

**PRAGATI SETU – Exploring the role of
architecture and river tourism to generate
river-related economy.**

**A case of river Vincharna, Shinde Wasti and
Sautada Village in Beed district, Maharashtra**

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Abstract

The study highlights one of the many utterly neglected villages in India - Sautada, on the banks of Vincharna river in Maharashtra's Beed district. Sautada Dam was built on the river Vincharna 25-30 years back; the construction of the dam caused the river to overflow and gave rise to the backwaters of Vincharna's riverine lake. The river Vincharna split the village of Sautada into two, isolating the Shinde Wasti from the main village; which is accessible only by rafts. The existence of abundant water source led to flourishing agriculture and pisciculture practices. Rameshwar Waterfall and Temple, located within 1.5km radius of the Wasti in Sautada is a popular pilgrimage and tourist destination within the nearby villages. Despite the presence of these natural and cultural assets, there has been lack of tourism infrastructure development leading to migration of youth and socio-economic decline. There is a need to understand the adverse impact of dam construction on the river and livelihoods of nearby settlements. The study follows a participatory approach as methodology to identify the current and future needs of the villagers and the river. The proposed river-related agrotourism infrastructure, pilgrim infrastructure and river ecology enhancement aim at uplifting the socio-economic conditions of the village. The study also not only aims at exploring the role of architecture to enhance the livelihood of the villagers, but also to conserve the existing ecology of the river. Using the study analysis, the interventions and policies that are developed aim to serve as a model solution for similar conditions in rural villages of India, urging them to grow socially and economically with a ecologically sustainable and sensitive approach.

Key Words - *Socio-economic development, Agrotourism, Pilgrim Infrastructure, River ecology*

Introduction

The livelihood of the villagers in India is based mostly upon agriculture, animal husbandry and local arts and crafts which is dependent on rivers as the water source. In any rural area, the development depends on mobility of areas, connectivity of people and availability of sources in that area. Some villages are disconnected within each other, from the main cities and the world. There is a need to investigate the root cause of such dysconnectivity and develop safe linkages and infrastructure in such remote locations for the overall development of the villages. There is also a need to study the existing natural, cultural and religious assets of such villages and enhance them to boost economic development. Thus, there is a need to explore the role of architecture in identifying such villages and developing tourism infrastructure for their growth.

Study area

Background on Sautada Dam

Sautada is a Village in Patoda Taluka in Beed District of Maharashtra State, India. Sautada is on the banks of Vincharna river in Beed district.

The Sautada Dam, which lies 2.4 km from the main Ahmednagar-Pathardi Road, was constructed over River Vincharna almost 25-30 years back. In a drought-prone region like Beed, the construction of a dam over the river, resulted in it acting as an abundant source of water. The construction of dam caused the water to overflow, causing the formation of the riverine lake backwaters of river Vincharna.



Figure 1 Sautada Dam (Source : Dr. Ganesh Dhawale, Beed)

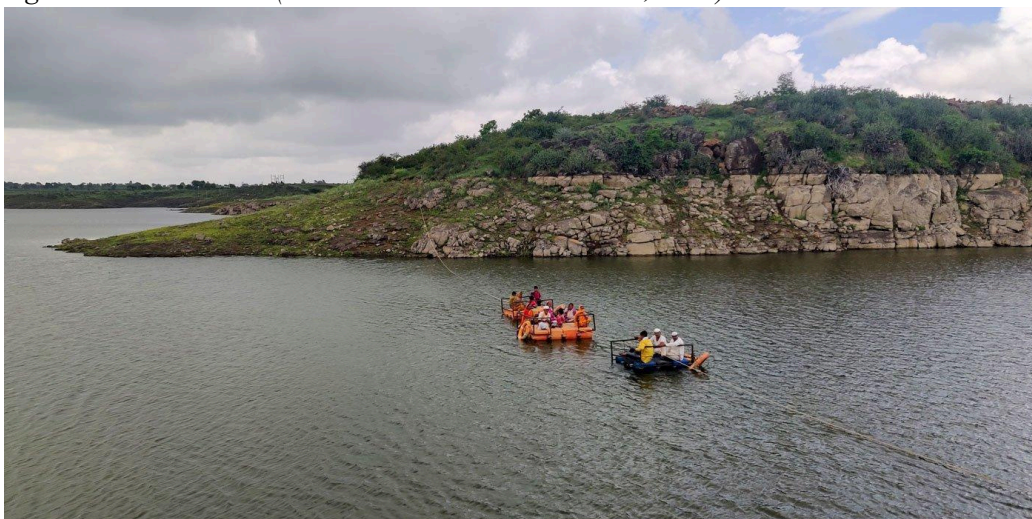


Figure 2 Shinde Wasti residents crossing river Vincharna by rafts (Source : PARI network)

About Shinde Wasti

This resulted in splitting the village of Sautada into two parts, cutting off a portion of the village from the main part. The cut-off island known as the Shinde Wasti got disconnected from Sautada village and from the neighboring villages. The Shinde Wasti Island is surrounded by water from the Sautada dam backwaters from three sides and by private inaccessible farmlands on the fourth side. The only available access to the Wasti is by crossing the water body. The residents of Shinde Wasti have been using thermocol rafts to cross the river on a daily basis because of the absence of a bridge. Restricted access to their part of Sautada village has affected almost every one of Shinde Wasti's 500 or so residents. It has been particularly harsh on children and women and at times proved to be fatal. The population of Shinde Wasti is 500-600 people, and around 40-50 houses in total. There is a primary school – Shinde Wasti School from 1st to 4th standard only. There are currently 7 children studying in that school. The other children have to cross the river to attend the ZP school on the other side in Sautada. The occupation of the residents of Shinde Wasti is primarily agriculture. Crops like sugarcane, soyabean, jowar, peanuts, etc. Animal Husbandry is also an occupation, mainly milk production. The farmers have to go and sell their produce in Sautada and nearby villages by crossing the river. They need to get supplies for their farming and cattle almost on a daily basis from the other side in Sautada.



Figure 3 & 4 Vernacular Houses of Shinde Wasti



Figure 5 & 6 Agricultural Farmlands and Cattle of Shinde Wasti



Figure 7 Rameshwar Waterfall and Rameshwar Temple in monsoon (Source : Sakaal newspaper)

About Rameshwar Waterfall and Temple

Sautada is famous for Sautada waterfall, also known as Rameshwar waterfall. This place is famous in both, Beed and Ahmednagar districts as it attracts people from every region of Maharashtra. The height of the Sautada waterfall is 70mts. From the mountain cliff down to the level of the river basin a flight of about 600 steps has been built to access the famous Rameshwar temple of Lord Shiva built in Hemadpanti style. The Rameshwar temple stands alone at a height of about 15.24 metres (50 ft.) overlooking the river Vincharna, flowing through the valley below. At the base of the waterfall, there is a pond known as *dev kund*. It is so-called because it is supposed to have been created by Ram by shooting an arrow. Further away is a big water strip in the form of a *doh* called *Sita kund*. The religious and historical importance is thus held high due to mythological legends associated with the Rameshwar temple and waterfall. An annual fair is celebrated around the temple, known as Rameshwar Yatra. On the third Monday of the month of *Sravan* a fair attended by over 3,000 people, which goes on for 2 days.

Literature Overview

‘Scope of Agro-tourism development of Rural Areas: A Geographical study of Baramati Tahsil, Pune district Maharashtra, India’ is authored by Sunil Ogale. The study region was Baramati tahsil, which is mainly an agrarian region having 84.89 percent net sown area of the total geographical area. The objectives of the study were – to evaluate and scope of agro-tourism of rural areas and to evaluate the benefits of agro-tourism in rural areas. Primary and secondary data have been used for the research paper and cartography and GIS techniques were used to represent data. Through data collection, 3 existing agro-tourism centres were identified and studied to identify their benefits and shortcomings. The research findings were – Agrotourism centres have the potential to attract tourists. Besides training and demonstration, disease-free planting material is provided to the farmers. There is no other source of income other than agriculture for the farmers, so their livelihood depends on agricultural business. The agriculture practices are flourishing, but need more upliftment for economic growth. The conclusions of the study were – there is a need to develop more agro-tourism schemes in Baramati with maintenance, hospitality and tourism facilities. There needs to be an increase in the awareness amongst urban markets, ngos and companies to invest in agro-tourism projects. With the help of financial aid and by attracting the farmers to get involved in the agro-tourism sector, the socio-economic conditions of the tahsil will improve. This study will act as a guideline for the agro-tourism potential in my project.

‘Rehabilitation-The Problem of Dam Affected Displaced People: A Study of Warna River Basin, Maharashtra’ is authored by Jagdish B. Sapkale Assistant Professor, Department of Geography, Shivaji University, Kolhapur, Maharashtra, India. The aim of the research was to address the increasing demand for detailed and accurate assessments of the socio-economic impacts of dam construction on environment and displacement of native people. For the research methodology in terms of primary data, the information and statistical data was generated from the Warna river basin and from the displaced settlements. Total 21 villages were selected for Socio economic survey of rehabilitation villages. From each village 10 % households/families had been considered for questionnaire survey. Questionnaire was formulated on account of all the relevant socio-economic aspects. The methodology also includes: individual household case study and institutional analysis. Door to door house hold survey for selected sampled households were carried out. During field work and study some villages are found to be in good conditions, but at some villages the rehabilitated settlement is very poor. The finding and analysis of the study were as follows - after resettlement, the school and educational facilities are declining in some villages. Thereafter, shifting the villages to the new location, they have suffered lack of poor infrastructure amenities, some displaced people got good facilities. In some villages, people have faced poor sanitation facilities. After displacement, the people have suffered changing occupational structure as well as increased unemployment due to loss of agricultural source of subsistence. The results suggested that there are major positive effects of dam but dams are also responsible for social and cultural deterioration.

After resettlement, the displacement of native people have faced many social problem such as disturbance of family relationship, poor drinking water facilities, lack of infrastructure amenities, lack of education, medical, road and transportation, electrical facilities, absence of public toilet facilities, deficiency of market center and lack of water for irrigation. The suggestions were that occupational opportunities should be increased for the displaced population and the government should provide employment opportunities for rehabilitated people. The socio-economic impacts studied in this paper are similar to the impacts of dam construction in my research. The methodology, analysis and suggestions will be helpful for my study.

‘River as a source of income generation : a case study of the river Kapili in Marigaon, Assam, India’ is authored by Monoj Kumar Jaiswal, Panchi Devi and Bharati Dutta from Department of Geography, Gargaon College, Sibsagar, India, Centre for Studies in Geography, Dibrugarh University, India and Department of Geography, D.H.S.K. College, Dibrugarh, India respectively. The purpose of the study is to examine how far the people are economically benefited by the way of income generation from the river. Here, an attempt has been made to analyse what are the different economic activities are performed in the study area and how they are related to River Kapili. The Kapili river basin is an important part of the physiographical setting of Assam; it is bounded by the Karbi Anglong in the east and Meghalaya plateau in the west and North Cachar hills in the south and the Brahmaputra River and its flood plain in the north. The present study mainly tries to evaluate the importance of the Kapili River to its surrounding population in general and its economic importance as a source of income generation in particular. The objectives can be summarized as follows : To understand the importance of river as a source of income generation, To identify the economic implication in terms of monetary value arising out of the use of resource. The present study has been done based on both primary and secondary data sources. The data and information used in this study are collected from (i) Analog maps from authentic sources (ii) field surveys and (iii) other means. In the study, nine villages have been selected; development of these villages is attributed to the proximity of the river Kapili. In all these it was found that the river is the main source of water for most of the domestic consumption as well as other activities and it has a deep significance to them not only for economic point of view but also aesthetic point of view. All the surveyed villages are primarily have agrarian economy. 69 percent of the source of income is from agriculture, and the contributors of the other sources go like this-animal husbandry 12 percent, fishery 10 percent, quarrying 4 percent, industrial activity (small scale industry) 2 percent and others confine merely 4 percent. The activities like agriculture, fishery, animal husbandry, and quarrying directly or indirectly depend on availability of water and in this case on river Kapili for water availability. Thus, river Kapili is the community resource for the people of Marigaon, which not only has significance for its direct water requirement but also it helps in smooth functioning of natural ecosystem that promotes some traditional economic activities. From the above mentioned analysis it can be concluded that the water of River Kapili facilitated socioeconomic life of the study area in particular and the whole Marigaon district in general. Thus the river is in true nature a source of income generation and people’s aspirations bind with it. This research will help me identify river Vincharna’s economic potential.

Need for Research

There is a need to explore the role of architecture and river tourism for establishing a symbiotic relationship between the river, human settlement and socio-economic sustenance in Sautada village.

Objectives of the study

1. To study the impact of transition of river Vincharna’s backwaters on the lives of Sautada village’s Shinde Wasti and the river ecology.
2. To understand the needs and aspirations of villagers in terms of connectivity, socio-economic conditions and infrastructure.
3. To lay emphasis on studying and enhancing the ecology of the existing river and its surroundings.

4. To formulate design proposal and policies focusing on holistic development of the Shinde Wasti and Sautada village using the River Vincharna as a catalyst.

Research Methodology

The research conducted in the past has discussed about the rivers, tourism and villages in India separately. There is a need to study the correlation of existing natural resources, tourism and infrastructure in villages for the growth of rural India.

The remote villages in India which are disconnected due to physical barriers need to be identified to study the root cause of their issues and establish better connectivity and infrastructural development for them. Most livelihoods in such villages are dependent on agriculture. There is a need to explore the potential of tourism infrastructure using existing natural, cultural and religious heritage of these villages.

The research was carried out using a composite methodology that followed a participatory approach. Secondary data collection was done using news article, Beed tourism websites, Beed district maps of irrigation, etc. The primary data collection was carried out in two parts- part A and part B. In Part A - Interviews of identified stakeholders and authorities. Door to door interviews of villagers, social workers, teachers, meetings with local bodies, telephonic interviews of authorities were vastly carried out in part A. Part B included – Mapping consisting of land use mapping, architectural typology mapping, relief mapping, vegetation and biodiversity mapping, etc.

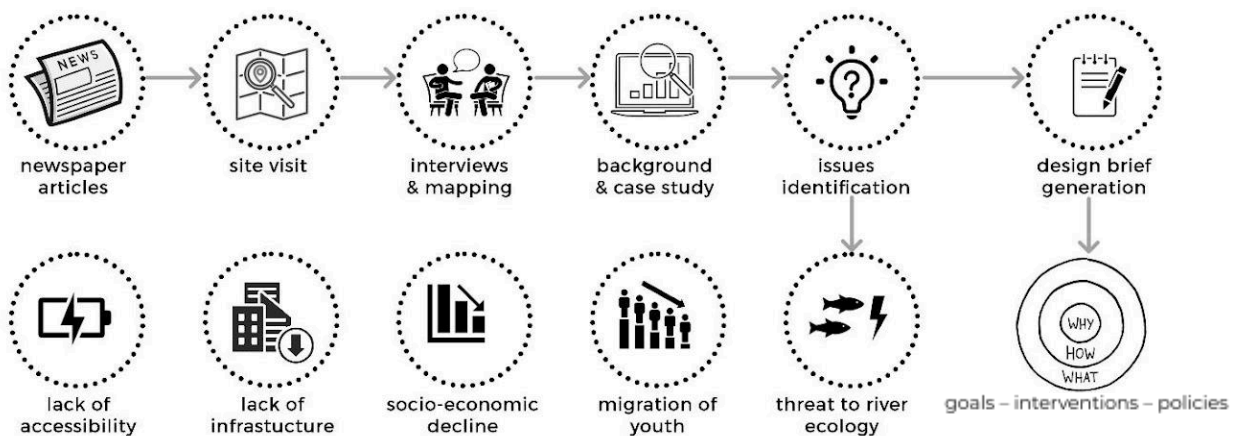


Figure 8 Research Methodology

Part A

To study the impact of transition of river Vincharna's backwaters on the lives of Sautada village's Shinde Wasti and The questions asked during the interviews were –

1. What are the major problems you have faced due to the lack of connection over the river?
2. How has the dam construction impacted the agriculture in this area?
3. What are the positive aspects of the riverine backwaters?
4. What is the infrastructure does your village lack?



Figure 9 Interviews (Left to right – Sanap Sarpanch, Indubai Shinde, Vitthal Shinde, Ganesh

Dhawale)

Findings of Part A

Mr. Sanap, the Sarpanch of Sautada village stressed on the need for infrastructural development for boosting the economy of the village using the existing heritage of the place. Indubai Shinde, a 50 year old woman who has been living on the island since her birth said that the construction of the dam resulted in isolating them from the main village. She stressed on the problems faced by the women in Shinde wasti. The agriculture is flourishing due to the presence of water, but we have been cut off from all the basic facilities, said Vitthal Shinde, a 65year old farmer. Ganesh Dhawale, a social worker who has been working for the welfare of Shinde wasti residents feels that there is a burning need to safeguard the future of Shinde Wasti.

Part B

Part B consisted of mapping the site at macro and micro scale.

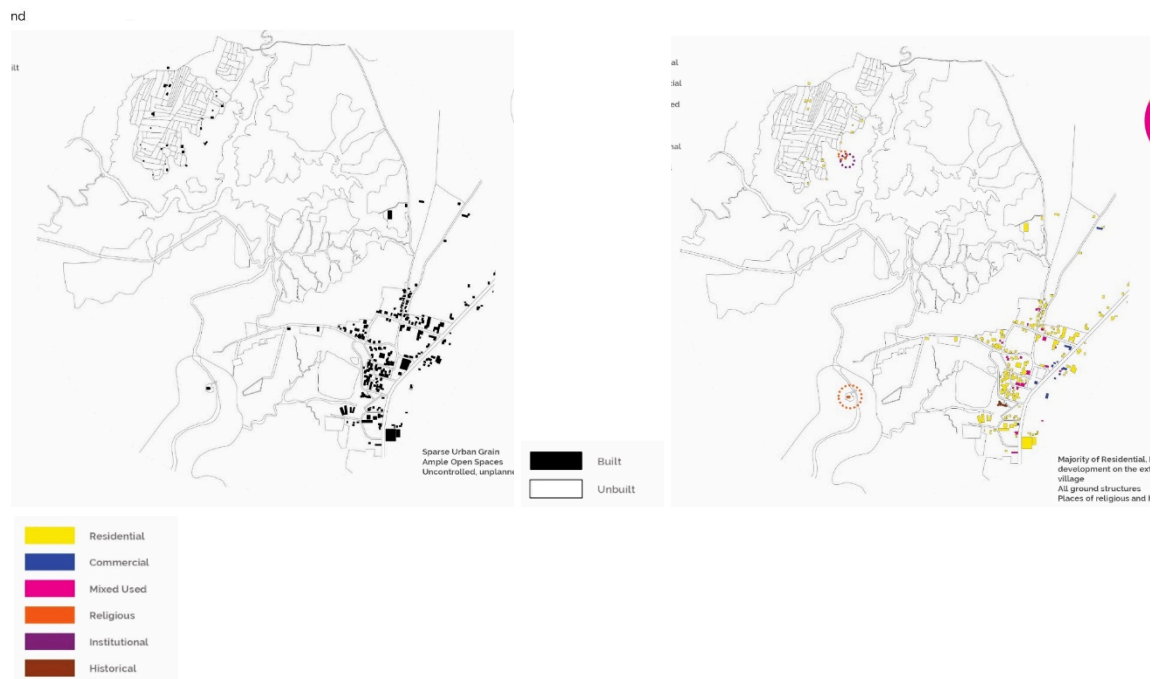


Figure 10 & 11 Figure Ground Map, Land Use Map



Figure 12 & 13 Road Network Map, Open Spaces Map

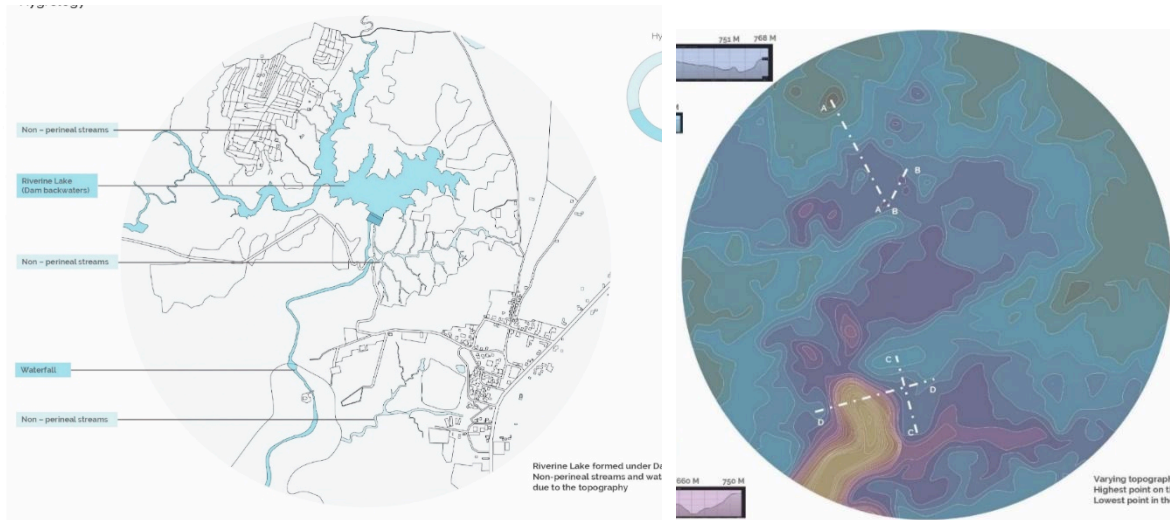


Figure 14 & 15 Hydrology Map, Topography Map

Findings of Part B

Figure Ground Map Findings- Sparse urban grain consisting of uncontrolled, unplanned, scattered growth can be seen along the national highway.

Land Use Map Findings- Majority of residential, mix use typology of buildings on the exterior parts of the village. All structures are ground or ground + 1 structures. Places of religious and historic importance are observed.

Road Network Map Findings- Hierarchy of roads is observed. Narrow, unfinished internal roads are seen and there is inaccessibility over the river Vincharna.

Open Spaces Map Findings- Large open spaces are observed, majority of which are private farmlands. Dense forest with rich bio-diversity is seen in Rameshwar waterfall and temple valley

Hydrology Map Findings- Riverine lake formed due to the faulty construction of Sautada (Rameshwar) Dam over river Vincharna. Non-perennial streams and waterfall are formed due to the topography of the site.

Topography Map Findings- Varying topography is observed with the lowest point in the Rameshwar valley and highest point on the Shinde Wasti Island.

Flora and Fauna Map Findings-

Agriculture in Shinde Wasti – Fruit bearing trees like mango, custard apple, tamarind and crops like sugarcane, spinach, fenugreek along with groundnuts and soyabean are native to the village.

Pisciculture practice in Sautada village –Fish seeds are brought from Andhra Pradesh and cultures in the riverine lake of Vincharna by a local organization in Sautada village. They are cultured for 8-12 months till they weigh 1.5 -3kg, after which they are extracted and sold in the local market.

Discussion

This study examines the impact of change in water body (in this case, Vincharna river backwaters) on the lives of the villagers and surroundings. The survey conducted is used to understand the positive / negative experiences and challenges faced by the villagers, village sarpanch and social workers in the village. The micro and macro level mapping done is used to understand the strengths and opportunities presented by the site area. In this study, the findings of part A and part B are used to identify the underlying issues, recognize the assets and devise solutions for them.

From the findings of part A and part B,

The key issues identified are as follows -

1. Lack of accessibility over the river - There is a need to establish proper connectivity and accessibility over river Vincharna for the Shinde Wasti residents to commute daily.
2. Lack of tourism infrastructure - Despite the presence of tourist attraction places like the waterfall and temple, there is no tourism infrastructure development.
3. Socio-economic decline - The lack of accessibility and lack of tourism infrastructure have led to poverty in Sautada village.
4. Migration of youth - The lack of development and employment opportunities have led to migration of youth to cities.
5. Threat to river ecology -In case of infrastructural development, a threat to the existing river ecology may pose if not conserved with a sensitive approach

The key assets identified are as follows -

1. Flourishing agriculture – Mango, custard apple, tamarind, sugarcane, spinach, fenugreek, groundnuts, soyabean which are native to the village are grown here.
2. Ongoing pisciculture practice – Fish are cultivated in the backwaters on Vincharna river.
3. Religious and natural heritage – The Rameshwar waterfall, temple and valley have great tourism potential.

Based on the issues and assets, the objectives, interventions and policies of the project were defined.

Objectives (Why?)

1. To uplift the socio-economic condition of the village
2. To develop river-related tourism potential
3. To enhance the ecology of the river
4. To ensure safe accessibility of the river
5. To ensure effective waste management, especially in the river zone

Interventions (What?)

1. Agrotourism for Shinde Wasti and river related activities
2. Visitor's centre for Rameshwar waterfall and temple valley
3. Riparian management along the river edge
4. A safe linkage over the river Vincharna
5. Sustainable waste treatment and recycling waste water

Policies (How?)

1. Tourism infrastructure with controlled footfall for minimum environmental impact
2. Visitor's centre equipped with food plazas and resting plazas for huge crowd
3. Landscape policy with native plantation, riparian and wetland species
4. A bridge for the villagers as a part of the agrotourism proposal, designed considering the riparian zone
5. Using Soil Bio-technology Treatment plant where the output of one system is the input of the other system

Concept

The design aims to be a grand celebration of the river which is socially inclusive, economically beneficial and environmentally responsible. The concept is **Connect** (the people) – **Transform** (the condition)– **Innovate** (along the context) – **Reflect** (the existing heritage).

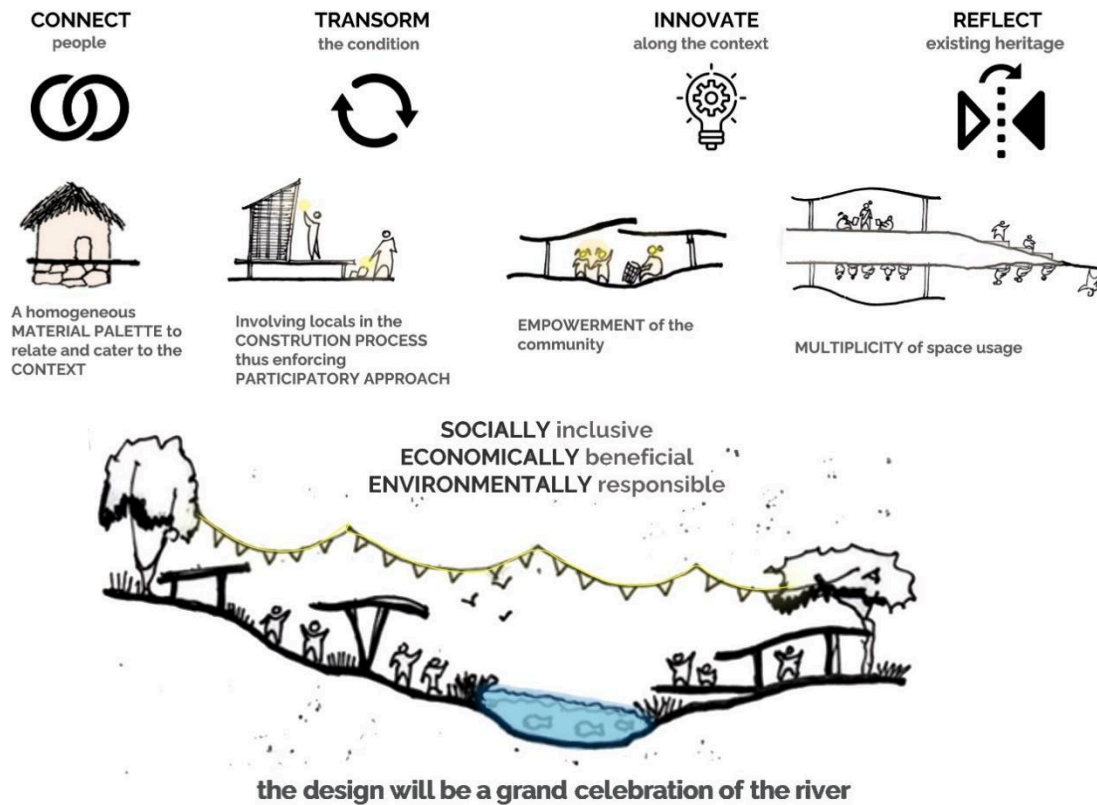


Figure 16 Concept Diagram

Design Brief

	PART A – AGRO TOURISM - SPACE PROGRAM	UNIT AREA	NO. OF UNITS	BUILT AREA IN SQ. M.	OPEN AREA IN SQ. M.
	WELCOME PAVILION			150	280
	Arrival Porch			30	
	Waiting Area			36	
	Information and Help Desk			18	
	Visitor's Toilet			65	
	Viewing Deck				200
	Boat Deck				80
	ARRIVAL COURT AND RECEPTION			530	145
	Entrance Porch			35	
	Waiting Area			200	
	Refreshment's Area			100	
	Storage			30	
	Reception and Information Desk			100	
	Visitor's Toilet			65	
	Central Courtyard				145
	AGRO EXPERIENCE ZONE			1500	440
	Welcome Pavilion			42	
	Visitor's Toilet			65	
	Community Chula Kitchen			42	
	Dining Area			225	
	Activity Area			72	
	Central Courtyard				290
	Tree Plaza				150
	Aamrai Picnic Zone pavilions	36	5		180
	Gaushala			780	
	Kitchen Unit	60	4	240	
	Sugarcane Pavilion			42	
	FISHING ZONE			100	80
	Pisciculture Information Desk			36	
	Fishing Storage			18	
	Fishing Decks	10	5		50
	Orientation Hall			54	
	Nature Trail				30
	ACCOMMODATION			1150	
	Type A – Farm Stay Unit (3-4 people)	150	4	750	
	Type B – Stream Side Tent Unit (2 people)	35	5	175	
	Type C – River Side Tent Unit (3 people)	45	5	225	
	WELLNESS ZONE				2400
	Yoga Lawn				10
	Meditation Pavilions				150
	Green Gym		5 (50)		250
	Open Air Amphitheatre				2000
	VILLAGE WELFARE AND EDUCATION ZONE			600	1248
	Healthcare Clinic			100	
	Multi-purpose store			40	
	Villager's toilets			65	
	Banyan Court				225
	Children's Playground				390
	Tree Plaza				225

	Welcome Pavilion (Visitor's Entry)			54	
	Library			54	
	Training Hall	54	4	216	
	Open Workshop Area	54	2		108
	Visitor's Toilet			65	
	Stream Court				300
	PARKING				5000
	2 wheeler		30		
	4 wheeler		45		
	Bus		7		
	TOTAL PART A			4000	

Table 1 Design Brief of Part A – Agro Tourism

Considering footfall of max 200 people per day, 100 max for overnight stay for Agro tourism.

Table 2 Design Brief of Part B – Visitor's Centre (Pilgrim Infrastructure)

	PART B – VISITOR'S CENTRE Pilgrim Infrastructure	UNIT AREA	NO. OF UNITS	AREA IN SQ. M.	OPEN AREA IN SQ. M.
	PARKING PLAZA			100	
	Driver's Resting Plaza				
	Bus Parking (Pilgrim)		10		
	4 Wheeler Parking (Tourist)		60		
	2 Wheeler Parking (Tourist)		40		
	VISITOR'S CENTRE			2240	
	Arrival Court	270	2	540	
	Refreshment Court	20	20	400	
	Visitor's Toilets	75	2	150	
	Tourist Information Centre			125	
	Kitchen			125	
	Dining Pavilion			450	
	Resting Pavilion			450	
	Sunken Courtyard Seating				550
	TOTAL PART B			2340	
	TOTAL PART A + B BUILT AREA			6340	

Considering footfall of 1000 people per day during yatra month, 100-200 per day otherwise for Visitor's Centre.



Figure 17 Site Plan – Agro-tourism at Shinde Wasti

Site Design

The site has been carefully designed keeping in mind the existing site conditions.

There is a Welcome Pavilion with boat dock and parking facility for the visitors. The visitor's entry is via boats to reach the Arrival Court and Reception. This is the first experience of the river that has been provided to the visitors.

The Agro-experience centre with Mango grove, Gau-shala and Community kitchen lie at the heart of the site. The visitors can spend their day enjoying these activities.

There is an open Amphitheatre for local cultural performances. There are yoga pavilions, bamboo bridges along the seasonal streams. Nature trail with birdwatching decks along the entire river edge with Riparian plantation.

The Fishing Zone has a pisciculture information hall and fishing decks, accessible by boats on site.

The Village Welfare and Training zone has been designed along the seasonal stream.

The visitor's Accommodation is in the silent zone and there is a bridge for the villagers and visitors in case of emergency.

The Arrival Court and Reception

The journey to the entry of the main site through water makes the guests experience the true essence of river Vincharna. The simplicity of local materials and grounded nature of the structure speaks the language of the vernacular architecture of the village.

Agro Experience Zone

The agro-experience zone shows the guests a glimpse of rural life. This zone consists of a dining

facility, community kitchen, pickle and papad making workshops along with a mango grove picnic area and gau-shala experience areas.

Fishing Zone

The fishing zone provided on the opposite side of the island is accessible by boats. It will remain operational during peak cultivation seasons.

Village Welfare Zone

The Village Welfare Zone is carefully crafted around the existing school, temple and peepal tree. The Welfare zone on side – consisting of a clinic, multi-purpose store and public toilets and The Education Zone – consisting of playground and training centre with library on the other side of the school aims at bringing out the true sense of community living of the village. The playground and semi-open library placed on the axis of the school aim at enhancing the educational experience of village children. The training zone will be used for conducting sessions for villagers by the guests, thus completing the circle of giving back to the community.

Conceptual Level Bridge Proposal

The conceptual proposal of a suspension bridge is made considering the Riparian zone to serve as an immediate solution for the villagers.

Visitor's Accommodation

The accommodation cluster offers the guests two distinct yet unifying experiences with an objective to build a strong harmony with nature.

Type A – Farm Stay Unit

The farm stay cottages, derived from the village housing typology aim at remaining true to the context, blending with the vernacularity of the village and reconnecting the users to their roots.

Type B– Tent Stay Unit

The tent units, nestled in the natural slope of the site, along the seasonal stream and facing the river Vincharna are raised on stilts to conserve the riparian zones around the water bodies.

Material palette and construction technology of agro tourism intervention

The rubble stone packed foundation, load bearing mud walls, wooden louvered vents topped with clay tiled roof are not only cost effective but aim at involving local villagers as a beginning step of social and environmental sustainability. A native landscape policy is proposed for the enhancement of the river edge.



Figure 18 Site A – Agro-tourism at Shinde Wasti

Site B - Visitor's Centre at Rameshwar Waterfall and Temple

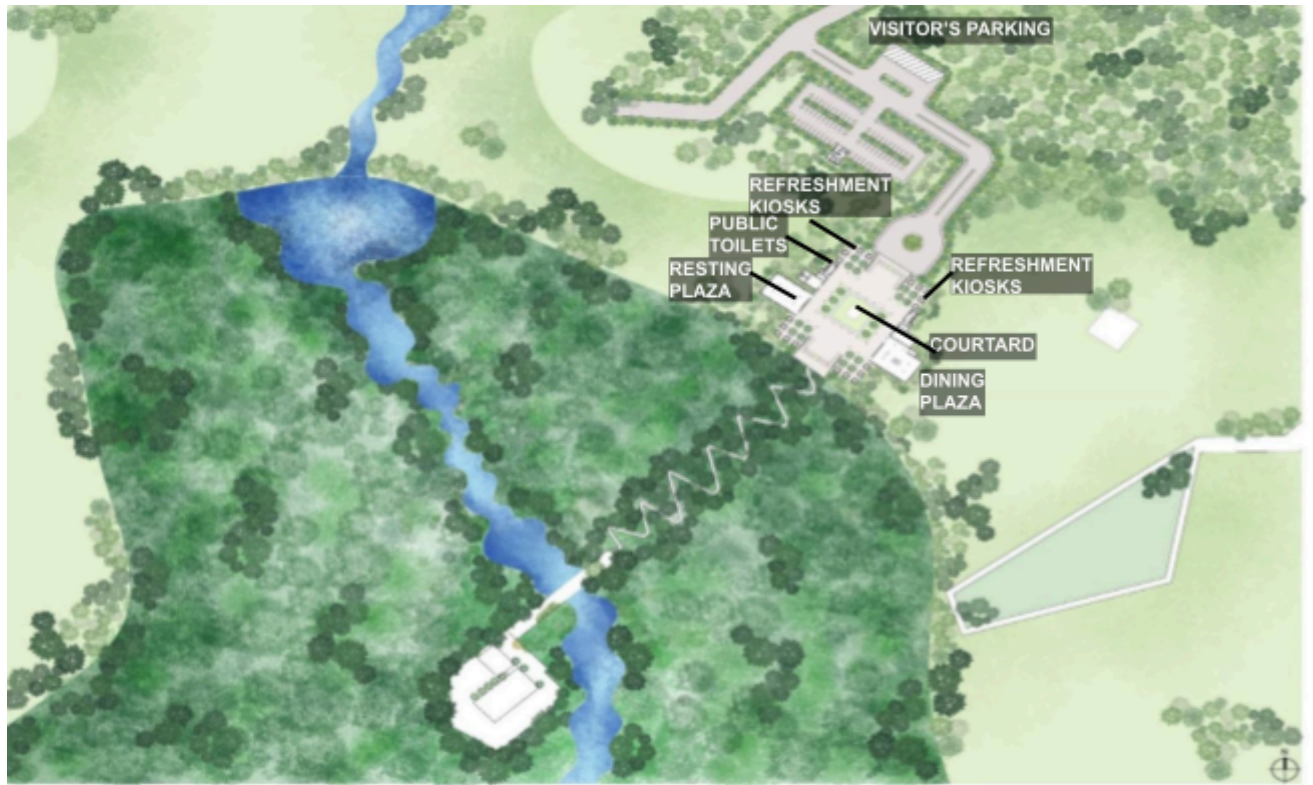


Figure 19 Site Plan – Visitor's Centre at Rameshwar Waterfall and Temple

The Visitor's Centre at Rameshwar Waterfall and Temple

The Visitor's Centre is designed keeping in mind the large crowds visiting the temple during Yatra season.

The Visitor's Centre is placed on the axis of the Rameshwar temple. The central axis is highlighted with the focal central courtyard. Symmetry is observed while placing the blocks of dining and resting pavilions, visitor's toilets and refreshment courts on either side of the court.

The orientation of the centre, shady trees and central RWH kund are the passive design strategies used.

Material palette of the Visitor's Centre

The material palette is inspired by the basalt stone quarry valley of Rameshwar.

Locally available stone, bamboo, wood and clay roof tiles are used with native construction methods.

The grounded character of the pavilions represents the humble hut style stalls of the village.

River edge conservation and enhancement policy

The goal was to create a vibrant river zone for enhancing the existing river ecology. The policies to be implemented are – public gathering spaces along the river to increase the river-citizen connect, to design landscape features along seasonal streams in a sensitive manner, enhancing the existing river ecology by proposing a nature trail with jogging track, bird watching decks and seats and riparian plantation along the river edge.

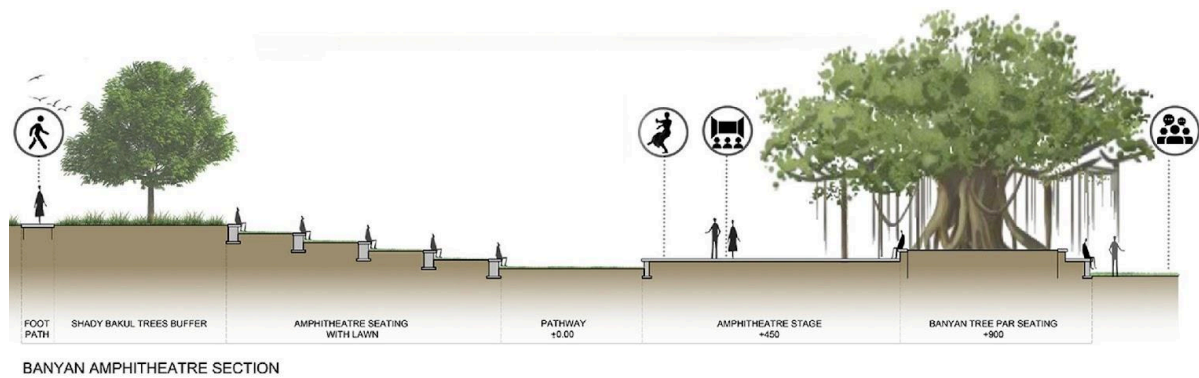


Figure 20 Policy - Public gathering space along the river to increase the river-citizen connect

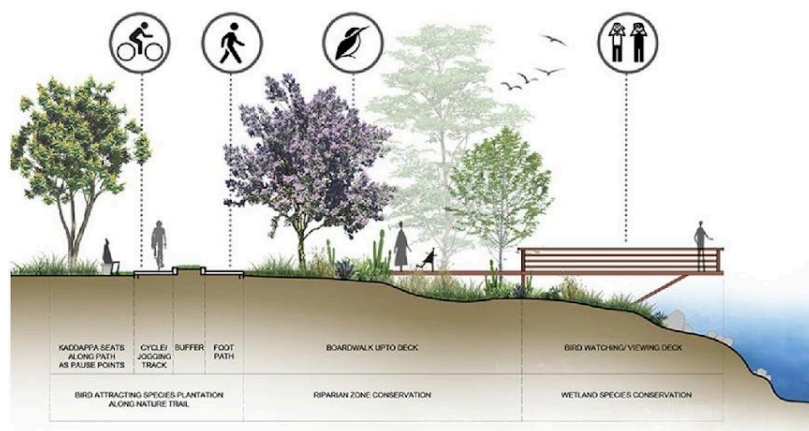


Figure 21 Policy – Conserving and Enhancing the Riparian buffer zone



Figure 22 Policy – Conserving and Enhancing the Riparian buffer zone

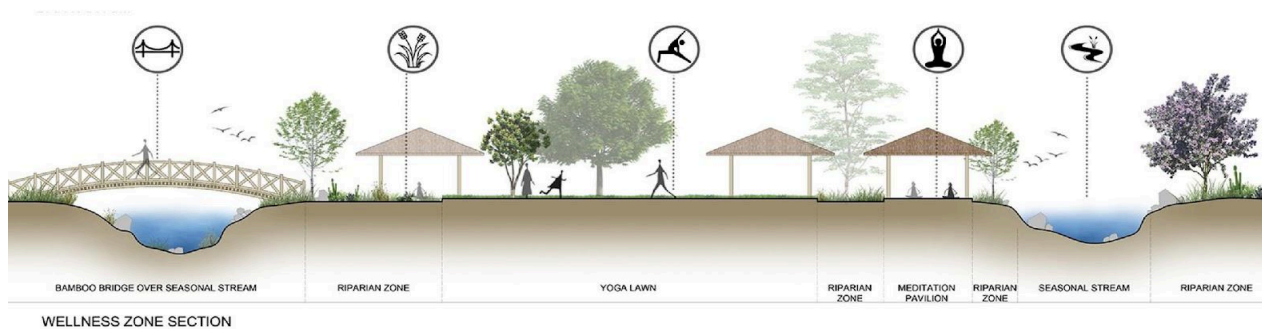


Figure 23 Policy - Designing landscape features along the seasonal streams, in a manner sensitive to and respectful of the existing natural habitat

Landscape policy

A zone-wise native landscape policy is proposed, where each zone has different species like the riparian species, bird-attracting species, vegetable and fruit plantations, medicinal and herbal species. The plant species recommended are all native to the Beed region and thrive well in the climate of the region.


































ZONE A	ZONE B	ZONE C	ZONE D	ZONE E
RIPARIAN ZONE	BIRD ATTRACTING SPECIES	BUFFER ZONES	HERBAL/MEDICINAL SPECIES	VEGETABLE FARMING - KITCHEN GARDEN
CACTUS	BABUL	CORDIA	TULSI	SPINACH
ALOE VERA	PELTOPHORUM	BAHUNIA	LEMON GRASS	FENUGREEK
AGAVE	SINGAPORE CHERRY	APTA	ALOE VERA	CABBAGE
FICUS (UMBAR)	JAMBHUL	ARJUNA	ADULSA	SOYABEAN
KARANJ				GROUND NUTS
PARAL				SUGARCANE
CYPERUS				
				
				
ZONE F	ZONE G	ZONE H	ZONE I	ZONE J
AAMRAI MANGO GROVE	FRUIT TREES PLANTATION	SHADY TREE SPECIES	FRAGRANT TREES	GRAZING LANDS
	CUSTARD APPLE	BAKUL	CHAMPA	SORGHUM
	JACK FRUIT	PELTOPHORUM	RAAT RANI	FORAGE LEGUME
MANGO	POMEGRANATE	PALAS	MILLINGTONIA	COW PEA
	JAMUN	NEEM	HORTENSIS	
	TAMARIND			
				
				
				
				
				

Figure 24 Landscape policy chart

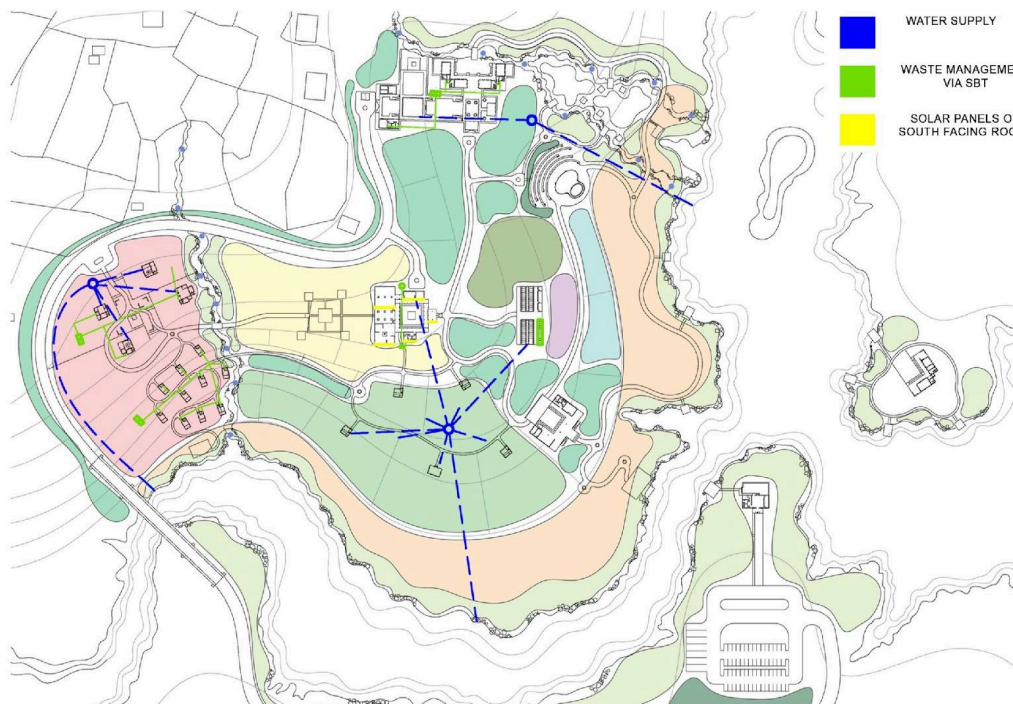


Figure 25 Landscape Policy Zones

Sustainable development policy

With development and rise in footfall, arises the question of waste management. For that, a sustainable development policy has been proposed where the output of one system can be used as an input for another system. Eg. The cattle waste, kitchen waste and community waste can be treated in the Soil Biotechnology Treatment plant and can be used as manure for trees. Rainwater harvesting and recharge wells can be done to enhance the existing groundwater table level. 95% of the waste water can be recycled and reused in organic farming.

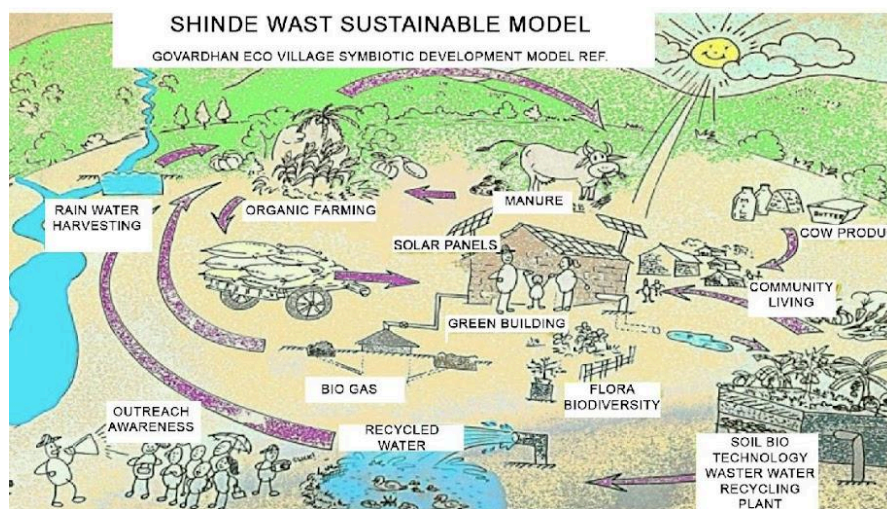


Figure 26 Sustainable Model (Source Govardhan Eco Village)

Funding and way forward

Ppp model – public private partnership

A co-op society can be formed where key stakeholders will be farmers, panchayat and Government of India. CSR funding can be tapped for raising the initial capital with a definite R.O.I. and timeframe. Stage-wise execution can take place for agrotourism giving priority to agricultural and river activities for initial revenue. This project will become economically sustainable over a period of time.

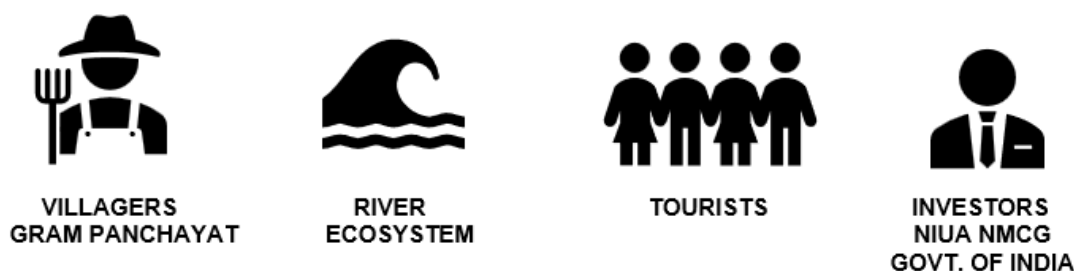


Figure 27 Stakeholders for PPP model

Conclusion

The study highlights the issues, experiences and challenges faced by one utterly neglected village of Maharashtra, India. An attempt has been made to weave together the positives and negatives of this village using architecture and river tourism as a mediator.

The project title ‘Pragati Setu’ is thus a metaphor which means ‘the bridge towards the socio-economic upliftment of the Sautada village’. The expected outcome of the project aims to pave the path of success in Sautada village. The interventions and policies of the project intend to serve as a model to develop river tourism infrastructure in Beed district and eventually, it pose act as a model for many such villages which are spread across different rivers all across India.

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Conflict of interest

Authors has no conflict of interest to declare.