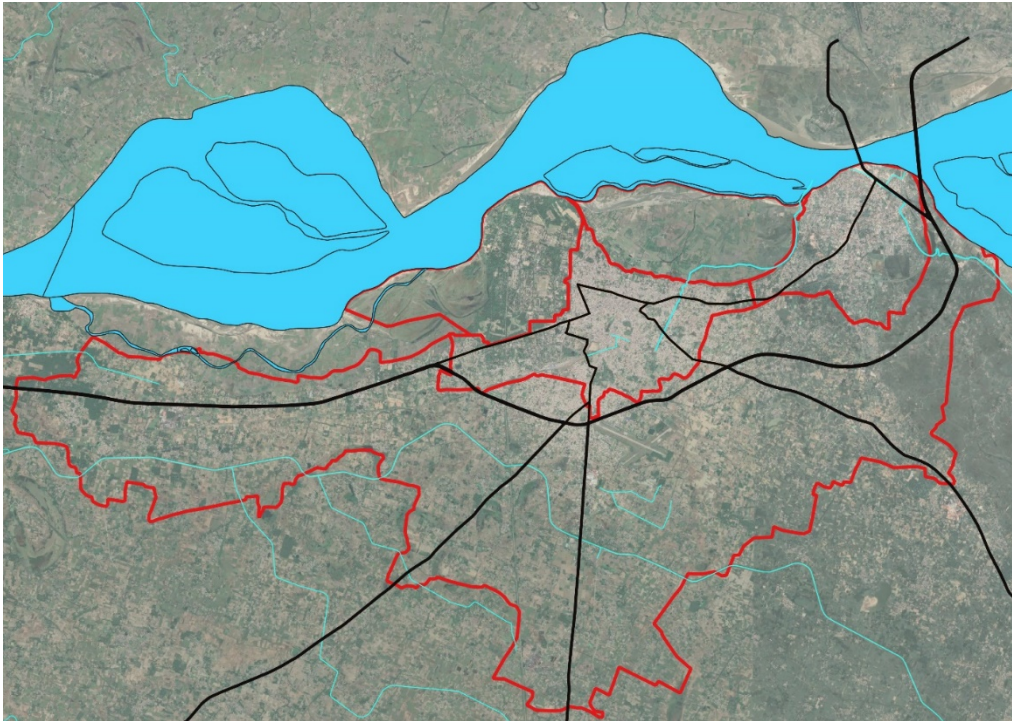
Map 5 River city interaction

The river Sarayu's characterization in Ayodhya's city stretch was analyzed with components consisting of: Activity mapping, Cultural approach towards water conservation, Issues caused by tourism on the river (Solid waste -majorly plastic, sewerage etc.), Landscape assessment through a lens of tourism potential which exists. Navigational profile analysis. A catchment area profile has been done to derive conservation strategies. Flood lines (which are changing rapidly and a need to stabilize the course of flow).with the following inferences decribing the character –

The river Sarayu creates varied landscapes along the zone of interactions that have simultaneously been developed alongside Ayodhya's rich socio-cultural scapes.

Ancient heritage-rich elements can be observed up till the stretch of Prahalad ghat along core zone..post which it transits towards natural heritage with rural and agricultural backdrop alongside settlements of fisherman community at Rajghat which is observed till the cantonment.

In the Cantonment backdrop gets denser vegetation with cultural richness with places such as company garden and Guptar ghat.The northern bank is primarily agricultural. With river Sarayu changing its tracts across the years, the upper bank remains uninhabited, as depicted in the line diagram.
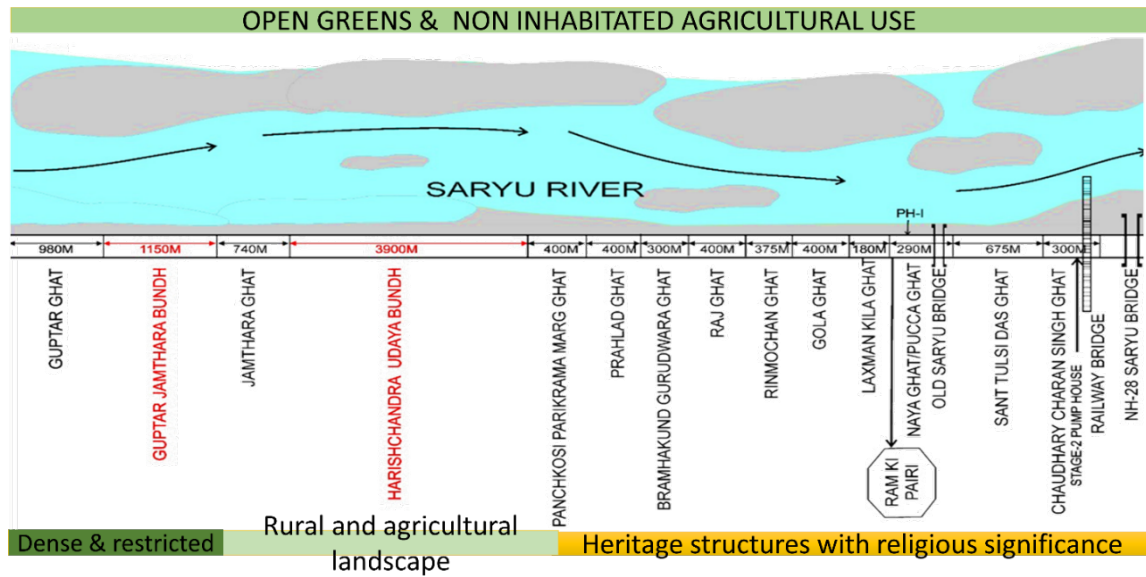
Figure 41 Line diagram of riverside activities

Increasing urbanization has driven concern with water shed area across sarayu plains and northern banks being of main concern there needs to policy and spatial interventions to conserve these areas.
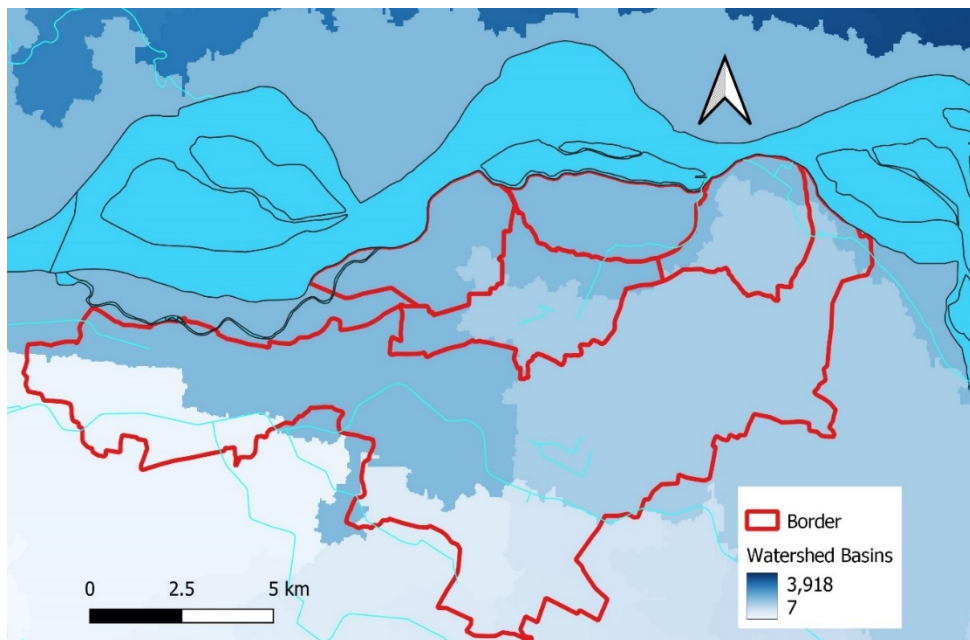
Map 6 Watershed basin of Ayodhya

4.5 Sarayu conservation
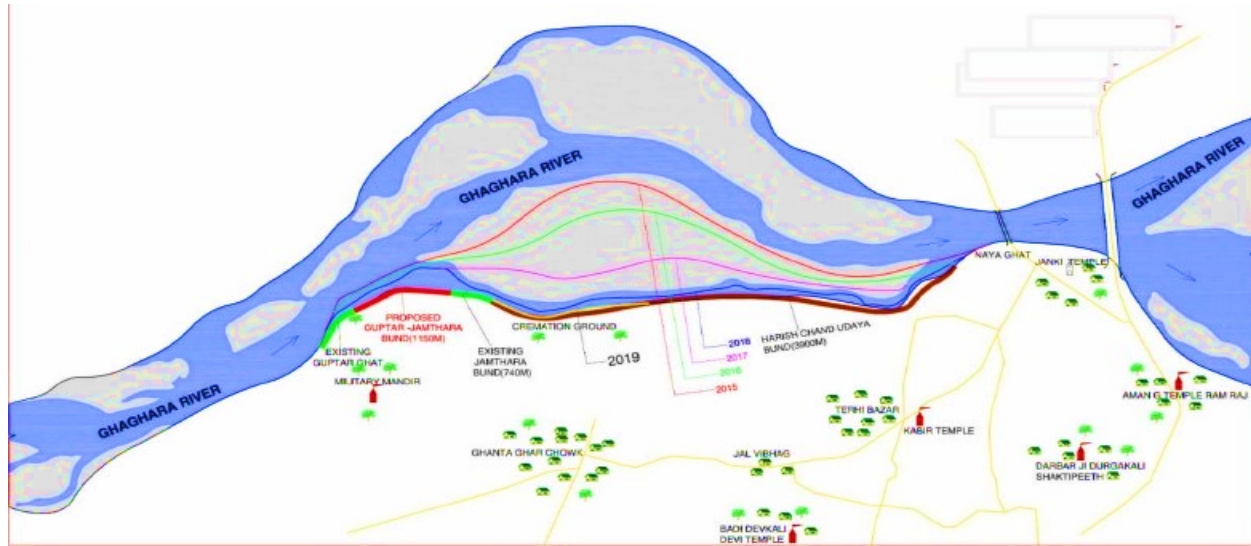
Map 7 Flood lines of Sarayu
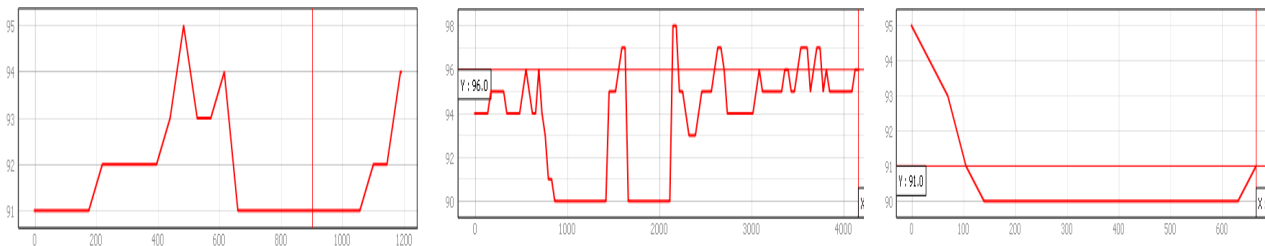
Hydrological profiling of river

Rapidly changing flood lines across the year remains a major concern,where there needs to be approches formulated to stabilizethe flow of the river in the river course where most of the tourist spots exists.

Hydrological profile depicts difficulty in navigation where desiling need to be used as a tool.

Canal & Kund distribution

Figure 42 Canals and Kunds of Ayodhya

Tradional approach towards water conservation is observed to be followed across the city in the form of kunds.where kunds not only harvest water but also is viewed from religious prospective.over a course of time several kunds are facing extinction inducing a need to conserve them..

issues

Solid Waste & Sewage Disposal issues

Solid waste disposal and sewage issues has to be addressed in order to preserve river health.wherein tourism adds to be a major contributer theres needs to be startegies which address these issues at generation itself.

5. Integrated analysis

5.1 Accessibility

A detailed profile of existing connectivity used in Ayodhya in terms of modes and routes consisting of Personal transport, IPT encompassing Vikram autos (Diesel-powered), General auto-rickshaws (CNG), E-Rickshaws, Walking were analyzed, wherein characterization and issues of each mode were identified, through primary surveys and secondary analysis consisting of; Isochronal network Analysis, Walkability assessment.wherein following observations were made.

IPT is observed as the central spine of intracity transportation of Ayodhya.

Increasing trend of residents moving towards private mode of transportation depicting need to strengthen public transportation.
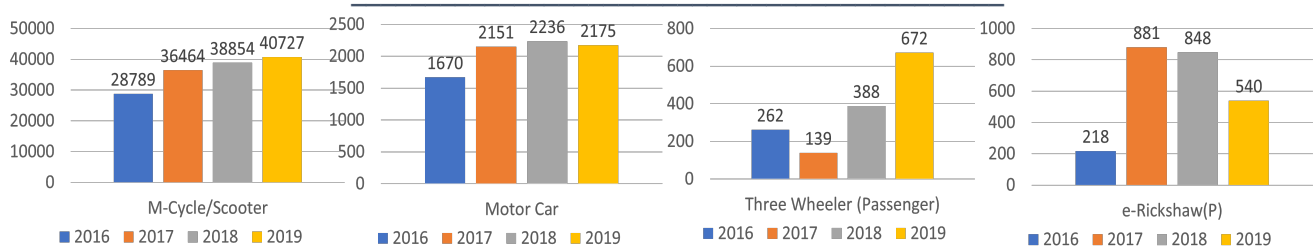
2.1.1 Immediate increase in E-Rickshaws and decrease in other IPTs between 2016 and 2017 can be attributed to SUDA's Free Rickshaw Yojana.
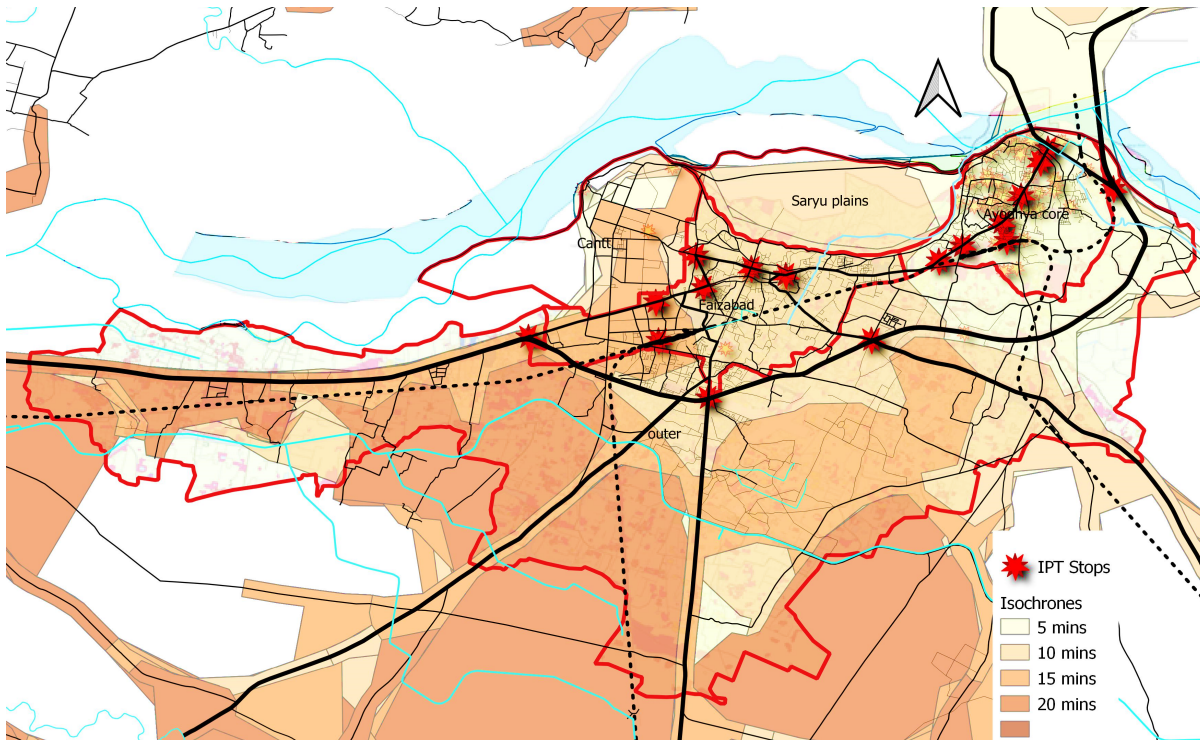
Map 8 Isochronal network Analysis

Isochronal network Analysis was done based on **17 major stops** of IPT.Wherein **Ayodhya core** zone was observed to be **most accessible.Outer zones, Sarayu plains** where IPT was found to **be least accessible** can be cross interpreted with tourist approach towards Guptar ghat and Bharath kund.

IPT routes **Majorly covered route of** -Naya ghat towards Shahadatganj, Shahadat Ganj towards Sohawal, Naka towards Sultanpur, Naka towards Bara.,Devkali to Maya,Naya ghat to Nawabganj.

3.1.1 Modes of Movement

Component	Minimum	Maximum
Frequency	5	10
Fleet size	4	9
Patronage	20	80
Cost	10rs	20rs
Revenue/day	400	1000
Fuel cost	200	300

Figure 44 Vikram auto Rickshaw

Figure 43 E-rickshaws

E-Rickshaws cater to the major chunk of tourists in shorter ranges along with vikrams its charactristics were captured which ranges upto 80 km, Fleet- up to 5,Cost similar to Vikram.But coverage remains factor of deterrence as many drivers prefer smaller distance.Mostly composed of ex-auto rickshaw drivers and beneficiaries of SUDA's **Free Rickshaw Yojana**.Earning remains similar to rickshaw drivers, mostly high frequency low range coverage

Cycle-Rickshaws

<p align="center">**Figure 45 Cycle rickshaws**</p>

One of the oldest mode of transport linked with cities past.Major operational area remains Ayodhya core.Limited operational timings from 7am to 5pm.Mostly operated by elderly >60.They classify themselves as non beneficiaries of SUDA's **Free Rickshaw Yojana**.left out with no choice.Nominal earnings of 100-300 rs

Boating

<p align="center">**Figure 46 Boating**</p>

Boat ride has majorly transformed as a means of access to leisure across the years.Stationed at Naya ghat and Guptar ghat majorly there are around 90 boats. Majorly belonging to Majhi community residing at Rajghat.Powered by diesel and fleet size of 10 a ride is trailed around Naya ghat.Squattered docks is observed which cause frictions between devotees taking holy dip and boats. **with Boatman also involving in rescue operations with Jal police. They demand to be covered under insurance.**

Walkability

- Walkability assessment was done underlining the standards that destinations should be under 500m of reach and under 10 mins overlaying which the areas where walkability needs to be
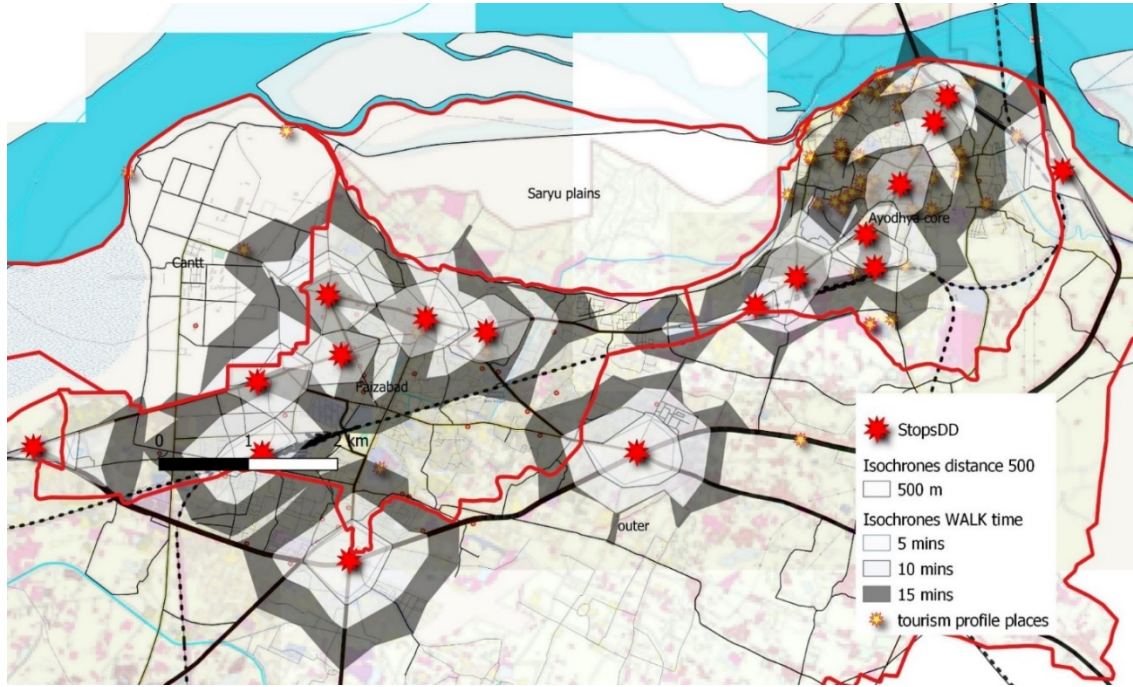
Map 9 Walkability assessment

improved is depicted by overlay method in Grey.

- The scorching temperature, lack of shade & shelter adds of to a depleting walkability.

Comprehensive issues

- Parking issues.
- Lack of dedicated stops leading to traffic and congestion.
- Increasing trends of reverting back of drivers to Fossil fuel runed rickshaws from E-Rickshas post incentivization scheme of Free rickshaws by SUDA.
- Fine and parking charges process should be digitized to avoid Irregularities and jams caused during physical collection.
- Lack of stakeholder groups & collective unions to engage for future collective engagement and inclusionary implementations of schemes (Similar to Kochi)

4.1.1 Parikrama yatra

Figure 47 Parikrama yatra Route

The concept of parikrama/Holy circumambulate of religious sites exits at 3 scales-

- Panch koshi.(15.4km)
- Chauda koshi.(43.05Km)
- Chaurashi koshi.

Where devotees circumambulate around holy sites bare footed during the holy month of KarthikIt raises up a need to uniquely reconsider planning approach towards walkability even at extreme stretches.**Temporary road stretches with sand filling** is constructed by Nagar nigam across the route. Along with counters for facilitating them with **basic requirements.**The services remain temporary in nature as at stretches across plains in the route majorly remains unused for any major purpose across the

year.The shear **number of devotees ranging up to 10,00,000** (Est by ANN) in the route with width of 10m molded by time limit to complete the yatra causes concern over stampede.

Primary survey cross analysis based on mode of arrival
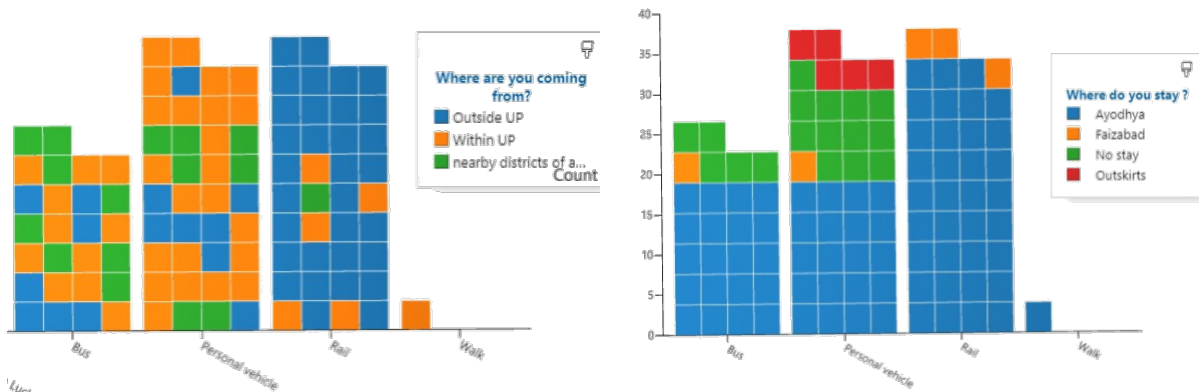
Several inference as mentioned below were derived based on the mode of arrival; which can be briefed as follow-

The Mode of arrival is majorly Rail and personal vehicle. Wherein Rail is preferred by most tourists outside UP.Personal vehicles are preferred by people within UP. Bus and the personal vehicle has been preferred mode of transport by people from surrounding districts. Preference of stay is majorly Ayodhya zone wherein people travelling in bus and rail use IPT to reach their destination. No stay tourist- consisting of majorly people from Gonda, Basti and Ambedkar agar up to a radius of 100km including Lucknow.

5.2 Accommodation
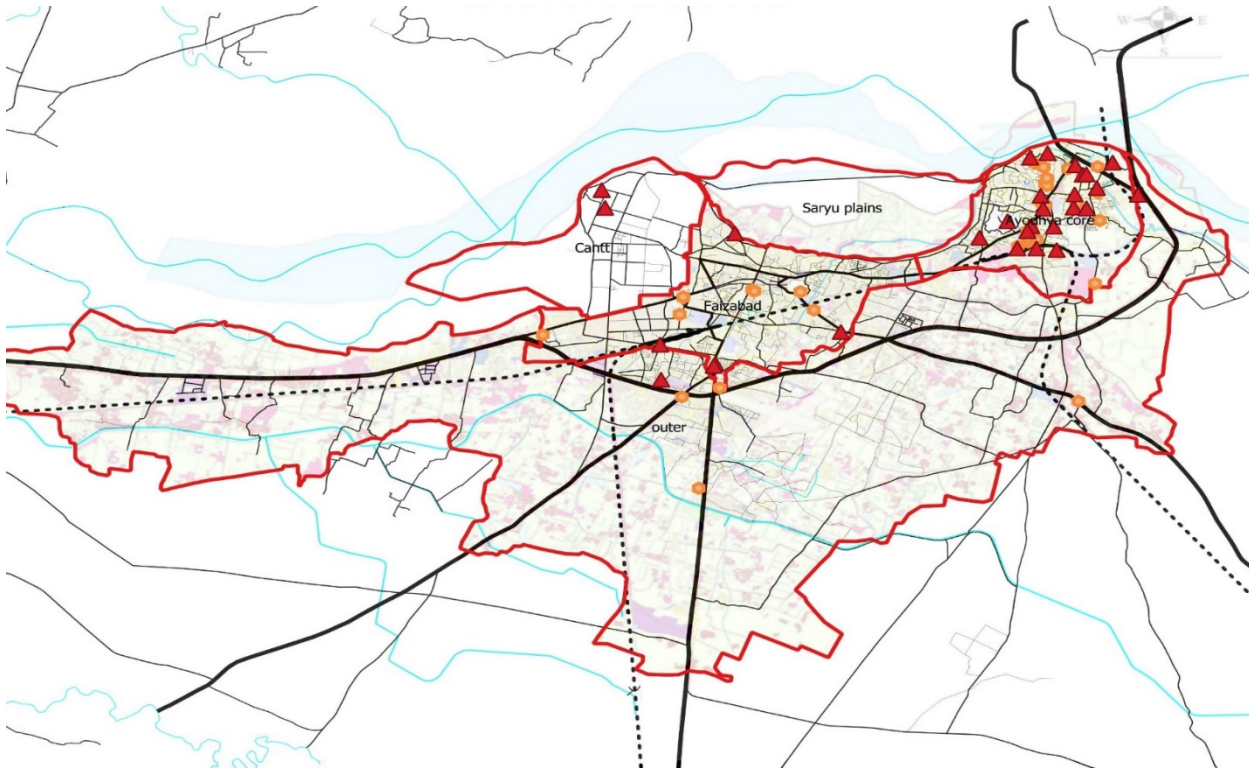
Map 10 Accommodations of Ayodhya

Ashrams   **Hotels**   **Dharamshala**

In the primary surveys, it was majorly implied as follows –

• Establishments are mostly non starred and budget in nature, with ashrams and dharmshalas remaining universally accessible to all, mostly charging nil or nominal remains most affordable.

• Average occupancy lies between 25% to 50% during lean, going more than 75% to 100% during peak.

- Up to 5 regular employees remain a common pattern with skill gaps on hotel management, catering and waiters are found.

- Around 5000-6000 units of electricity remain average consumption increasing during summers.

- Mostly dependent on self-cleaning of soak pit, sewerage remains a point of concern.

- Water consumption ranges from 50KL to 300KL per month, Majorly dependent on groundwater.

- Electricity usage ranges from 1100 units to 5,700 units.

- Accommodations have been majorly unaffiliated.

- Solid waste majorly consisting of plastic bottles and kitchen waste. Contributes to the major unsustainable practices effecting the land and water ecosystem.
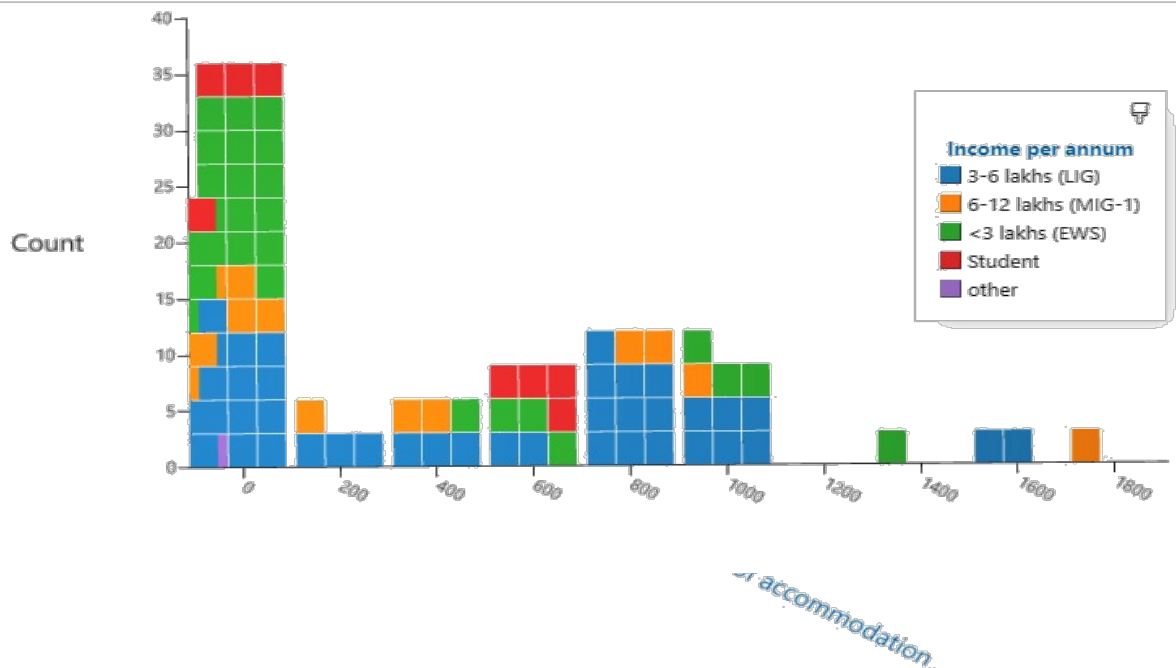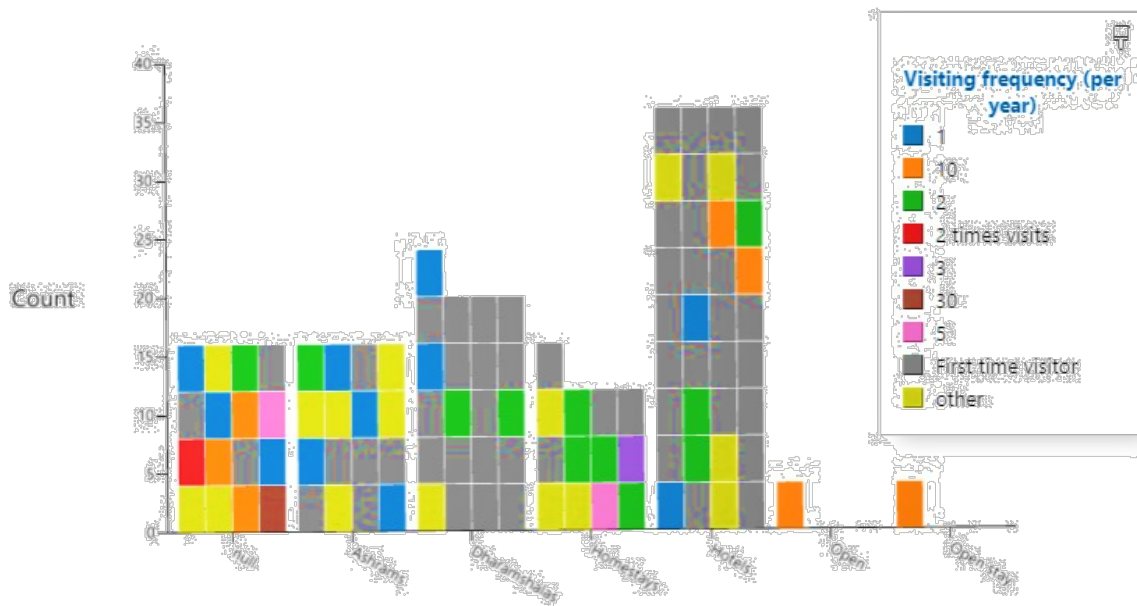
- First-time visitors mostly prefer Hotels over other modes attributing to lack of information regarding other options

- First-time visitors residing at dharmshalas are informed through agents/communities ex: Gujrathi Dharamshala catering to First time Gujrati tourists.

5.3 Tourist characterization

Tourist's profile was captured through cross-analysis from primary survey data(As depicted below), which encompasses – **Nature of a tourist, Prospective, Issues.**based on which below inferences were made-
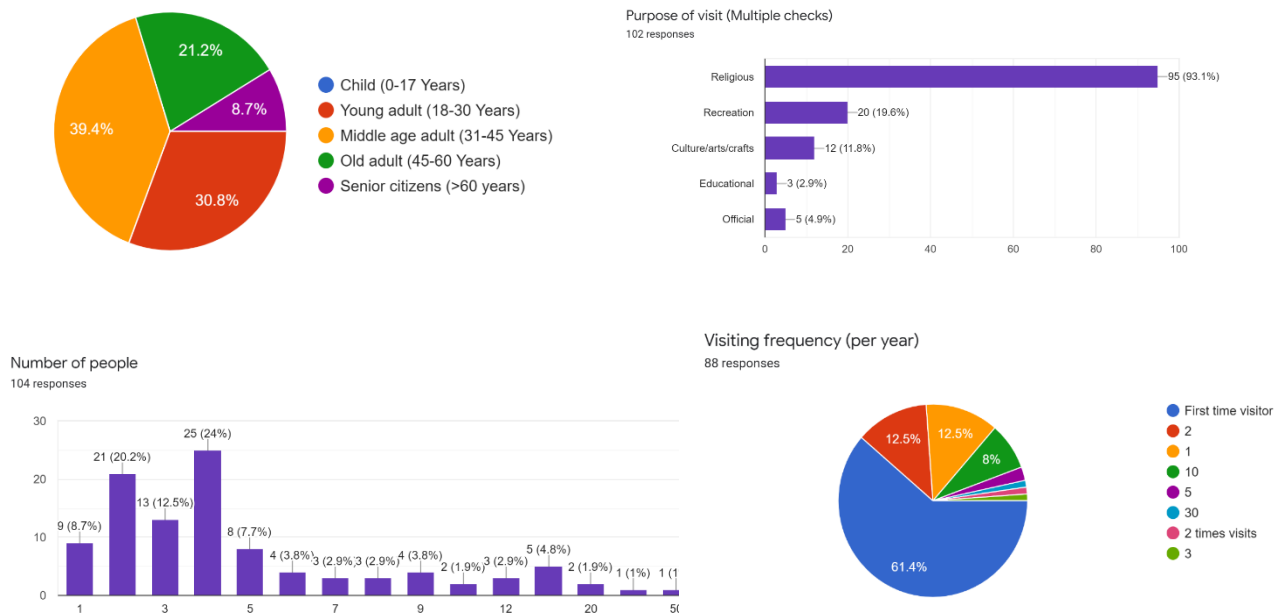
Figure 48 Tourist survey components

Source: Author – Primary survey
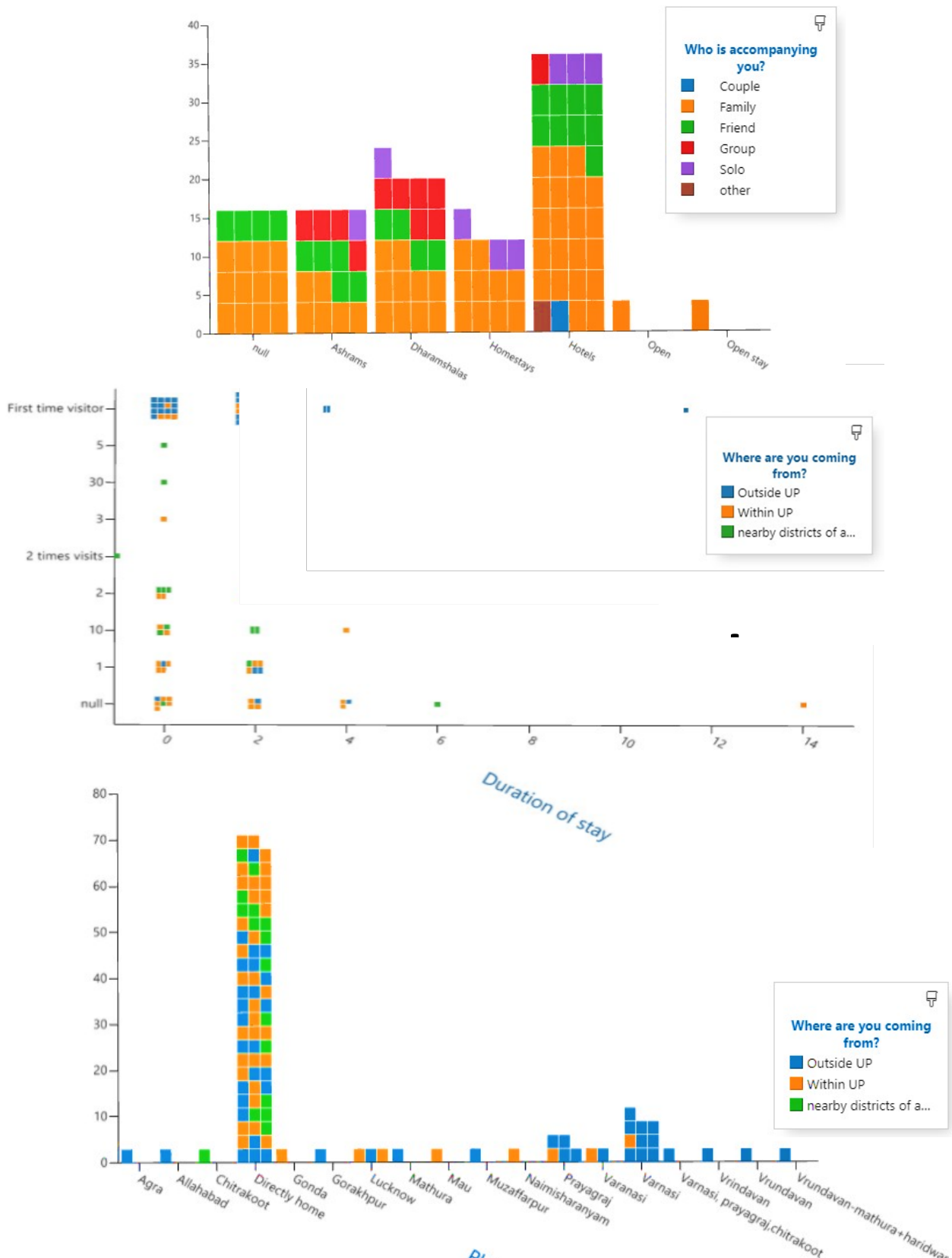
Figure 49 Cross analysis of Tourist Characterization

- **Average grouping** was found to be between **2-4**, with a considerable proportion of **bigger groups** as well.

- Purpose of visit predominantly **religious and cultural.**

- **Locals** and a multitude of visitors from surrounding districts subscribe to **Recreational** use alongside religion.

- **Family tourists** comprised the major chunk, **followed by Friends and Groups.**

- Further classifying the family group based on accommodation, younger couples preferred to stay in a hotel compared to senior citizens and older adults who preferred ashrams and dharamashalas, whereas middle-aged adults were split between both types.

- The average group size is to be seen at 5.7, but there exists a stark contrast in group character with groups with two people to groups > 10 persons.

- Tourist belonging to **other states** tend to more cover the **regional circuit** travelling **Varanasi, prayagraj** and other places.

- But their **duration** of stay is limited to **a day or 2**,**covering mainstream** places.

- During primary surveys **willingness to explore** Ayodhya further was expressed mostly by **first time visitors.**

- But **lack of information** regarding non mainstream places were **the deterrence factor.**

- Major proportion of first time visitors

- Potential for regional integration.

- Need for redistribution to tackle congestion

- Solid waste sensitization issues

- Need for promotion of non mainstream attractions and activity induction.

5.4 IMAGE INTENSITY ANALYSIS & CALENDER OF EVENTS

Image intensity analysis was done in order to understand the psychological footprint of imageability of spaces & places in Ayodhya. The city's tourism is characterized at a stage between development and consolidation on butler's scale; there is a higher potential to utilize the places by mapping the unmapped places in people's minds. It frames as a basis to formulate redistribution as a tool towards sustainability to tackle congestion alongside enhancing user experiences.

Image analysis=Recall frequency*100/sample size
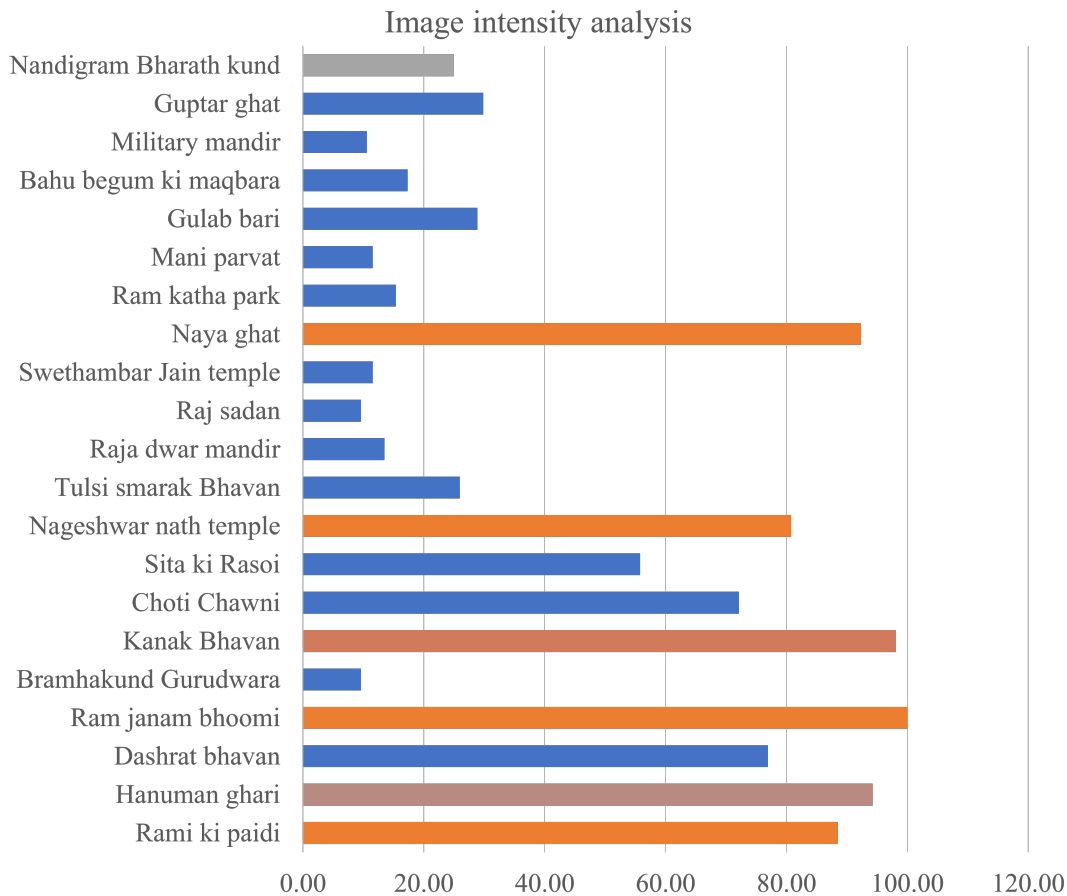
Figure 50 Image intensity analysis

5.5 Calendar of events
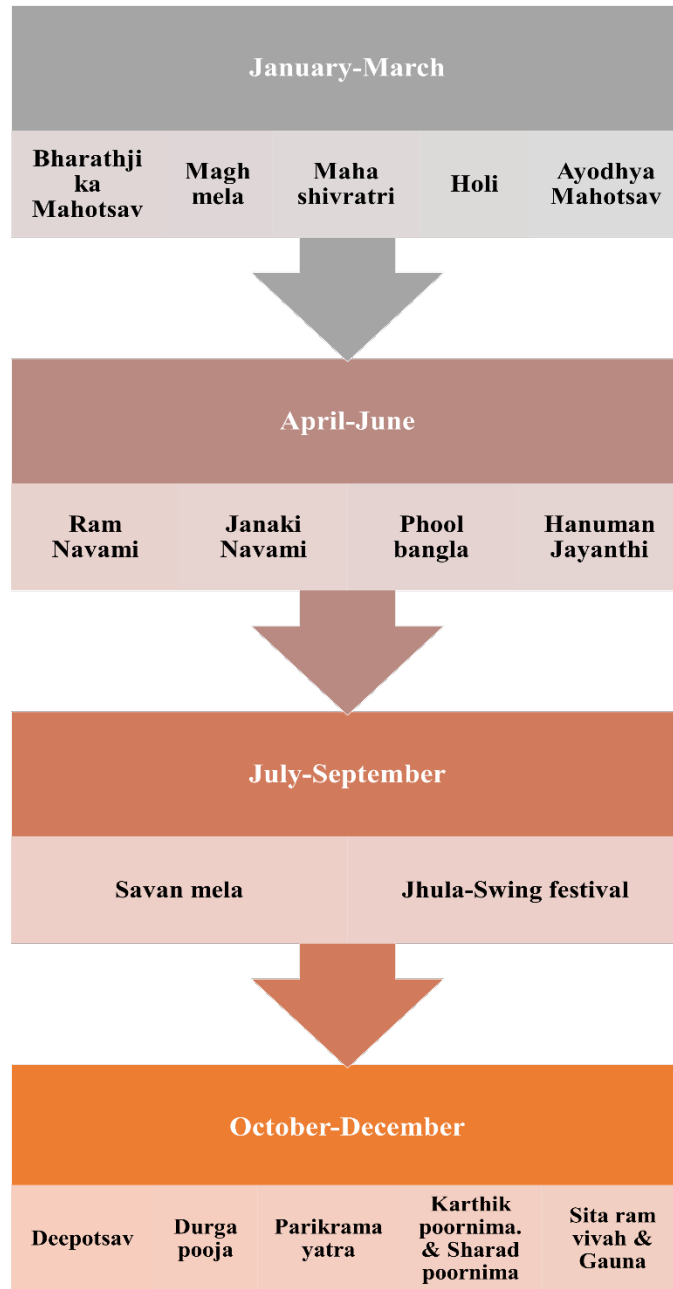
Figure 51 Events

The calendar of events was derived based on local survey. Major events such as ram Navami and deepotsav other less known events with unique celebratory style were noted.

5.6 Service quality assessment

A perception-based Service quality assessment was done to identify the criticality in services were in
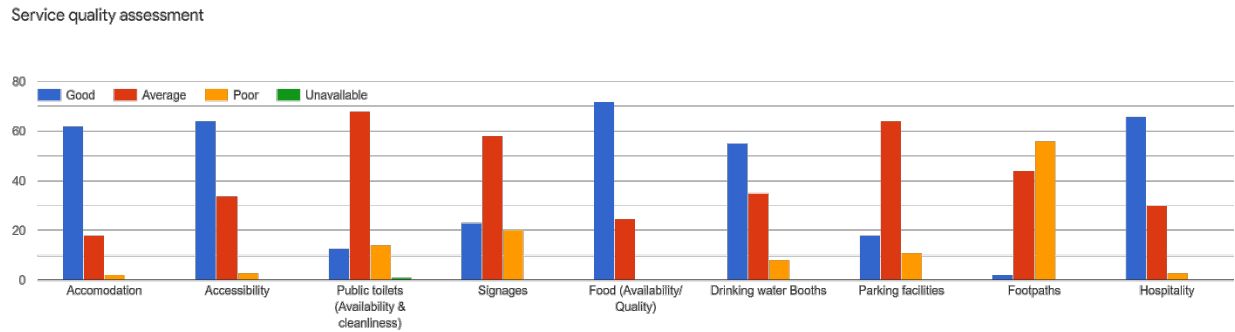
issues pertaining to Footpath, Signages, Parking facilities, public toilets were identified to be concern among others.

5.7 Local resident characterization.

A local resident survey was conducted across different zones to reflect – Influence of tourism on quality of life—core characterization of Ayodhya through Must catalogue, factors of likes, dislikes and Issues.

It was observed that :Less than 10% population at city scale and around 35% of Ayodhya core's population is directly/indirectly aligned with tourism sector which is set to increase in the coming years.With people of Ayodhya core culturally inclined people participate in Ram Navami, Deepotsav, and parikrama predominantly.
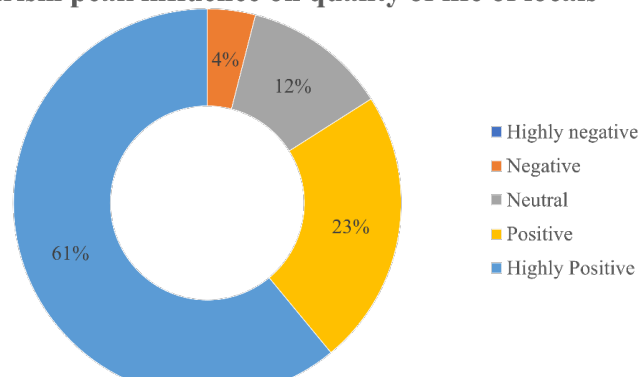
Figure 52 Influence of Tourist peak on locals

Factors liked about city by locals	Factors disliked about city by locals
• Spirituality • Liveliness. • Sarayu river view. • Safety (Attributing to less crime rate).	• Congestion • Traffic issues • Fear of loss of heritage due to urbanization. • Spammers. • Solid waste management issues.

Place
- Ram Janmabhoomi
- Hanuman ghari
- Guptar ghat
- Mani Parvat
- Ram katha sangrahalay

Experience/Activity
- Deepotsav. & Parikrama
- Ram Navami
- Sarayu aarti
- Evening lightshow at Ram ki paidi.

Product
- Small statues specially ram darbar.
- Wooden slippers
- Kesari Dwaj
- Banarasi lehanga
- Bamboo handicrafts

Food
- Hanuman ghari laddu
- Kanak bhavan peda
- Litti chokha
- Dahi jalebi
- Meals of Bhojnalay's.
- Tandoori chai
- Kabab paratha (Faizabad)

Figure 53 Must do catalogue

Attributes such as what locals like and dislike about the city were captured along with the must-do catalogue depicts a necessary experience a tourist should experience from a perspective of locals and core nature of the tourism that must be conserved.

5.8 Non participant survey-Identifying potential tourist (Outside Ayodhya)

A Non-participant survey was conducted to analyze and extract the issues faced by the potential tourists based on the psychological paradigm. The terms were captured in terms of – Awareness, Perception, Preferences.

Given an opportunity to plan a trip among below cities which one would you choose ?
117 responses

- Haridwar
- Varnasi
- Prayagraj
- Ayodhya

43.6% · 31.6% · 19.7%
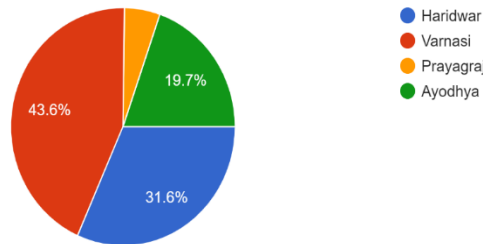
Are you aware of places & services available in Ayodhya ?
117 responses

- yes i'm aware (Full information)
- I am less aware (Less information)
- I don't know much (No information)
- Not aware

56.4% · 38.5%
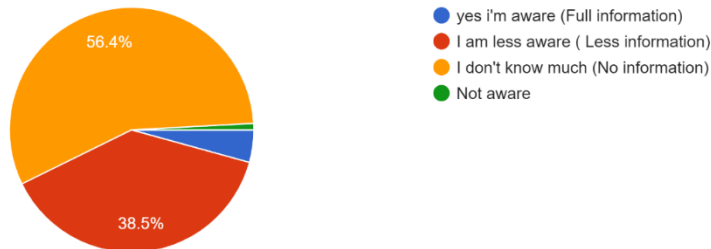
If you don't wish to ? why ?
39 responses

- Based on previous experience
- No previous experience
- Others

25.6% · 69.2%
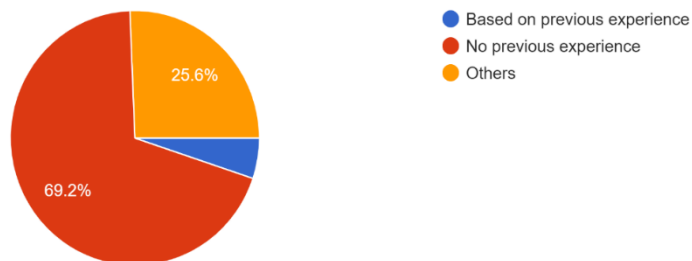
Given an opportunity would you visit Ayodhya
117 responses

- Yes i wish to
- No i don't wish to
- Maybe

90.6%
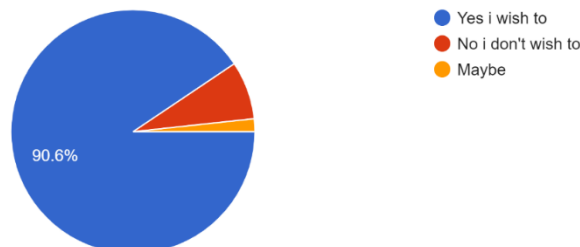
Figure 54 Non participant survey analysis

Which of these factors does NOT let you visit ayodhya easily ?

117 responses

Factor	Count (%)
Travel time	36 (30.8%)
Stay time	7 (6%)
Unable to visit during religiou…	41 (35%)
Unable to find tickets during…	17 (14.5%)
Others	30 (25.6%)
Ayodya is always a second o…	1 (0.9%)
Did not get any opportunity a…	1 (0.9%)
I dont know about easy.. i ha…	1 (0.9%)
No reason	1 (0.9%)
Never thought and got a cha…	1 (0.9%)
Overloaded spirituality	1 (0.9%)
More then a holy place it's p…	1 (0.9%)
Never thought of going there	1 (0.9%)
Distance (Accessibility to Ay…	1 (0.9%)
Personal Reasons (Time or…	1 (0.9%)
Never considered visiting. W…	1 (0.9%)
Basic infrastructure and Hos…	1 (0.9%)

A Non participant survey was conducted in order to analyze and extract the issues faced by the potential tourists based on psychological paradigm.

- **Varnasi** was chosen **as preferred choice** followed by **Ayodhya** attributing towards the **spirituality, landscapes, experience and mainstream information availability.**

- From other prospective it can be observed that tourists visiting Varanasi and prayagraj **are potential tourists** given the **drawbacks addressed**.

- It was observed that the **lack of information** was one of the prime deterrence factor raising a need to revisit tourism promotion strategy.

- **Uncertainty regarding services** is another factor observed binging up a **need to induce transparent system.**

- **Tourist integration through regional development** is a possibility given the proximity to Varnasi and Prayagraj if a different character is developed

5.9 Commercial establishments/ travel trade

Micro profiling of tourist markets and tourism products was done to capture opportunities and extract issues.Wherein Hanumanghari market stretch till naya ghat,Ghanta ghar market and Thursday market were noted to be prominent among tourists and locals

GHANTA GHAR & THURSDAY MARKET

NAYA GHAT TO HANUMAN GHARI STRETCH
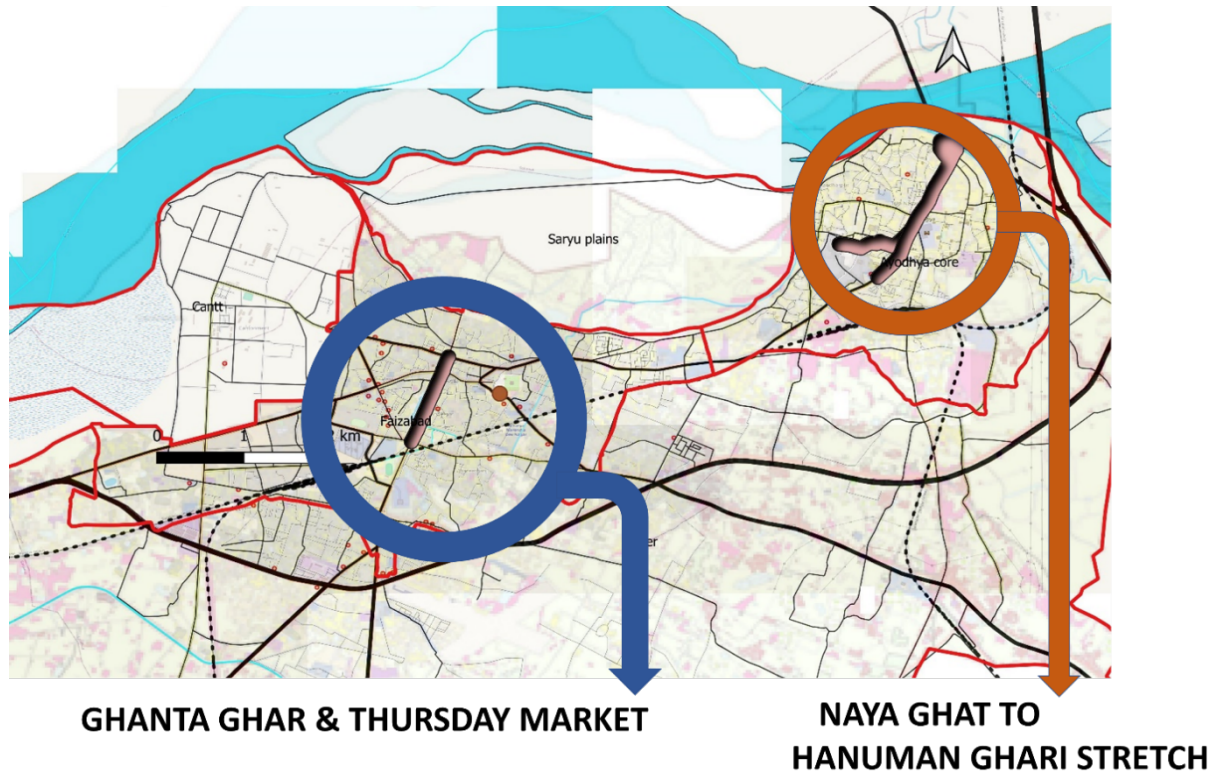
Figure 55 Tourist markets of Ayodhya

Source : Author

The consumer comsuption behavior towards tourism products are observed to be drivern by socio-cultural components with products consisting of pooja items, Toys, Brass items, Stone Sculptures, Wooden items, Shrungar items, Sweet shops, Deity dress, Bangle shop, Bhagwa flag prominently in Hanumanghari market stretch also known as Sringar hat this place used to be famous for beauty products since centuries.

located near Gulab bari market Ghanta ghar and Thursday market are known from Faizabadi Chudi, Banarasi lehenga, Bamboo handicrafts, ladies textiles among others in product consumption choices.

5.10 Food

Capturing the culinary habits existing in Ayodhya's tourism the food product base was diverse consisting of various cusines influenced by demand created by tourists across the country with major impact of eastern Uttarpradesh's dietry practices in tradtional hotels called bhojanalays which serve meals.

Figure 56 Traditional Bhojanalays

With devotion and dietry practice having close connect, Hanuman ghari laddu,Kanak bhavan's peda forms a major component in sweet markets presnet in RJB zone where these desserts are offered to the dieties and consumed by devotees.**Litti Chokha,Dahi jalebi,Mix along with Sohal (A native crispy snack) were dominent in snack preferences.**

Comprehensive Issues observed in markets were observed to be

- **Lack of public toilet** and **drinking water facilities.**

- Crowding and congestion issues with **human vehicle conflicts** causing traffic rising up a **need for crowd management strategy**

- **Concerns of displacement** due to expansion with many shops deeply routed into the temple ecosystem for more than 6 generations.

5.11 Amentities

Amenities of sewerage, stormwater drainage, water supply, solid waste were individually assessed to capture – Existing status and contribution of tourism to demand, Gaps, Potential.

5.12 Sewerage

Attributing to the rapidly increasing tourist influx and its rippling effect on tourism allied industries combined with local generation majorly propelled by sugar refineries, Oil extracting mills in and around Ayodhya has redifined the challenges. With existing state of waste water treatment observed to be managed unsafley as per study conducted by CSE (As depicted in Figure6) posing a catostrophic risk on Sarayu's riverine ecosystem in future.

	Treatment facility present	Type of facility	Generation	Treatment	Designated disposal site
Sewage	Yes	STP	23.17 MLD	7 MLD (Capacity - 12MLD)	NA
Septage	No	No facility	30KLD or 0.03MLD	No treatment	No site

Figure 57 Shit flow diagram

Source : CSE

5.13 Drainage

State of drainage was analysed with the help of sarayu action plan report where it was observed to have both open and closed drains, however, Along with regular cleaning/maintenance of drains, underground drainage systems and decentralized treatment plants are required in the city for **maintaining hygienic conditions and enhance the aesthetic view of the tourist city.**

Number of Drains	Type of Drains			Status of Drains			Industries		Sewage discharge (MLD)			Total discharge in the river(MLD)
	Domestic	Industrial	mixed	Tpped	Untapped	partially tapped	Number	Treated effluent	Treated	Untreated	Total	
18	16	2	0	0	18	0	2	7.9	0	23.14	23.14	31.04

Figure 58 State of Drains

Source : Sarayu Action plan report

5.14 Electricity

The supply is sourced from a centralized grid network (as depicted in with the demand set to increase, there is a need to turn towards a sustainable energy source.Where localising the energy systems through decentralisation through small scale renewables or low carbon technologies can be adopted at household or community level.

Source of Power	Distance (km.)	Total Electricity Demand (MW)	Total electricity Supply (MW)	Total Consumption (MK WH)
132 KV Darshannagar & 220 KV Sohawal	15 KM	44.62	44.62	33.197

Type	Residential	Commercial	Industrial	Agricultural	Other
No. of Connections	51844	9860	188	52	410
Electric consumption	15343985 KWH	2541529 KWH	144440 KWH	4675 KWH	2100829 KWH

Figure 59 Electricity consumption

Source : Vidhut Vibhag, Ayodhya

5.15 Water Supply

Toursim activities, often correalted to hydric stress poses as a challenge to the growing demand arising out of increasing influx,wherein it was analysed that despite the city being located on the banks of river Sarayu it is majorly dependent on **Underground water** which is supplied through Overhead tanks ac. Though **Groundwater** resources being abundantly available with ranging water tables varying from **20ft to 150ft** within the city, the concern of overexploitation persists due to rapid urbanization.

Tourist demand was estimated to be more than 14.79 MLD (Calculated from individual demand based on consumption studies and influx) and a need to induce sustainable supply system through conservation approach was derived correlating to the projected demand.

Quantity of Water supply	Domestic Water Requirement	Gap	Estimated Tourist demand	Source
39.55 MLD	49.68 MLD	10.13 MLD	>14.79 MLD	Ground water

Tap water		Hand pump	Well/tub well	Tanks/pond/	Rivers/Canal	Other
Treated source	Untreated source					
NA	39.55 MLD	1939	NA	14	1	NA

Figure 60 Status of water supply

Source : Jalkal Vibhag Ayodhya 2020

5.16 Solid waste management

A corelational analysis was done on affixing the relation between impact of tourism and soid waste management. Calculated based on a study which states that Indian tourist, on average, generates 0.9 kg waste (Source: Sustainable tourism promoting the environmental public health university of Copenhagen) per day using which tourist waste generation was estimated to be 49.31 TPD constituting the major proportion of total generated waste in the city attributing to the top solid waste generaters being the result of tourist activities. ANN is practising door to door collection of MSW, where due to lack of processing facility unsegregated solid waste is dumped in open plots or ponds/low-lying areas resulting in toppling fown of waste to riverine ecosystem,addtionally contributing to air and groundwater pollution. The plastic waste propelled increasing tourist influx was analysed to be major contributor contamining the rivers health bring in a need for alternative waste management plan.

Waste Generated (inner zone)	Outer zone	Total	Estimated Tourist Waste generation	Disposal
115 TPD	62 TPD	177 TPD	>49.31 TPD	Dumping
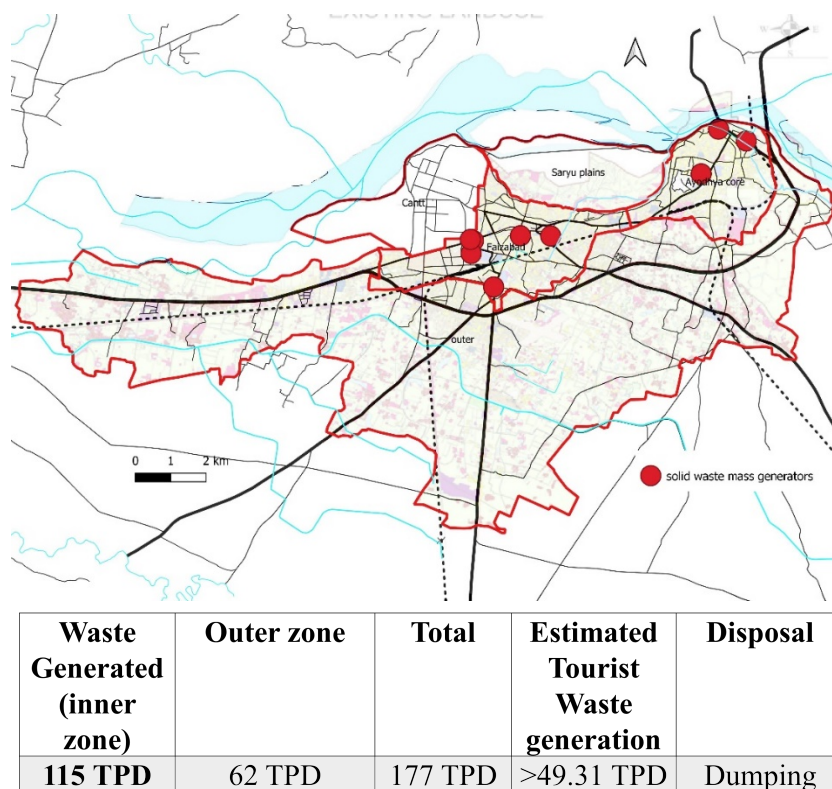
Figure 61 Solid waste mass generators

Source : Author

6. **Proposal**

The following proposals were derived from the cohorts of issued identified through analysis is classified into administrive,Spatial and Non spatial based on nature of implentation.

6.1 **Administrative proposals**

It is said that the success of any scheme or project lies in the spirit of implementation where to address the concerns of Cordination,Capacity building is addressed by formulating a **joint Coordination committee** consisting of representatives appointed by **the line department and headed by the commissioner** is formed under Section 5, **The Uttar Pradesh Municipal Corporation Act, 1959.**
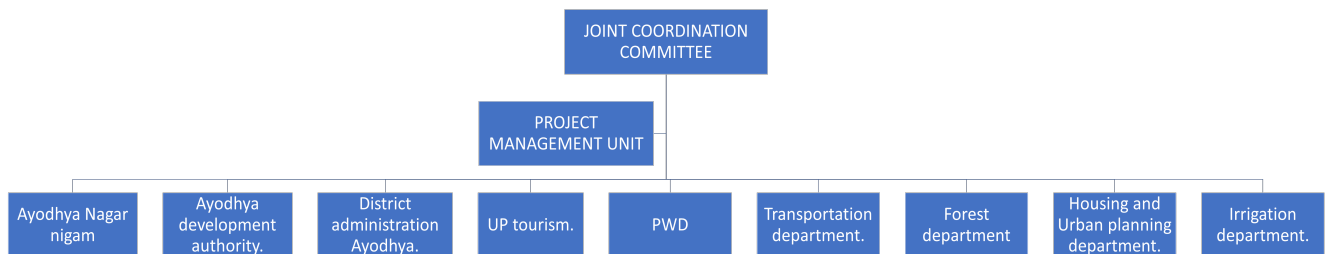
Figure 62 Joint coordination committee

As a part of enhancing the local government's capacity, the existing Project management unit is promoted in its hierarchical placement under Joint Coordination Committee.Senior Advisor heads the Unit.Sub units consisting of cells looking into
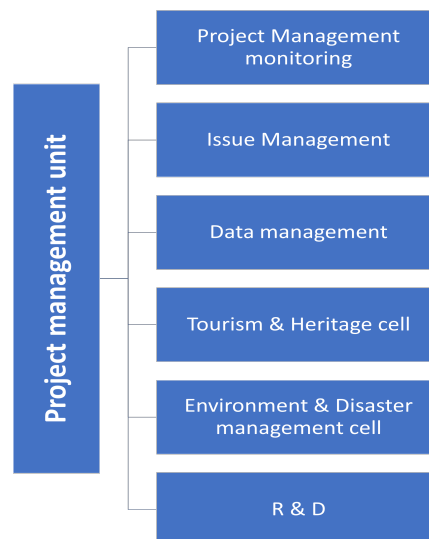
Figure 63 Sub divisons of PMU

- Wherein the project management cell looks into -Status monitoring, Daily report & Benchmarking to set standards and targets.

- Issue management cell- is to be a one stop destination with respect to any stakeholder issue addressal pertaining to all line departments.

- Data management cell- should act as a centralized data base of all details pertaining to line departments.

- Tourism & heritage cell- would be entrusted with short term action plan preparation, tourist management, heritage conservation. Assessing & coordinating line department projects on tourism and heritage.

- Environment & Disaster cell- would work on environmental conservation, flood plane conservation, dynamic activity monitoring and coordinating with line departments.

- R&D unit would act as a innovation cell inducing sustainable practices through dynamic strategic plans and action reports among line departments.

Land value rating
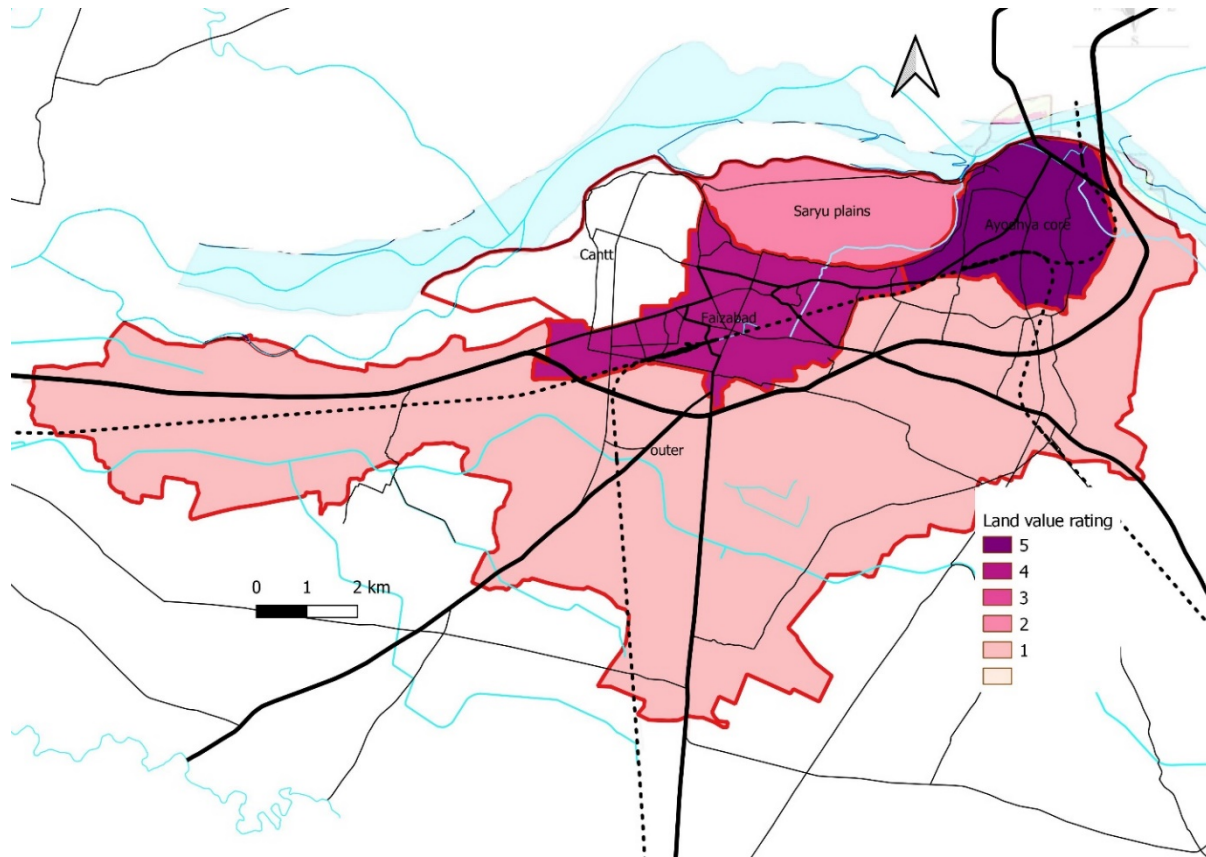
Figure 64 Land value rating

Source : Author

As a part of revenue resource mobilization to reduce the dependency on grants and increase fiscal autonomy, Betterment charges is proposed to be induced to reap the benefit of urbanization and development activities in Ayodhya

- **Betterment charges proportionate to land value** is leaved on **non-agricultural land.**
- **Residential plot sale-** 0.5% of market value per square meter.
- **Commercial plot and development** – 1% of market value per sq m.
- **Industrial plot and development –** 1.5% of market value per sq m.
- **Others plot and development –** 0.5% of market value per sq m.

Authorized to **levied under JCC** by UP municipal act,1959, where the revenue is deemed as a **Joint transaction**

Figure 65 spatial proposals

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6.2 Spatial proposals in river abutting zones (Attractions & Activities)

Spatial proposals focused on attractions and activities were proposed to address the cohorts of :
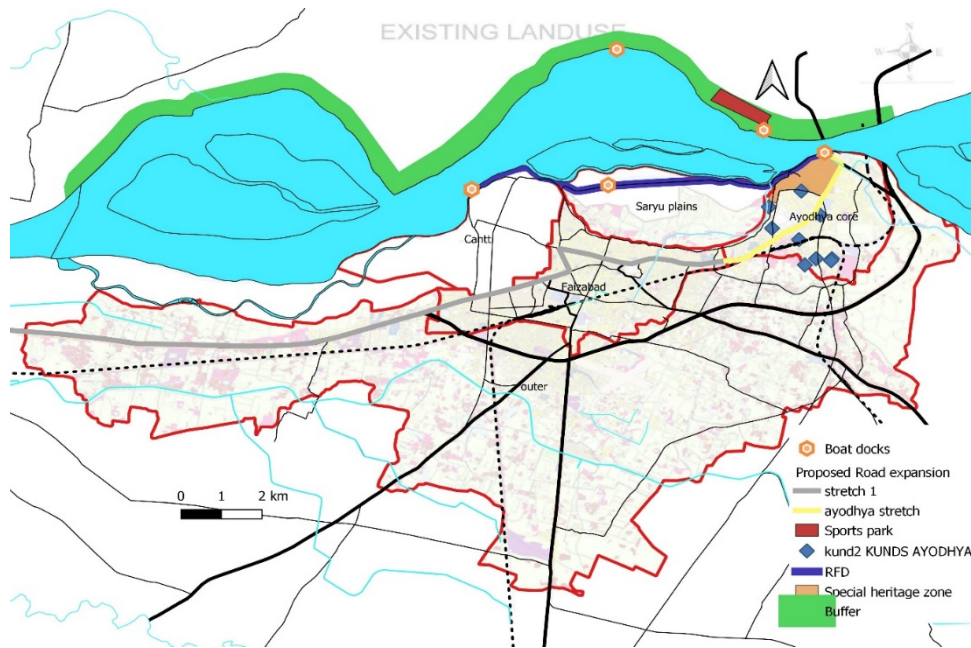
Figure 66 Spatial proposals

Rapidly Changing flood line – where an extended buffer of 500m width and 10km length towards the off side(Northern bank) of Sarayu. Where a riparian buffer constituting reforestation as a strategy to cater the local ecosystem and flood mitigation by stabilizating the flow would be impleneted. It can be supported by the Funding drive would be undertaken through CAF (Compulsory afforestation fund) along with modelling of Sarayu's riverscape developing scope for open space sport activities.
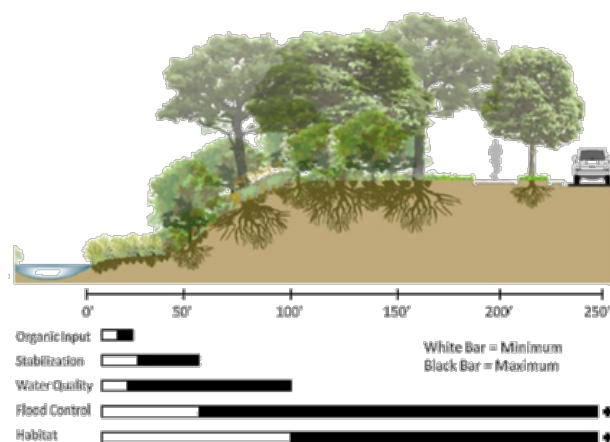
Figure 67 Riparian buffer

Source- Austintexus.gov

With ayodhya being epitomized as a symbol of civilization, An Open sports park of 330m*1500 forming 111 acre is proposed to **promote display and practice of ancient sports** along with modern sports adding touristic value and activities towards the northern bank. Additionally **3 dock upgradation**(Naya ghat,Guptar ghat,Raj ghat and **2 new docs**(Buffer view and open sports park) is proposed to facilitacte better accesibility to difffrent attractions through rivers.increasing the scope of boating from purpose of lieasure to a mode of transportation.

Figure 68 Docks

Source : Author

Figure 69 Open sports park

Source- Binu Balakrishnan

As a part of riverfront activity developement on embankment which is being constructed from Naya ghat to Guptar ghat stretch, a cycling drive is proposed with docks at Lakshman ghat and Guptar ghat **along with** Activity induction through rural cafes, food points are permitted in between limitedly.The stretch would help to redistribute the tourist exposing several non-mainstream heritage structures to recreational and cultural tourist increasing in tourist influx would increase accessibility to Sarayu flood plains. Also adding to be a mode of revenue generation by lending view points and cycling through PPP.
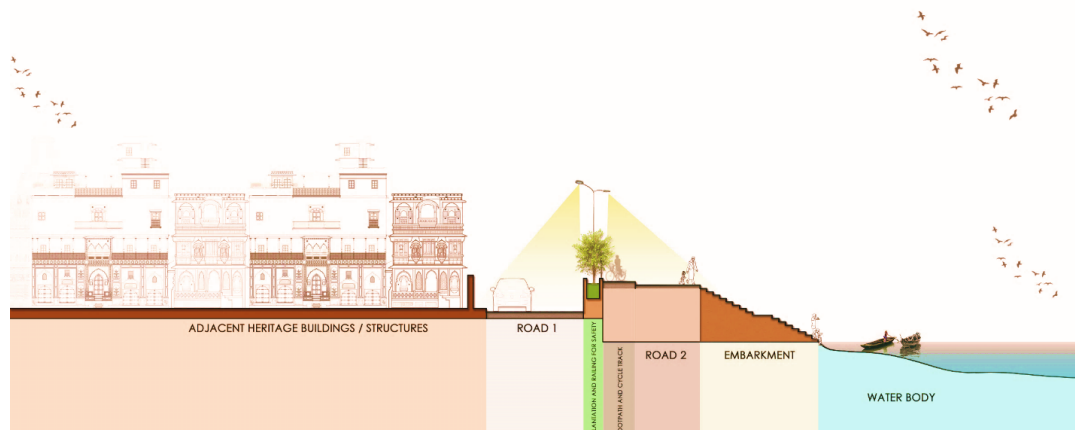
Figure 70 C/S of river front activity development

Source : Author

Special heritage zone delineated in Ayodhya core

Figure 71 Special Heritage zone

Addressing to the issue of heritage degradation a Special heritage zone abutting proximity to naya ghat is delineated in Ayodhya core to conserve heritage structures. A Special Area heritage plan has to be prepared to promote adaptable reuse of heritage structures. Ex-Deteriorating and abandoned heritage buildings can be conserved and used as heritage accommodation in PPP model along with where such as supervised building destruction and construction permits to be given.

Urban Design intervention in streetscaping is recommended in proposed expansion of road from Shahadat Ganj to Nayaghat by authorities.Wherein **urban design intervention** has been drafted to **provide shade increasing walkability and reducing thermal discomfort provinding a better user experince to tourists as well as locals.**
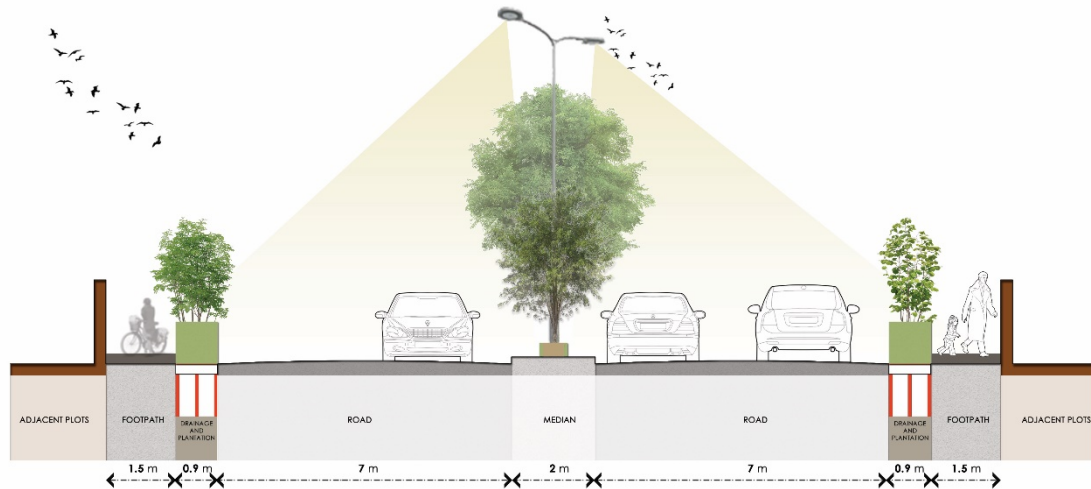
Figure 72 C/S depicting design intervention on Road

Source : Author

Kund Rejuvenation – As a part of effort to revive ancient water conservation techniques **7 kunds has been identified as depicted in** Figure 66**,** adding both soci0-cultural and environmental value

Figure 73 State of Kunds

6.3 5A's

As a part of inducing the Responsible consumption to tackle issue at source and Sustainable channelization of resources by forecasting the demand.The below cohorts in the line regional,accesability,accomodation and amenties are recommened to achieve the above mentioned vision.

REGIONAL

➢ At regional **Tourist circuit integration through packaged tourism** supported by **UP tourism and IRCTC consisting of** Ayodhya- Varnasi- Prayagraj- Chitrakoot is proposed.alongside **Ghaghara to Gomti regional integration** of tourist places promoting kamakhya temple, Imam bara and Raich forest for greater regional development propelling sustainability through redistribution.

➢ A **caravan based tourism can be introudced** to attract HIG,MIG and International tourist with camping options on the northern bank of ayodhya.

Figure 74 Image represnting caravan tourism

Source- MP tourism

ACCESSIBILITY

Scruitizing the cohorts of issues drawn from analysis it is proposed to –

➢ **Boating as not just leisure** but also to **connect** Sarayu plains, Guptar ghat and offside once activities is induced.

➢ Converting current **diesel powered boats to solar** in association with TERI under **CSR** similar to Varanasi.

Figure 75 Solar powered boats of Varnasi

Source- Hindustan times

ACCOMMODATION

- **Impact of accomodation based on SDG 12 higlighting the priority of responsible consumption were analysed upon which it was proposed that -**

- **Mandating Solar installation** as a part of permit

- **Commercial Accommodations with kitchens structures** should be mandated with **Kitchen waste composter** along with decentralized waste water treatment (such as Anerobic baffled reactor, planted gravel filter).

- **Centralized databased of accommodation** of hotels, ashrams, Dharmshalas and ashrams in Realtime by PMU along with a private partner as a part of open data initiative inducing transperncy.

AMENITIES

- Lootels under PPP can be induced similar to Rameswaram where tourists, vendors can avail at minimal costs to access toilets, bathrooms and food.

Figure 76 Represntative image of lootels

- **Rain water harvesting for new building design approval** of any new property beyond 1200 sq ft envisaging the future demand which would emerge out of rapid urbanization and tourist influx.

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➢ Enforcement of **strict single use plastic bottle ban** in phased manner slowly replacing with earthen pot / bamboo /brass bottle. **In chronology of accommodations, restaurants and street vendors** replacing in phases

Figure 77 Earthern alternatives for single use plastic bottle replacement

Ram ki Paidi design intervention

Figure 78 Softscaping of Ram ki paidi

Soft scaping of Ram ki paidi developing shades and shelters to tackle scorching temperature.along with Coherent design approach for inclusion women and specially abled through **changing rooms, ramps, audio-visual signages, braille tactile signages.**

Wherein the impact of the proposal's essence is both active and passive in nature. The proposals lay on the principle of

- "Preclusion of issues through inclusion" – bringing in integration
- "Address the issue at the source, by predicting its future course" – inducing sustainability

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ANNEXURE

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Stakeholder Survey

Department - Ayodhya Development Authority

1. Jurisdiction of Ayodhya Development Authority & planning area boundary

2. Stake holders consulted during master plan preparation ?

3. Could you please share recent Master plan report and Land use map with percentage of developable area?

4. Functional delineation between ANN and ADA

5. Is there any comprehensive mobility plan in progress?

6. Are there any special zones/ heritage zones identified in the city and are any heritage buildings documented?(Spatial)

7. Are there any maps available depicting urban growth evolution?

8. Please share the details of areas with illegal construction/encroachments

9. Spatial details of amenities/infrastructure- provided/maintained (parks/playgrounds/lakes/ponds/drains) (police chowki/police stations/CCTV/Signages/public toilets/mobile toilets/Drinking water booths/kiosks/tourist sheds/luggage rooms/Banks/ATMs/parking facilities/Fuel stations/public wifi hotspots/smart poles/pedestrian facilities)

10. Where would the upcoming Airport be located? factors used for selection? And airport-based development plan?

11. Future scope of expansion of city where new infrastructure would be coming up (Growth direction) and proposed land for acquisition?

12. Are there any urban design norms-based interventions with respect to conservation?

Stakeholder Survey

13. **Has any committee been formulated to look into heritage conservation and tourism?**

14. **Are there any buffers delineated across heritage sites and façade in order to maintain visibility? (as per AMASR)**

15. **Could you please share details of flood plains and buffers across the river stretch?**

16. **Has parikrama yatra route being delineated? If yes what all interventions are intended to be implemented? (maps and details of project interventions)**

17. **Could you please share the details of existing tourist accommodations based on classification? (Hotels, ashrams, dharmshalas, havelis, guest houses and hostels)**

18. **What are your future plans regarding tourist accommodation?**

19. **Could you please share existing circle rates?**

20. **Location of slums?**

21. **Detailed location and typologies of industries**

22. **Could you please share details about upcoming model city which would be built on Vedic planning principles?**

23. **Please list out Development works undertaken under different schemes**

Schemes	Development work undertaken
AMRUT	
SBM	
HRUDAY	
PRASAD	
Smart city	
HFA	

Stakeholder Survey

24. **COVID-19-period impact and management strategies**

25. **Issues faced by Ayodhya development authority**

26. **others**

Stakeholder Survey

Department - Ayodhya Nagar Nigam

1. **Jurisdiction of Ayodhya Nagar Nigam with ward and zonal boundary**

2. **Could you please share the details of local plans and micro level town planning schemes prepared by ULB?**

3. **Demographic details**
   a. **Ward wise population**
   b. **Population density**
   c. **Sex Ratio**
   d. **Migration data**
   e. **Occupation pattern**
   f. **Floating population/tourist footfall with seasonal variation**
   g. **Unemployment rate**
   h. **Street vendors/Informal traders**

4. **Details of Melas/Exhibition/Fairs/commercial and market spaces/ Hawking Zone**

5. **Transportation network, road hierarchy and plans for future?**

6. **Spatial Details of amenities/infrastructure catered –**
   a. **Health facilities (Dispensaries/ambulances/hospitals/diagnostic centers/clinics)**
   b. **Parks/playgrounds**
   c. **Lakes/ponds/drains**
   d. **Drinking Water booths**
   e. **Public toilets & Mobile toilets**
   f. **parking facilities**
   g. **Fuel stations**
   h. **public wifi hotspots**
   i. **smart poles**
   j. **pedestrian facilities**
   k. **police chowki/police station/CCTV**
   l. **Signages/ kiosks/tourist sheds/luggage rooms**
   m. **Banks/ATMs/Money exchange centers**

Department - Ayodhya Nagar Nigam

7. **Water supply**
    a. **Source**
    b. **Demand**
    c. **Coverage**
    d. **Ground water levels**
    e. **Recent Water quality reports**
8. **Sewerage**
    a. **Generation & coverage**
    b. **Collection type**
    c. **Public toilets**

9. **Spatial details of permitted restaurants**

10. **Detailed location and typologies of industries**

11. **Are there any urban design norms-based interventions with respect to conservation? And initiatives taken up towards pedestrianization**

12. **Could you please share the details of existing tourist accommodations based on classification?** (Hotels, ashrams, dharmshalas, havelis, guest houses and hostels)

13. **Has parikrama yatra route being delineated? If yes what all interventions are intended to be implemented? (maps and details of project interventions)**

14. **Could you please share details of flood plains and buffers across the river stretch?**

15. **Has any committee been formulated to look into heritage conservation and tourism?**

16. **Details of flora and fauna based on their IUCN classification**

17. **Could you please share details about upcoming model city which would be built on Vedic planning principles?**

18. **Please list out Development works undertaken under different schemes**

Schemes	Development work undertaken

19. Issues faced by Ayodhya Nagar Nigam

20. COVID-19-period impact and management strategies

21. Others

Stakeholder Survey

Department – UP tourism

1. Could you please share the stats and details regarding below components?
   a. Tourist inflow (Monthly)(OD) (Time series)
   b. Enlisted tourist attractions (Classification)
   c. Heritage zones (Spatial)(Buffers)(any recommended for UNESCO world heritage sites)
   d. Floating population (Time series)
   e. Occupational data
   f. Tourist guides
   g. Travel agents
   h. Migration data
   i. Unemployment data
2. Could you please share the details of Existing tourism schemes & policies?
3. Is there a regional tourism plan at place and can you please kindly share the details of action plans?
4. is there any working plan for parikrama yatra?
5. Details Amenities provided –
   a. Tourist information centers
   b. Signages
   c. Public toilets and mobile toilets
   d. Tourist sheds
   e. Luggage rooms
   f. Drinking water booths
   g. Parking facilities
   h. Ticket counters
   i. Public wifi hotspots
   j. Smart poles
   k. Medical facilities
   l. Restaurants
   m. Details of Street vendors/informal traders
6. Details of Classified heritage
   a. Oral traditions
   b. performing arts
   c. Yatras
   d. Rituals and Festivals
   e. Traditional Art and Craftsmanship
   f. Scholastic Traditions and schooling and discourses system
   g. Indigenous Knowledge and Healing Tradition
   h. Memorials and icons

Stakeholder Survey

Department – UP tourism

7. Are there any urban design norms-based interventions with respect to conservation? And initiatives taken up towards pedestrianization

8. Could you please share the details of existing tourist accommodations based on classification? (Hotels, ashrams, dharmshalas, havelis, guest houses and hostels)

9. What are your future plans regarding tourist accommodation?

10. Details of
    a. Darshan packages
    b. Melas/Exhibition/Fairs/commercial and market spaces/ Hawking Zone
    c. Food/dietary practices
    d. View points
    e. Sport activities
    f. Adventure

11. Are there any special zones/ heritage zones identified in the city and are any heritage buildings documented?

12. Are there any buffers delineated across heritage sites and façade in order to maintain visibility? (as per AMASR)

13. Details of flora and fauna based on their IUCN classification

14. Strategies on
    a. Marketing
    b. Investment plans and funding sources
    c. Details of Revenue generations and employment from tourism
    d. Value capture

15. How do you plan to integrate model future city in the tourist plans and what all components are you expecting?

Stakeholder Survey
Department – UP tourism

16. Please list out Development works undertaken under different schemes

Schemes	Development work undertaken
AMRUT	
PRASAD	
HRUDAY	
SBM	
Smart city	

17. **Issues faced by UP tourism**

18. **COVID-19-period impact and management strategies**
19. **Strategies on Tourist management during peak time (Crowd, traffic, services)**
20. **Others**

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_____
Tourist

1. **Gender – Male/Female/Others**
2. **Age –**
    a. **Child (0-17 Years)**
    b. **Young adult (18-30 Years)**
    c. **Middle age adult (31-45 Years)**
    d. **Old adult (45-60 Years)**
    e. **Senior citizens (>60 years)**
3. **Where are you coming from?**
    a. **Home-_____ State_____ Nation_____**
    b. **Place visited before coming to Ayodhya _____**
    c. **Place to be visited after Ayodhya _____**

4. **Mode of arrival**
    a. **Air**
    b. **Rail**
    c. **Bus**
    d. **Taxi/hired vehicles**
    e. **Personal vehicle**
    f. **Boats**
5. **Purpose of visit (Multiple checks)**
    a. **Religious**
    b. **Recreation**
    c. **Culture/arts/crafts**
    d. **Educational**
    e. **Others_____**
6. **Who is accompanying you?**
    a. **Family_____   b) Friends_____ c) Couple _____   d) Group_____ e) Solo**
7. **Where do you stay?**
   a) **Ayodhya   b) Faizabad   c) Outskirts**

8. **Type of accommodation**   **Cost (Room per day)**

A	Hotels	
B	Ashrams	
C	Dharamshala	
D	Hostels	
E	Homestays	
F	Guest houses	
G	Havelis	

9. **Duration of stay**   **Trip budget**   **Expenditure per day**   **Visiting Frequency(per/year)**

_____ _____ _____ _____

10. **Education**
    a. **Illiterate**
    b. **High school (Up till 12th)/diploma**
    c. **Graduate**
    d. **Post graduate**

11. **Income per annum**
    a. **<3 lakhs (EWS)**
    b. **3-6 lakhs (LIG)**
    c. **6-12 lakhs (MIG-1)**
    d. **12-18 lakhs (MIG-2)**
    e. **>18 lakhs (HIG)**

12. **Service quality assessment –**

1	**Accommodation**	GOOD	AVERAGE	POOR	UNAVAILABLE
2	**Accessibility**	GOOD	AVERAGE	POOR	UNAVAILABLE
3	**Tourist information center & (availability)-**	GOOD	AVERAGE	POOR	UNAVAILABLE
4	**Public toilets (availability/cleanliness)-**	GOOD	AVERAGE	POOR	UNAVAILABLE
5	**Signages (Visibility)-**	GOOD	AVERAGE	POOR	UNAVAILABLE
6	**Food (availability/Quality)**	GOOD	AVERAGE	POOR	UNAVAILABLE
7	**Drinking water booths (availability/Quality)**	GOOD	AVERAGE	POOR	UNAVAILABLE
8	**Parking facilities (Availability/accessibility)**	GOOD	AVERAGE	POOR	UNAVAILABLE
9	**Footpaths (Availability in major streets)**	GOOD	AVERAGE	POOR	UNAVAILABLE

13. **Places to visit (According to priority)**

RAM JANM BHOOMI	**HANUMAN GHARI**	**KANAK BHAVAN**	**NAGESHWARNATH TEMPLE**
TERTHA KE THAKUR	**NAYA GHAT**	**CHOTI CHAWNI**	**SITA KI RASOI**
TULSI SMARAK	**BAHU BEGAM KI**	**RAJA MANDIR**	**RAM KATHA PARK**
DASHARAT BHAVAN	**MOTI MAHAL**	**GUPTAR GHAT**	**MANI PARBAT**
KOREAN PARK	**GULAB BARI**	**NANDIGRAM (BHARAT**	**JAIN SHWETAMBER**

older

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_____
Local Residents

1. Gender – Male/Female/Others
2. Age –
   a. Child (0-17 Years)
   b. Young adult (18-30 Years)
   c. Middle age adult (31-45 Years)
   d. Old adult (45-60 Years)
   e. Senior citizens (>60 years)
3. Education
   a. Illiterate
   b. High school (Up till 12th)/diploma
   c. Graduate
   d. Post graduate
4. Income per annum
   a. <3 lakhs (EWS)
   b. 3-6 lakhs (LIG)
   c. 6-12 lakhs (MIG-1)
   d. 12-18 lakhs (MIG-2)
   e. >18 lakhs (HIG)
5. Where do you stay? _____
6. Occupation

_____ Tourism related a)yes b)no

Type – a) permanent   b) Seasonal_____

7. Where do you work? _____
8. How do you travel? a) Bike b) cars c) walking d) Rickshaws e) bus f) boat g)_____
9. Can you list out the prominent places of the of town?

_____

10. Can you list out the prominent activities of the places of town?

_____

11. Which is your favorite location in the town?

_____

Why

_____

12. What are the cultural activities you participate?

_____

Where do they take place? When do they take place?

_____

_____

13. Which are the special markets present, and what commodities are they famous for?

_____

_____

14. **Things you like/Dislike about city**

Like

    a. _____

    b. _____

    c. _____

  Dislike

    a. _____

    b. _____

    c. _____

15. **Anything you suggest is must to:**

    a. **Place** _____

    b. **Experience/Activity** _____

    c. **Product** _____

    d. **Food** _____

16. **Skill you possess**

_____

17. **How does tourism peak influence your quality of life?**

Highly Negative	Negative	Neutral	Positive	Highly positive

If so why?

18. **Calendar of events**

January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		

Stakeholder Survey

_____
Local Residents (Commercial establishment)

1. **Nature of establishment**
    a. **Market stall**
    b. **Street vendor**
    c. **Restaurant**
    d. **Others**
2. **Product sold _____**
3. **Year of establishment**
    a) < 1 year   b) 1-5 years   c) 5-10 years   d) 5-20 years   e) >20 years
4. **Type of establishment**   **Categorization (Owner)**
    a) Own   b) Rented_____   c) others   a) local   b) non local
5. **Number of regular employees**   **Categorization (Employees)**
    a) alone   b)2-5   c)5-10   d)>10   a) local____   b) non local____
6. **Opening and closing hours**
    a. **During lean season _____**
    b. **During peak season _____**
7. **Average daily customers**
    a. **During lean season _____**
    b. **During peak season _____**
8. **Average Daily revenue**
    a. **During lean season _____**
    b. **During peak season _____**
9. **Proportion of Domestic: International tourist (x:y) _____**
10. **Where do you obtain product from?**
    a. **Local (within Ayodhya)**
    b. **Within Region _____**
    c. **Outside Ayodhya _____**
11. **Average monthly turn over**   **Income out of turn over(%)_____**
    a. **< 10k**
    b. **10k-50k**
    c. **50k-1lakh**
    d. **1lakh - 2lakh**
    e. **>2lakh**
12. **Average monthly turn over (during peak)**   **Income out of turn over(%)_____**
    a. **< 10k**
    b. **10k-50k**
    c. **50k-1lakh**
    d. **1lakh - 2lakh**
    e. **>2lakh**
13. **Average annual rise in income across last 3 years(%) _____**
14. **Where do you stay? _____**

_____

15. **Type of shop – a) permanent   b) Seasonal_____**

16. **How do you travel? a) Bike b) Cars c) Walking d) Rickshaws e) Bus f) Boat g) _____**

17. **Problems faced:**

    a.   **Financial**

    b.   **Infrastructural**

    c.   **Any other_____**

_____

_____

18. **Suggestions**

19.

Planning for integrated sustainable tourism development: Case of

Muddukrishna A S   Department of Urban Planning,

S3806

Sponsored Thesis Project Competition "RE-IMAGINING URBAN RIVERS" (2021)

Planning for Integrated Sustainable Tourism Development: Case of Ayodhya

School of Planning and Architecture

Stakeholder Survey

Hotels

1. **Category of hotel**
a)5-star b)4-star c)3-star d) 2-star e)1-star f) Non starred g) Others_____

2. **Year of establishment**
< 1 year   b) 1-5 years c) 5-10 years   d) 5-20 years   e) >20 years

3. **Type of establishment**   **Categorization (Owner)**
Own   b) Rented_____   c) others   a) local   b) non local

4. **Number of regular employees**   **Categorization (Employees)**
a) up to 5   b)5-10   c) 10-20   d)>20   a) local____   b) non local____

5. **Skills Required**

_____

6. **Availability of rooms & tariff**
a) Single bedded   b) Double bedded c) Triple bedded d) Dormitory

_____   _____   _____ _____

7. **Number of beds** _____

8. **Number of rooms**_____

9. **Occupancy rate (Lean)**
a) <25%   b)25%-50%   c)50%-75%   d)>75%

10. **Occupancy rate (Peak)**
a) <25%   b)25%-50%   c)50%-75%   d)>75%

11. **Average duration of stay (nights)(Domestic)**
a)1   b)2-3 c)3-4 d)>4

12. **Average duration of stay (nights)(International)**
a)1   b)2-3 c)3-4 d)>4

13. **Proportion of Domestic: International tourist (100:x)**
Lean _____
Peak _____

14. **Average customer per day**
Lean _____
Peak _____

15. **Average Room occupancy per day**
Lean _____
Peak _____

16. **Parking availability   a)Yes b)No**

17. **Solid waste generated per day (Kg)_____Disposal method   a) ANN   b) Others_____**

18. **Water consumption monthly _____**

19. **Source a) ANN   b) Ground water   c) Rain water harvesting   d)Others _____**

20. **Electricity bill _____ Unit cost(Per unit)_____**

Stakeholder Survey

_____

Hotels

21. Average monthly turn over   Income out of turn over(%)_____
    a. < 10k
    b. 10k-50k
    c. 50k-1lakh
    d. 1lakh - 2lakh
    e. >2lakh
22. Average monthly turn over (during peak)   Income out of turn over(%)_____
    a. < 10k
    b. 10k-50k
    c. 50k-1lakh
    d. 1lakh - 2lakh
    e. >2lakh
23. What kind of customers do you cater more? (Rank them out based on influx)
    a. Family_____ b) Friends_____ c) Couple _____ d) Group_____ e) Solo
24. Where do your customers generally belong to

City_____
State_____
Countries_____

25. Affiliation

a) Oyo b) Trivago c) Go-ibibo d) Non-affiliated e) Others_____

26. Which of the following years did u receive maximum influx

a)2015 b)2016 c)2017 d)2018 e)2019 f)2020

27. Problems faced:
    d. Financial
    e. Infrastructural
    f. Any other_____

_____
_____

28. Suggestions

Stakeholder Survey

Police

1.   **Could you please share spatial details of**
a) **Police stations**
b) **Police chowkis**
c) **Accident blackspots**

2.   **Strategies on Tourist management during peak time (Crowd, traffic, services)**

3.   **Security challenges during religious events**

4.   **Crime rate /which are the most and least crime prone areas**
Most

_____

_____

_____

Least

_____

_____

_____

5.   **CCTV coverage and future plans**
6.   **Vehicles registered (Typology)**
7.   **Details of paratransit**

8.   **Are there any river based security solutions currently in place ?**
9.   **Suggestions**

Stakeholder Survey

Auto Rickshaw/E-rickshaw/Bus/car taxi/Boat

1. **Where are your stands located?**

2. **Which route do you daily cover? & Frequency_____**

3. **How many customers do you daily cater to (patronage)? _____**

4. **How many people do you carry at a time Fleet size? _____**

5. **How much do you charge for a person? _____**

6. **Average daily turnover (Lean)_____   Income out of turn over (%) _____**

7. **Average daily turnover (Peak)_____   Income out of turn over (%) _____**

8. **Do you have any associations?**

9. **Affiliation**
   a) **OLA** b) **Uber** c)**others_____**
10. **Issues faced**

11. **Suggestions**