

**Gram Panchayat Spatial Development Plan  
For  
Mansar Village  
Report**



*Prepared by*  
**Department of Architecture &  
Planning,  
Visvesvaraya National Institute  
of Technology, Nagpur**



*with Support from*



**National Remote Sensing Centre  
Initiated and Funded by**



**Ministry of Panchayati Raj,  
Government of India**



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## Context for the project:

The Constitution Article 243G mandates for the Panchayats to be endowed with such powers and authority to empower them for the preparation of plans for economic development and social justice within their respective areas. Therefore, it is a natural corollary for the Panchayats to be capacitated to take over the larger canvas of local economic development in all spheres amongst their constituent villages, much in a manner similar to the spatial development planning undertaken by the Urban Local Bodies in the country. This potential for rapid economic development is particularly high in those Panchayats which are located on the National or State Highways. Thus, the villages of Gondkhairi (connected to National Highway 547E, junction at NH 53) and Mansar (connected to Jabalpur-Nagpur road National Highway NH 44) have been identified for this project.

The master plans of these villages by Gram Panchayats would help in demarcating areas earmarked for agriculture and farms, residential purposes, local markets, and commercial, Institutional area (for Banks, Post Office, Aanganwadis, PHC, Schools etc), Parks and Gardens, Waterbodies, Industries (Agro-based or MSMEs), and for making Resto or Service areas or Lay-by areas along the Highway. It would also give clear vision for immediate and future sources of Own Sources of Revenue (OSR) for the GPs making them self-reliant. It would clearly identify land and infrastructure usage requirements for the GP viz. land allocation & usage, provisioning of infrastructure services etc. creating economically productive, efficient and equitable rural growth centres resulting in harmonious and sustainable distribution of activities, so that the Panchayats/ Rural Areas can perform all their economic and social functions efficiently and effectively.

## Core Team:

The Department of Architecture & Planning, Visvesvaraya National Institute of Technology, Nagpur, has been commissioned with the project of undertaking this task of planning for the villages of Gondkhairi and Mansar in Nagpur District, Maharashtra State, under the team led by- Head of the Department (Architecture & Planning).

### **Team**

Faculty- Dr. V. S. Kapse, Dr. Sameer Deshkar, Dr. Pankaj Bahadure and Dr. Amit Deshmukh.  
M.Tech. (Urban Planning) Students- Riddhi Sarada, Akshay Kaleshwarwar, Sunny Gupta, Shreya Joshi, Saurabh Deotale, Gardi Tadas, Ankita Kabra, Vinay Girhe, Sachi Dongarwar.

## Acknowledgements:

The working team at Visvesvaraya National Institute of Technology (VNIT), Nagpur is thankful to the Ministry of Panchayati Raj, Government of India for initiating the project and inviting us to undertake the responsibility of preparing Spatial Development Plan for two villages Gondkhairi and Mansar in Nagpur region. The team from VNIT, Nagpur is very thankful to the ministry for funding the entire project.

This project wouldn't have been possible without the support from National Remote Sensing Centre and their regional center who have provided the geo-spatial maps and other required data for the project. The project team is humbly gratified by the same.

Special thanks to all the officials in the ministry of Panchayati Raj and NRSC for keenly following the preparation of the Spatial Development Plans of the villages.

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# 1. Regional Characteristics

## 1.1 Regional Setting of Mansar Village

Mansar is a village in Ramtek tehsil of Nagpur district in the Indian state of Maharashtra.

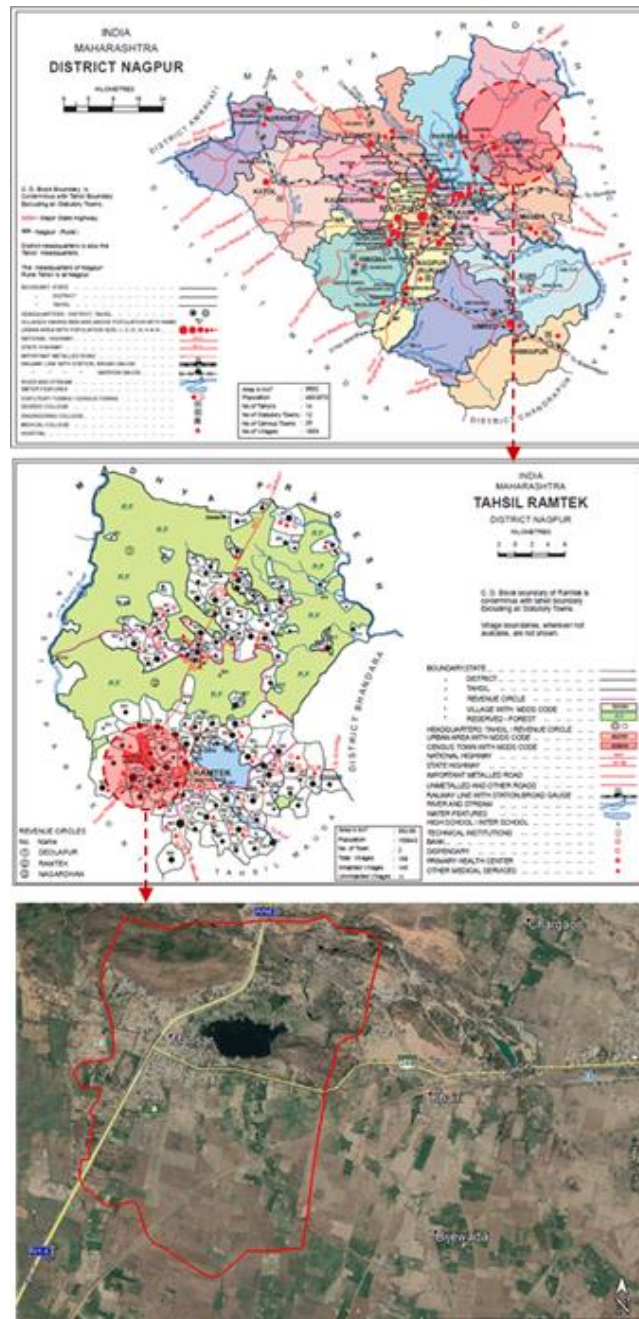


Figure 1. Location and Boundary of Mansar Gram panchayat.

Mansar has a population of 7139 is Ramtek sub district's the 2nd most populous village, located in Ramtek sub district of Nagpur district in the state Maharashtra in India. Total geographical area of Mansar village is 7 km<sup>2</sup>/ 712ha and it is the 20th biggest village by area in the sub district. Population density of the village is 1019 persons per km<sup>2</sup>.

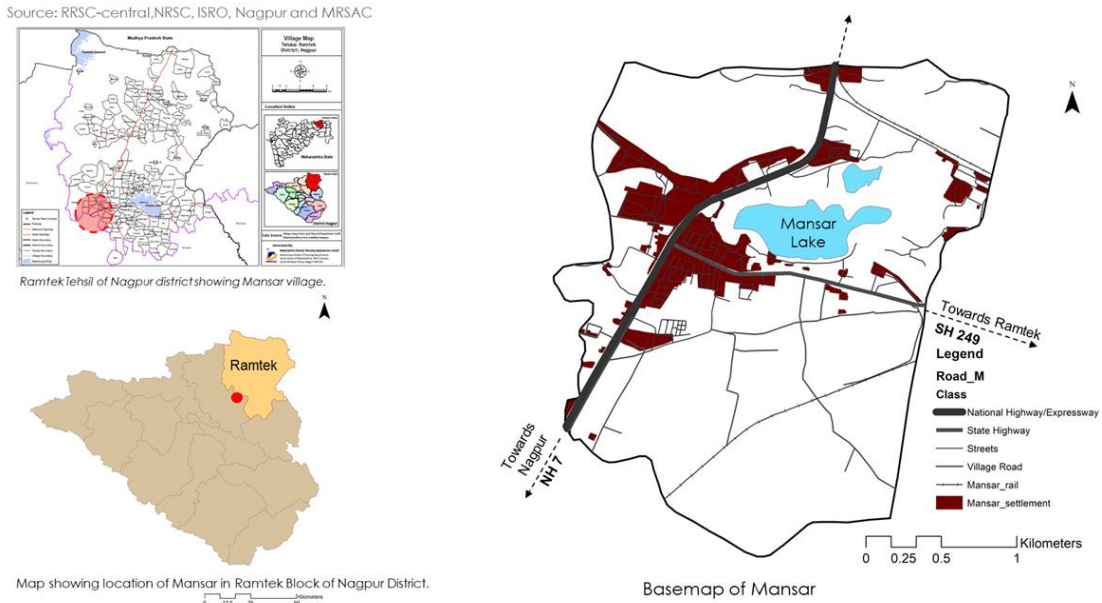


Figure 2. Basemap of Mansar gram panchayat

The Mansar Village is located 5 km west of Ramtek and 30 km northeast of Nagpur city.

**Mansar gram panchayat and its surrounding**

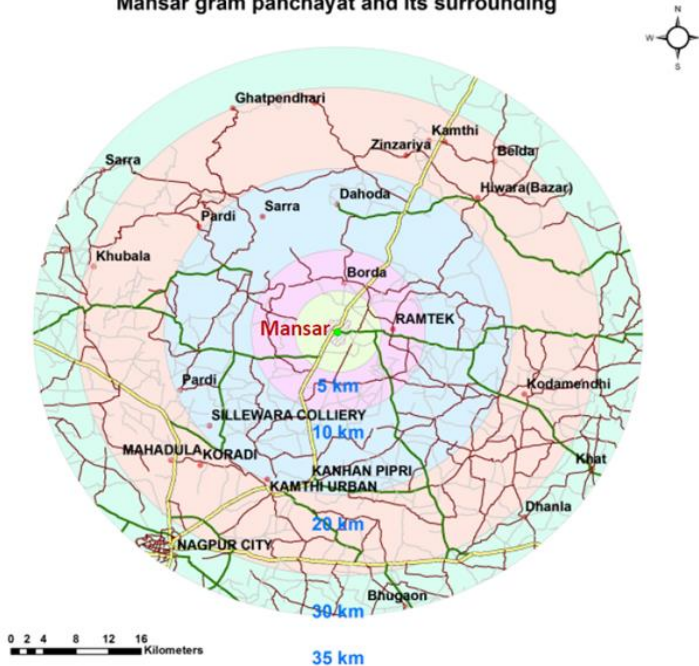


Figure 3. Map showing Mansar Gram panchayat and its surroundings.

## 1.2. Connectivity

The village is well connected with nearby towns & cities by roadways. As the google image shows, the internal roads are not planned & developed spontaneously over the period. The nearest railway stations are at Nagpur (46 Kms).

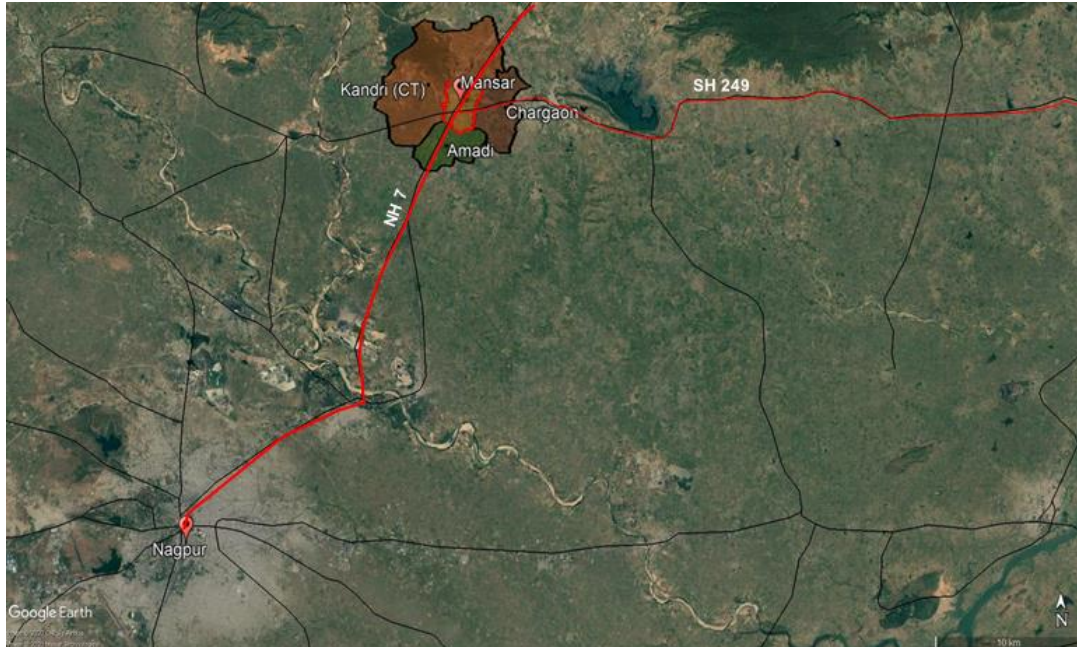


Figure 4. Map showing Major connecting Highways Passing through Mansar.

National Highway 7 is the longest and major North-South running highway which connects Jammu and Kashmir, Punjab, Haryana, Delhi, Uttar Pradesh, Rajasthan, Madhya Pradesh, Maharashtra, Telangana, Andhra Pradesh, Karnataka and Tamil Nadu. SH 249 is a state highway in Nagpur, Bhandara, and Gondia Districts in the state of Maharashtra. This state highway touches Katol, Savner, Parseoni, Ramtek, Tumsar, and Gondia. The adjacent Villages are Amadi (3.4 km), Chargaon(11km), and Kandri CT (7.8 km)

## 1.3. Existing Features

### 1.3.1. Archeological sites

- In 1972, an image of a deity, later identified as Shiva Vamana was found from a hillock in Mansar, locally known as Hidimba Tekri.
- Important excavations were carried out at the ancient sites of Mansar since 1997-98, under the aegis of the Bodhisatva Nagarjun Smarak Samstha Va Anusandhan Kendra, Nagpur and under the directions of Jagat Pati Joshi and A. K. Sharma. So far 5 sites have been excavated in Mansar, which are designated as MNS 1, MNS 2, MNS 3, MNS 4 and MNS 5.



- Exposed Brick Structures containing the Buddhist Monastery, Buddhist Box Pattern Stupa, Small Temples, and the Palace Structure. Various Stone images also exposed during the Excavation. Identified as the Capital of Vakatakas. The evidence of Purushamedha and the construction of Sheyna-Chiti is the important point. These excavations have resulted in the discovery of various shrines (MNS 3, 4, 5) and a palace complex (MNS 2), identified as Pravaraपुरa, the capital of the Vakataka king Pravarasena II (1st half of 5th century).
- Adjacent to this palace, on Hidimba Tekri (MNS 3), an extensive temple complex has been unearthed, identified as Pravareśvara. A 3 m tall lime model of a male human figure in crouching position was found underneath one of the terraces of MNS 3. Significant 5th-century sculptures of Hindu deities, artefacts and some coins have been discovered in the excavations.
- The water reservoir around the site and findings of ancient tools and other objects point to the fact that a large population inhabited the area 1600 years ago. The discovery has made Mansar one of the prime archaeological sites in the country.



Figure 5. Archaeological sites in Mansar.

### 1.3.2. Mansar Lake

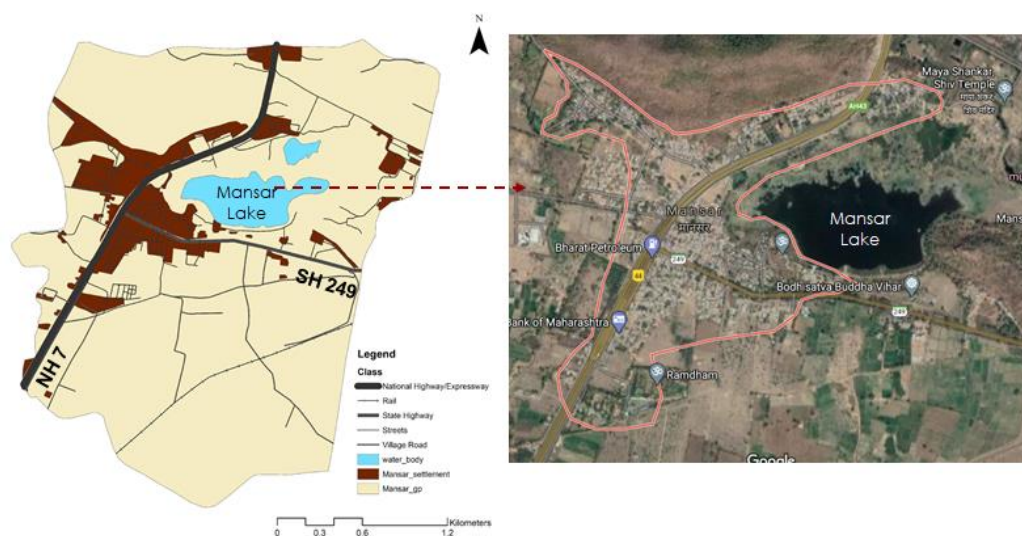


Figure 6. Map showing location of Mansar Lake.

Mansar lake is the only source of water for the residents of Mansar. This lake is surrounded by archaeological remains and many temples. Its surrounding brings the best pilgrimage experience for visitors and thus is one of the tourist attractions in Ramtek. The South side of the lake is surrounded by a chain of temples. Capital of Vakatakas, Mahanubhav Panth Mandir Mansar I, Mahanubhav Sthan, Bodhisattva Buddha Vihar, Shida Aai Mandir are one of those temples located there. Surrounding Mansar village are vast stretches of vacant land. Lots of greenery and forests are observed at the peripheral areas of the village. Due to the presence of abundant natural environment, the atmosphere feels lively and pure.

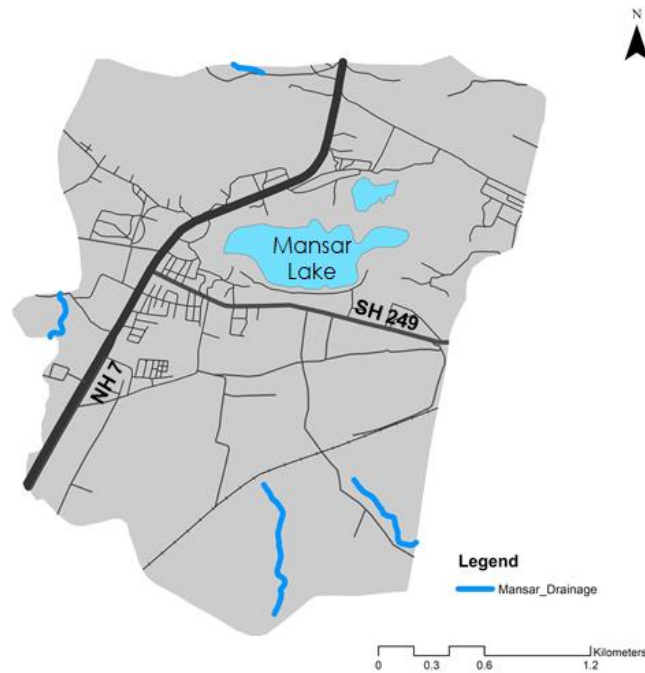


Figure 7. Drainage map of Mansar.

## 1.4. Physiography

### 1.4.1 Topography and Slope

Source: RRSC-central, NRSC, ISRO, Nagpur

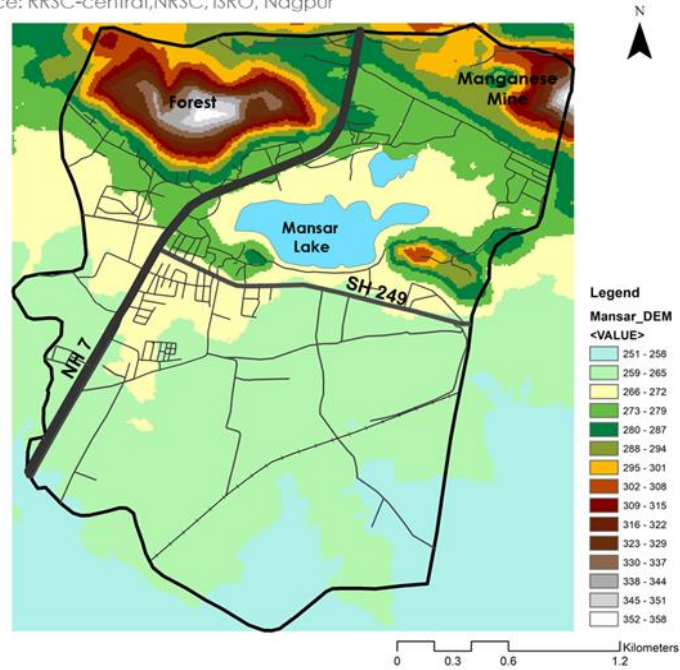


Figure 8. Map showing DEM of Mansar.

Topography: The elevation ranges from about 251 to about 357m above msl. The forest area and Manganese mine are located at higher elevation than the settlement.

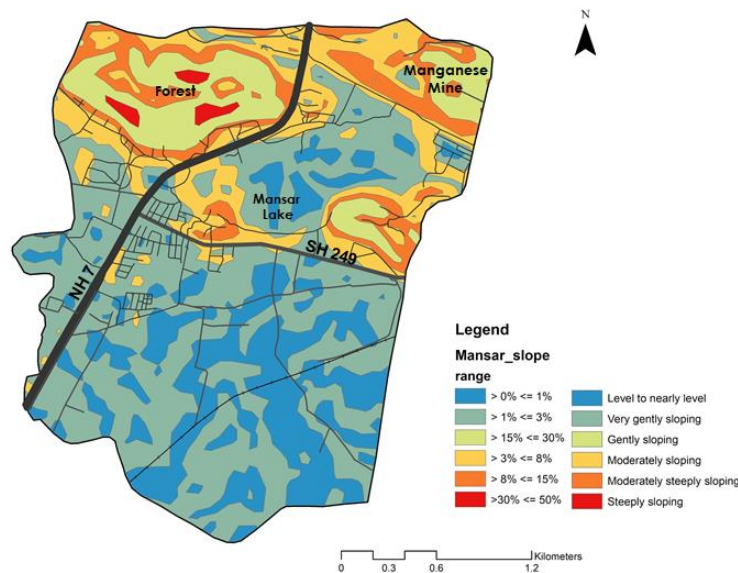


Figure 9. Map showing Slope of Mansar.

**Slope:** There is a steep slope towards the Forest area in the north west , moderate slope near the mine are in north east and near the mansarovar lake and near to level slope where the settlement is located.

### 1.4.2. Geomorphology

The habitation mask comes in denudational origin and Pediment Pediplain complex type. Forest area is of structural origin and the Mine area is of Anthropogenic origin.

Source: RRSC-central, NRSC, ISRO, Nagpur

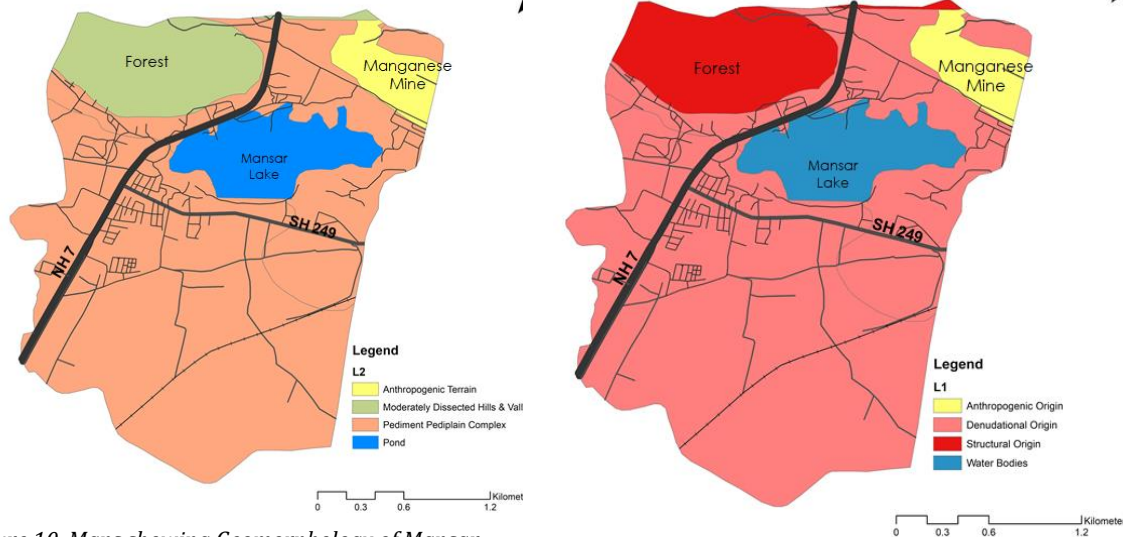


Figure 10. Maps showing Geomorphology of Mansar.



1.4.3. Soil Condition

Source: RRSC-central, NRSC, ISRO, Nagpur

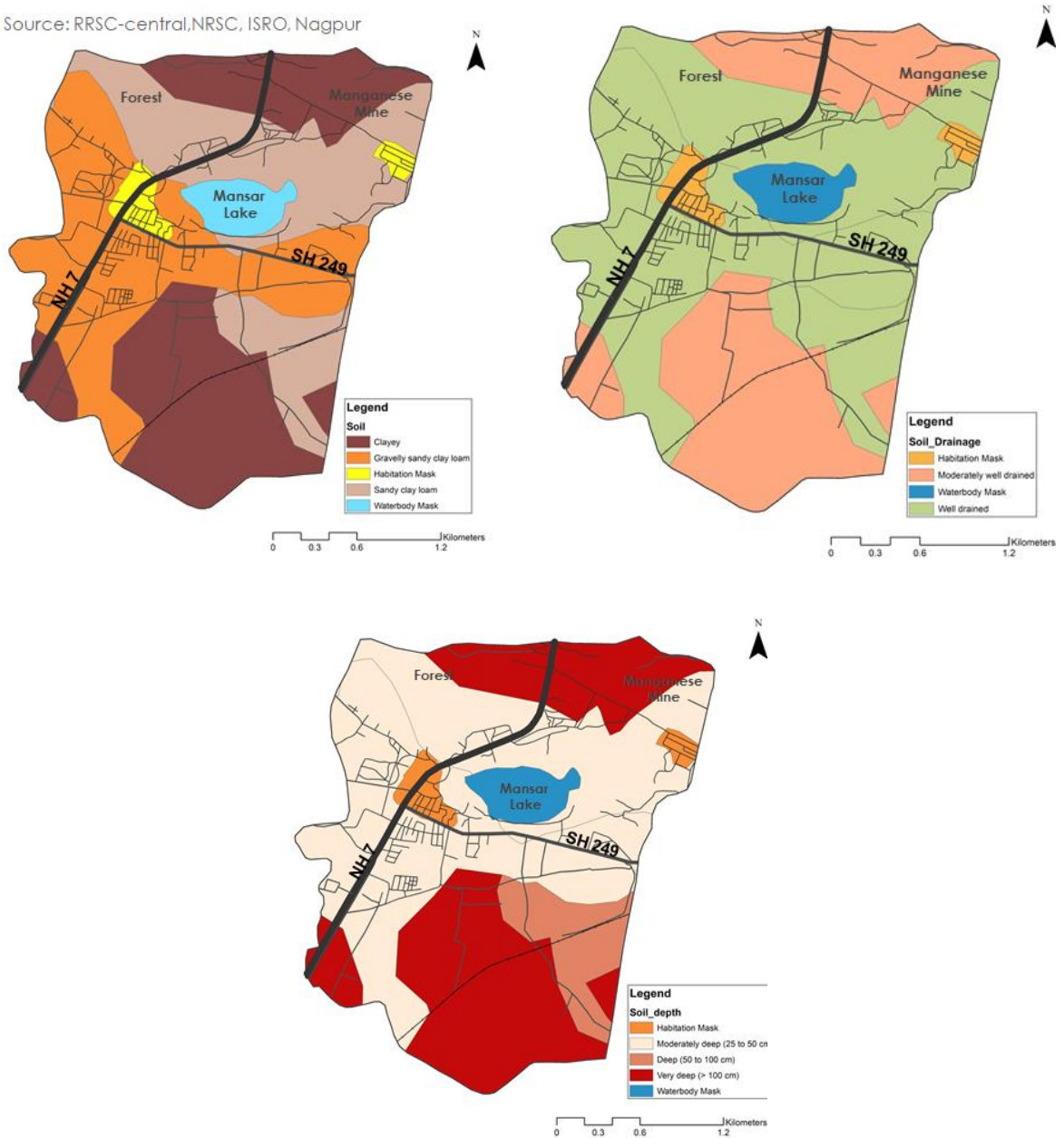


Figure 11. Maps showing Condition of Soil in Mansar.

Along NH7 and SH249, and Mansarovar lake, the soil type is Gravelly sandy and Clay loam. The soil type is well drained and has moderate depth of 25 to 50 cm.

### 1.5 Climate

**TEMPERATURE:** May is the hottest month of the year with a mean daily maximum temperature of about 43 Centigrade. With the onset of monsoon, temperature decreases appreciably in June but remains steady thereafter till September. During the period, the weather is generally pleasant. After monsoon, day temperature increases slightly and there is a secondary maximum temperature in October. The climate becomes cool in December and continues up to February. December and January are the coldest months of the year.

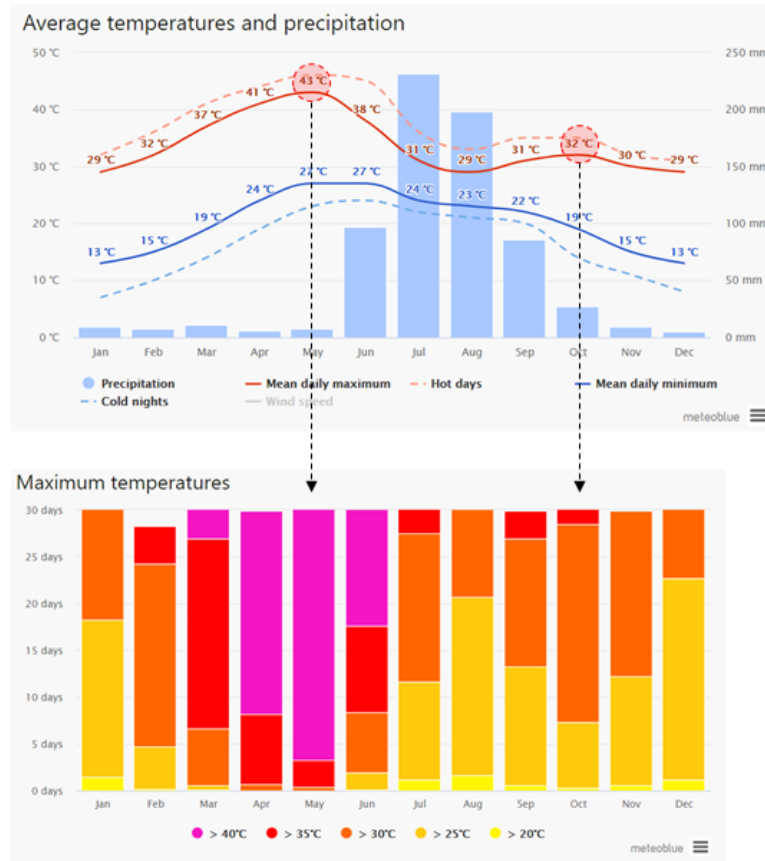


Figure 12. Average temperature, Precipitation and Maximum temperature of Nagpur District.

### HUMIDITY

An increase in temperature results in corresponding decrease in relative humidity and vice versa. Therefore, summer months from the driest part of the year when relative humidity is low, particularly in April and May. The climate is highly humid in monsoon, particularly in August. The average relative humidity in monsoon months goes as high as 85 percent.

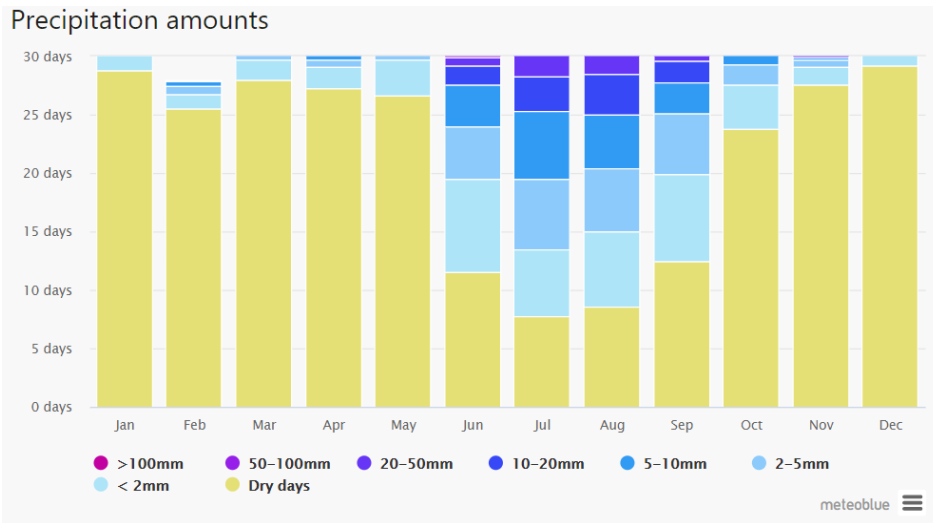


Figure 13. Precipitation in Nagpur district.

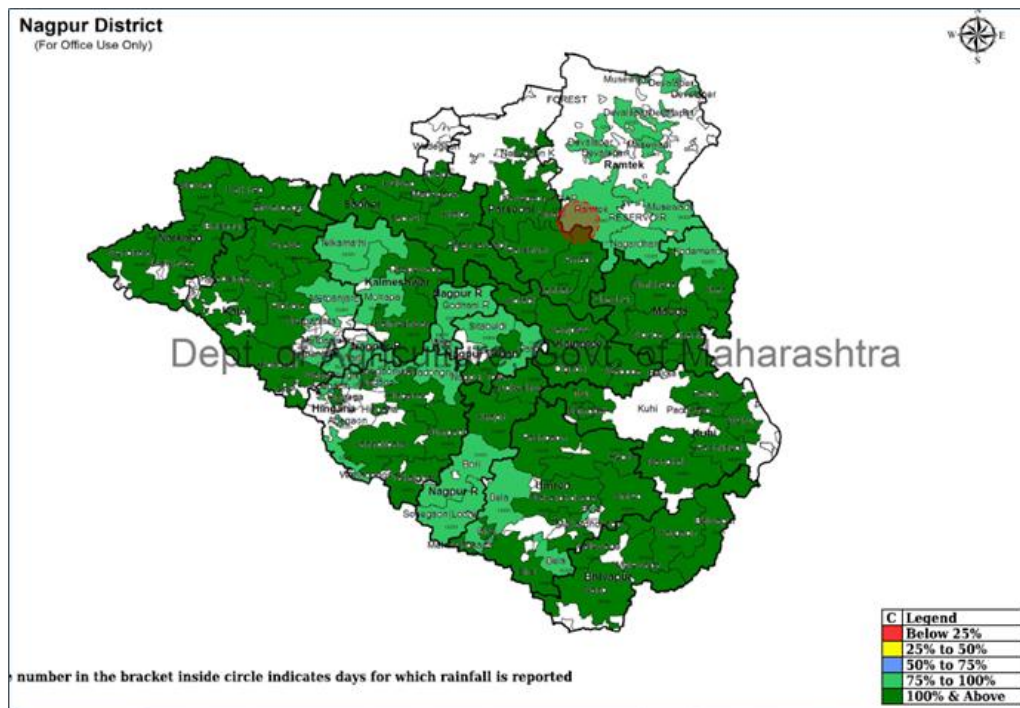


Figure 14. Map showing Precipitation in Nagpur district.

### PRECIPITATION

On an average the Nagpur district receives an annual rainfall of about 1,200 mm which classifies it in the moderate rainfall zone. Nagpur receives precipitation on account of both monsoons, namely southwest and northeast. The southwest monsoon occurs during June to September and northeast monsoon during October to December.

## 2. Population Characteristics

### Demographic profile and Population Density (Net and Gross)

- The Mansar village is home to 7139 people, among them 3536 (50%) are male and 3603 (50%) are female.
- 60% of the whole population are from the general caste, 20% are from scheduled caste and 20% are scheduled tribes.
- Child (aged under 6 years) population of Mansar CT is 10%, among them 54% are boys and 46% are girls.
- There are a total 1639 households in the village and an average 4.3 persons live in every family.
- Area of GP is 638 ha. The Gross population density is 11.18 ppl/ha.

### Population growth (Natural growth and Migration Patterns)

- Population of the Mansar CT has increased by 11% in the last 10 years.
- Female population growth rate of the village is 12% which is 3% higher than male population growth rate of 9%.

### Literacy and Age-Sex Composition

- Total 5342 people in the village are literate, among them 2760 are male and 2582 are female. Overall, the literacy rate is 75%
- As of the 2011 census, there are 1018 females per 1000 male in the village.

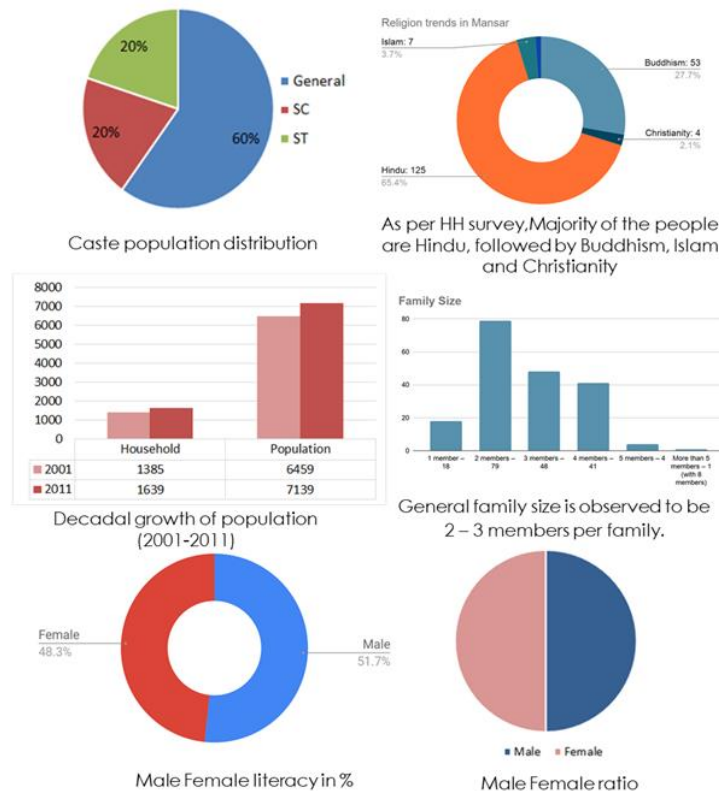


Figure 15. Population characteristics of Mansar.

### 3. Existing Scenario

#### 3.1. Land use Land Cover of Mansar

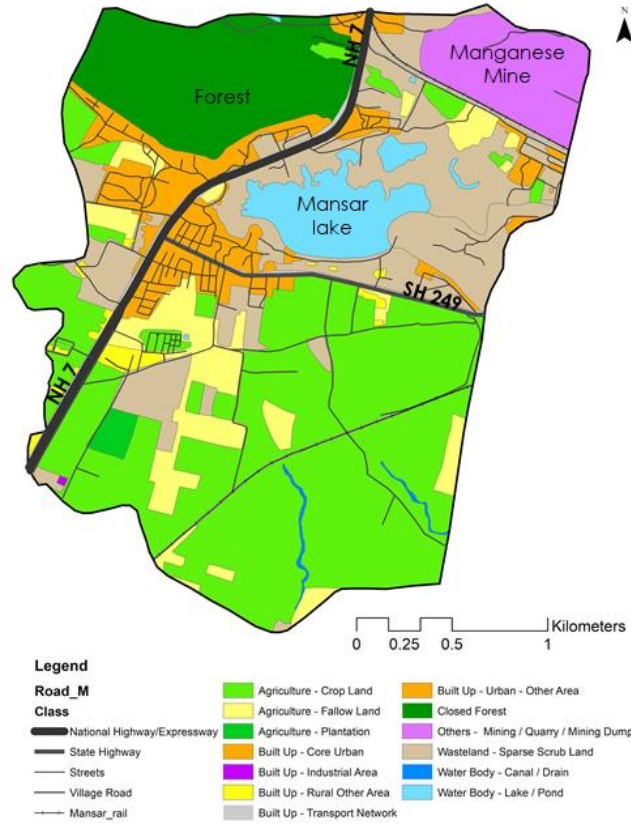
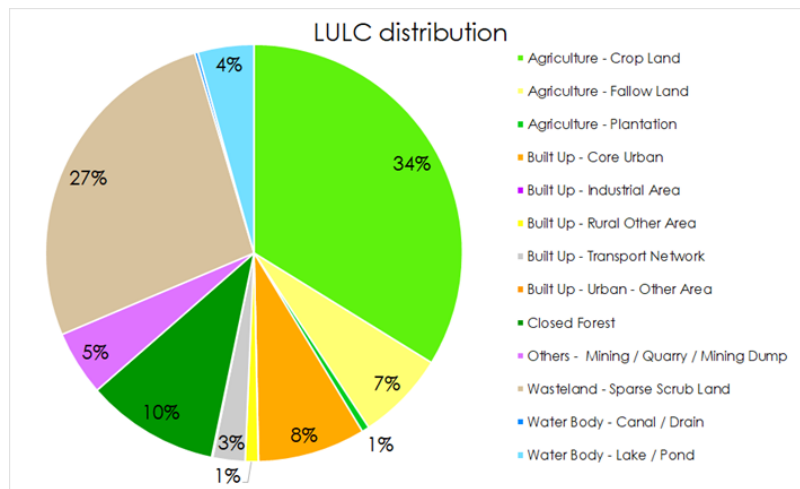


Figure 16. Land use/ Land cover Map of Mansar.



Total Agriculture land area is 42%, Total Built Up area is 9%, Forest area is 10%, Mining is 5%, Scrub land is 27%, water body is 4% and transportation is 3%.



### 3.2. Existing Land use Map

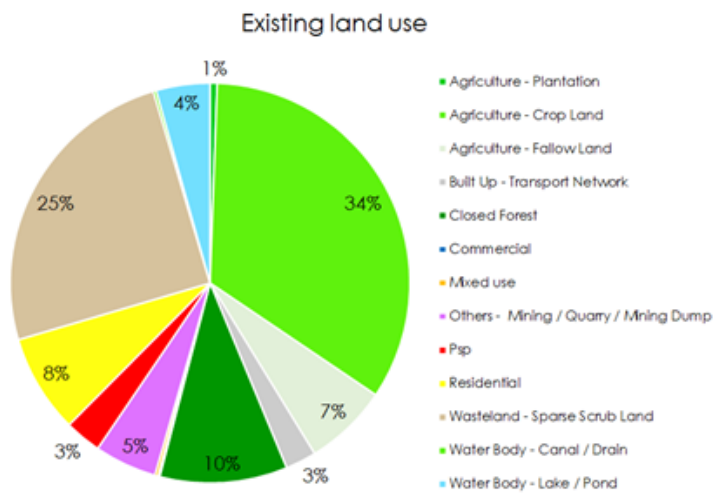
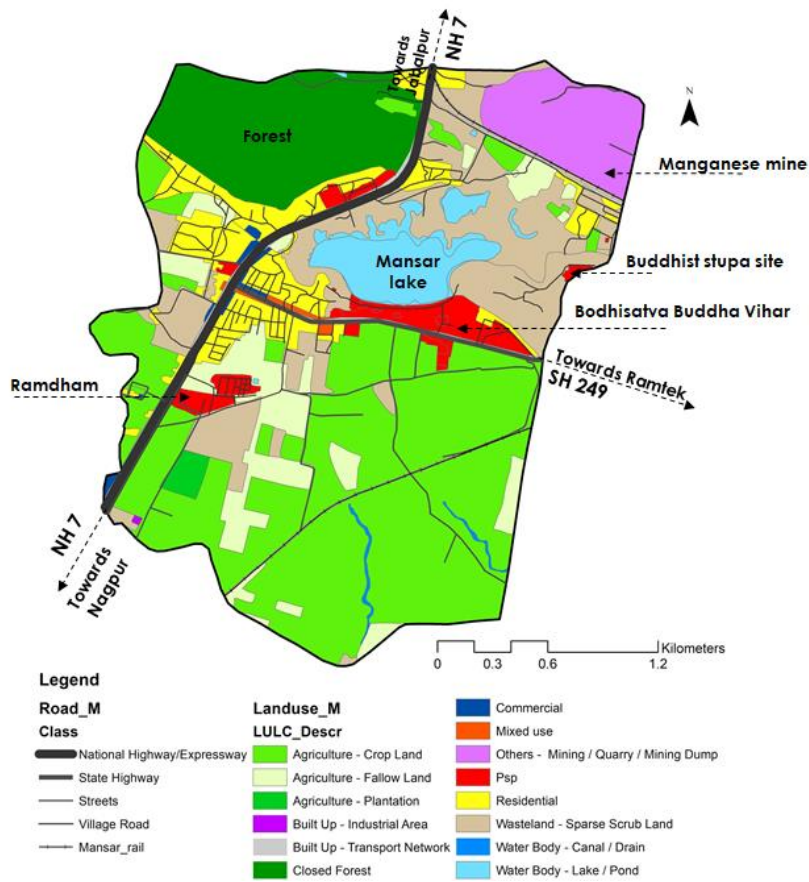


Figure 17. Existing Land use of Mansar.

Table 1. Land use distribution of Mansar.

Land use classes	Area in ha	Area in %
Agriculture - Plantation	4.07	0.6%
Agriculture - Crop Land	241.36	33.9%
Agriculture - Fallow Land	48.44	6.8%
Built Up - Transport Network	17.82	2.5%
Closed Forest	73.48	10.3%
Commercial	1.13	0.2%
Mixed use	1.77	0.2%
Others - Mining / Quarry / Mining Dump	35.95	5.0%
Psp	21.07	3.0%
Residential	56.75	8.0%
Wasteland - Sparse Scrub Land	178.00	25.0%
Water Body - Canal / Drain	1.73	0.2%
Water Body - Lake / Pond	30.97	4.3%
Total	712.54	100.0%

### 3.3. Land Resource Development Map

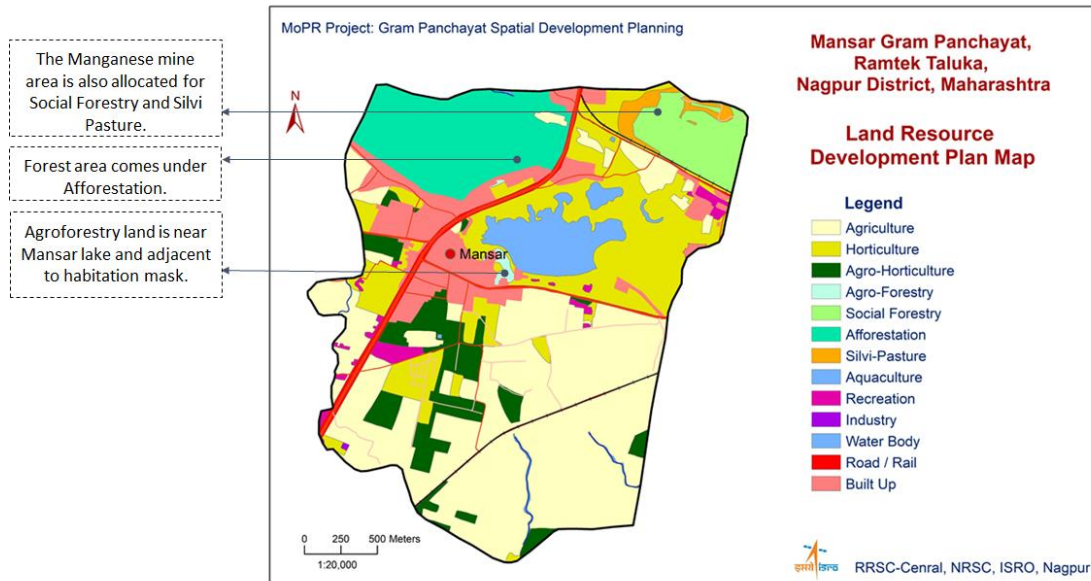


Figure 18. Land resource development plan of Mansar.

### 3.4. Development Trends



Figure 19. Map showing change in land use/ land cover from 2011-2018.

Table 2. change in land use/ land cover area.

Changes in LULC classes	Area (ha)
Crop land to Agriculture Plantation	4.1
Crop land to Built up	10.8
Crop land to Canal/Drain	1.7
Crop land to Scrub land	35.7
Forest to Built up	2.1
Mining/Industrial to Built up	2.8
Mining/Industrial to Scrub land	7.1
Scrub land to Built up	5.5
Scrub land to Cropland	6.2
Scrub land to Reservoir/Tank/Lake/Pond	1.9
No Change	634.6
Grand Total	712.6



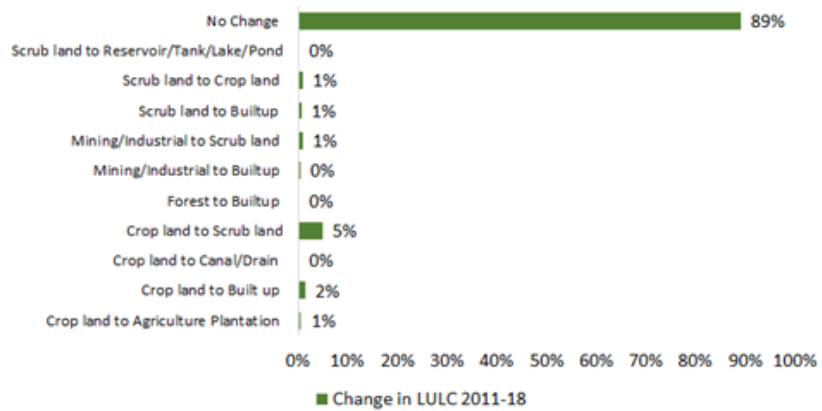


Figure 20. Bar chart showing change in land use/ land cover in %.

The development trend is along the NH7, near forest and Mansar lake. Overall, there is no significant change in land use from 2011-2018.

## 4. Sectors

### 4.1. Housing

In Mansar, a total of 191 responses were recorded. Following map indicates Household survey points in Mansar. Blow up map shows detailed household survey points at “A” taken by VHR satellite data.

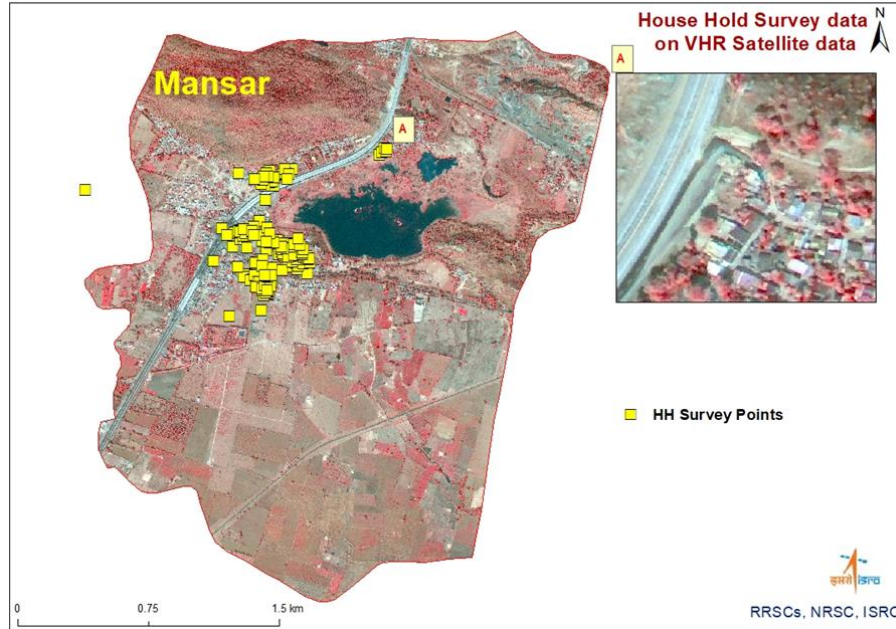


Figure 21. Map showing Household survey Locations in Mansar.

#### 4.1.1. Analysis of existing condition of houses based on its type

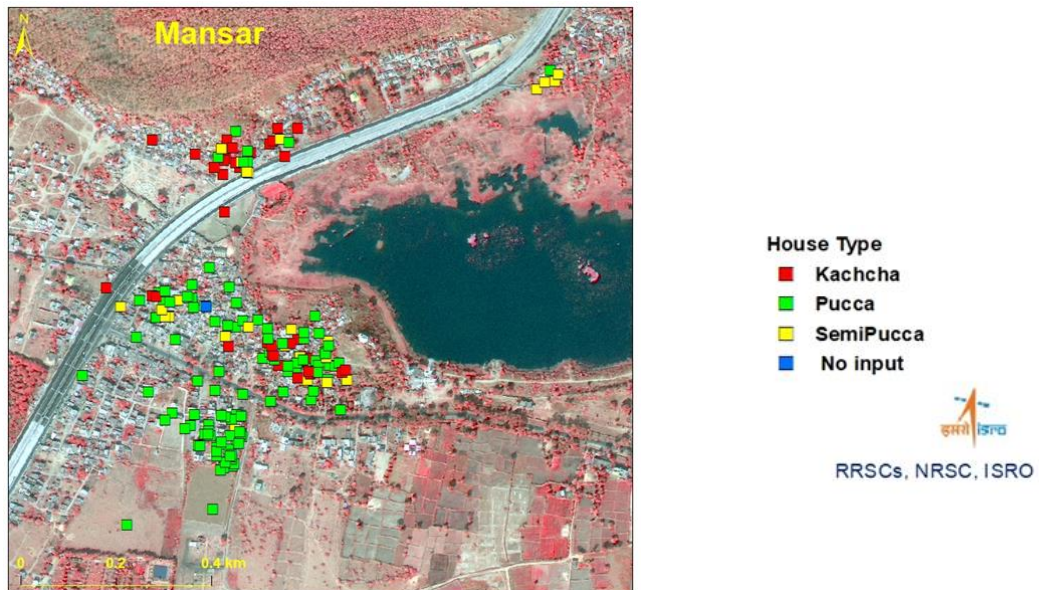
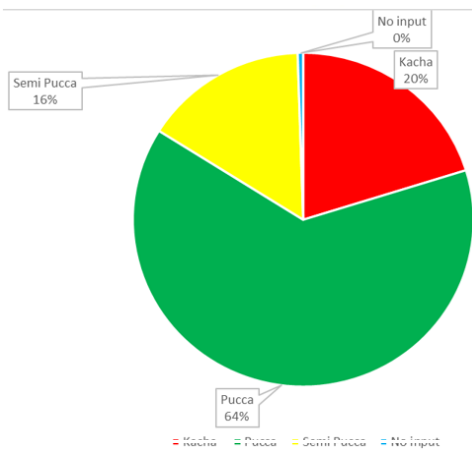


Figure 22. Map showing existing housing condition of the household surveyed.

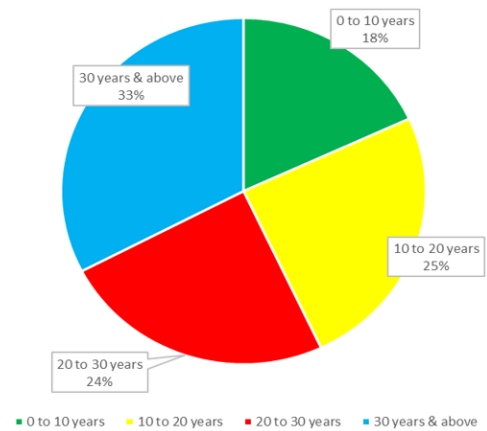
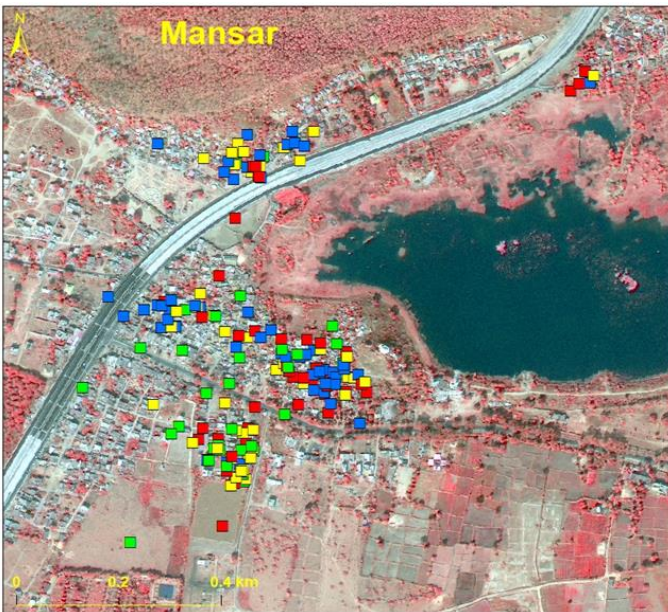


Around 20% of the surveyed houses are Kacha while 16% are semi-pucca.

Most of the Kaccha houses are located along the North side of NH 44.

#### 4.1.2. Analysis

of existing houses based on its age



**Resident Since**

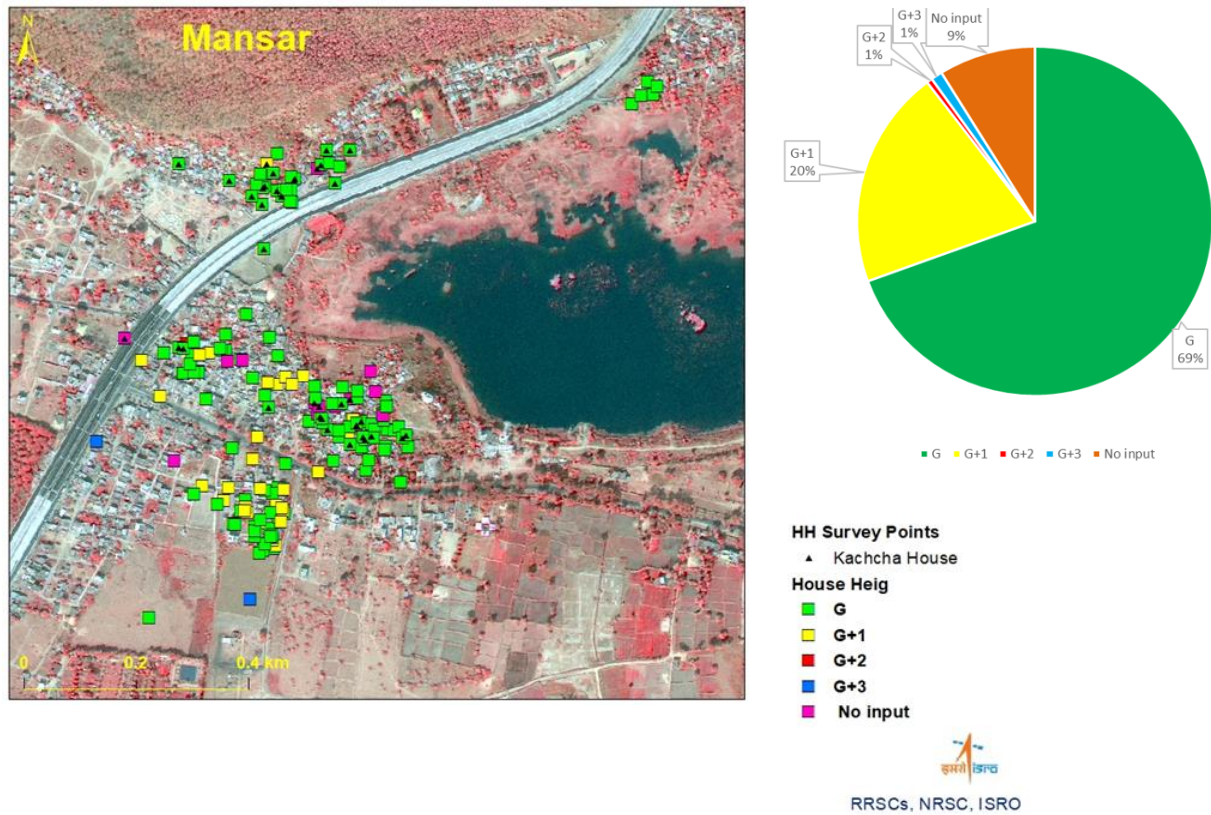
- 0 to 10 years
- 10 to 20 years
- 20 to 30 years
- 30 years and above



RRSCs, NRSC, ISRO

Total 33% of the surveyed houses are native (30 years and above) while old buildings account for 7.3%. These old buildings are 50 years of age and above.

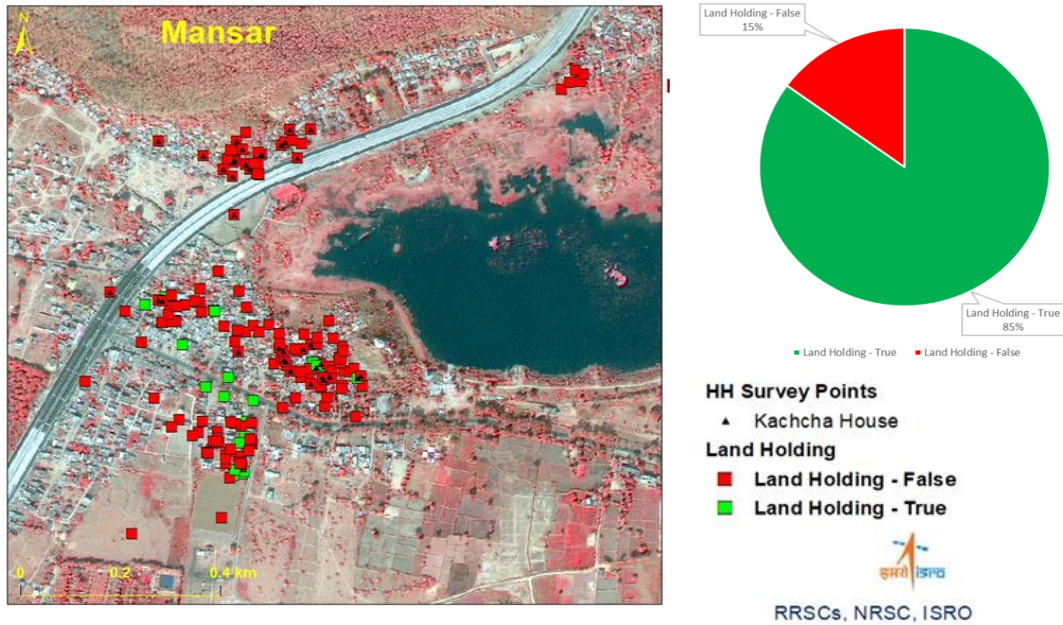
#### 4.1.3. Analysis of existing houses based on its heights



69% of the surveyed houses are ground floored. Followed by it, 20% are first floored.

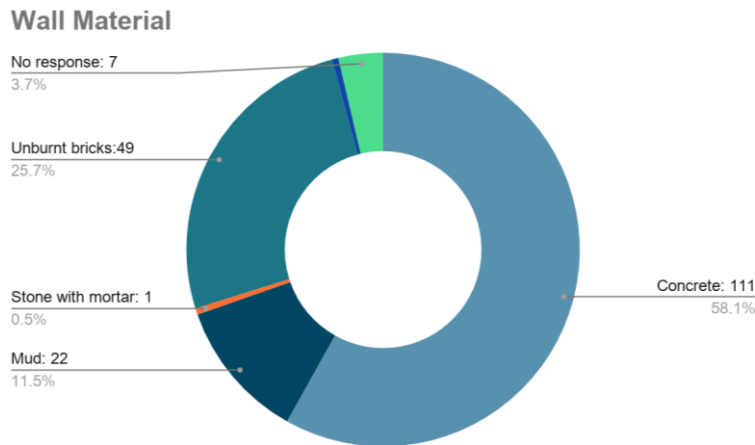


4.1.4. Analysis of existing houses based on its land holding



Total 85% of the surveyed houses are land holding rights. The red squares with black triangles in the map indicate Kacha houses with no land holding rights.

4.1.5. Building characteristics of the houses



More than half (58.1%) of the houses in Mansar have concrete wall material.

25% of the houses have unburnt bricks for walls.

Mud walls are also existent which constitutes 11.5%.

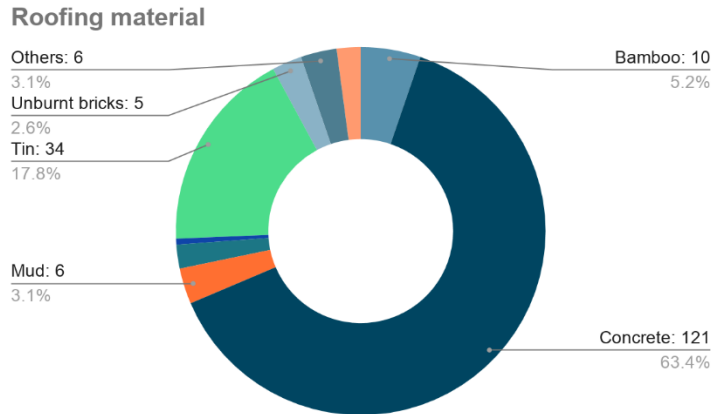


Figure 28. Pie chart showing roofing material in Mansar.

More than half (58.1%) of the houses in Mansar have concrete wall material. 25% of the houses have unburnt bricks for walls.

#### 4.1.6. Households by type of structures, Census 2011

Total Population (2011) = 6035

**Population projection (2031) = 10228**

Population growth rate = 14.95%

Household size = 4

Existing households (2011) = 1519

**Number of households projected (2031) = Projected Population / HH size = 10228/4 = 2557**

Total Households in "Good" condition = 828

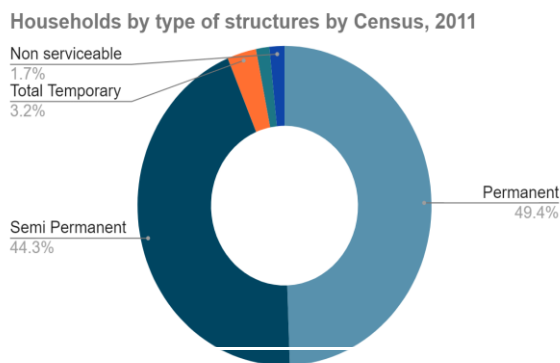
Total Households in "Livable" condition = 618

**Total households in "Dilapidated" condition = 73**

Total temporary structures = 50

Non serviceable structures = 26

To upgrade the existing housing stock of Mansar, it is important to improve the dilapidated, non-serviceable and Katcha structures.



## 4.2. Physical Infrastructure

### 4.2.1. Water Supply

The natural slope of the Mansar area is from the forest and mining area in the north towards the Mansar lake towards the south. Which helps in the watershed development.

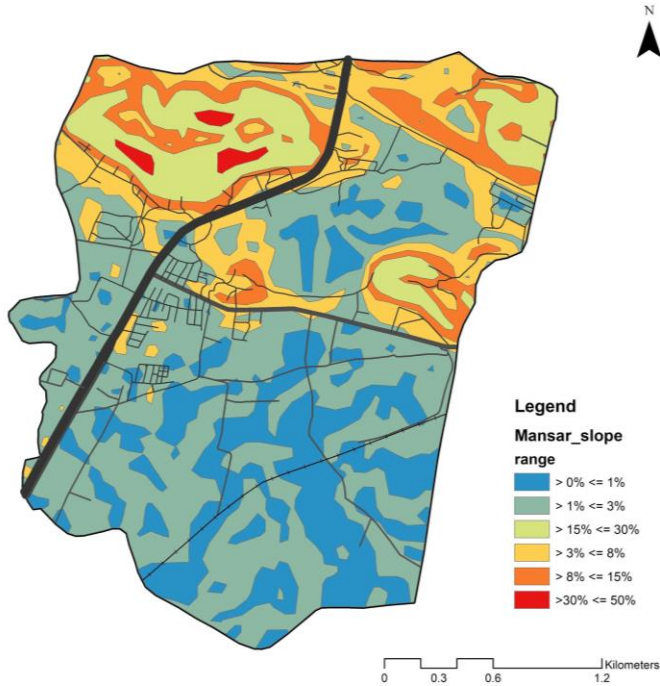
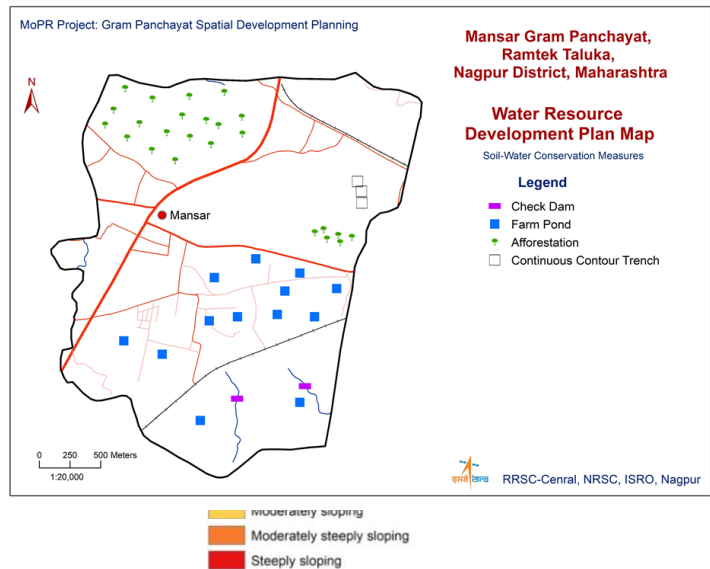


Figure 30. Slope map of Mansar.

Farmers have created artificial ponds in their agricultural land harvesting rainwater.

Check dams are also created by the gram panchayat of Mansar city to hold the stream water to serve the agricultural and other needs.



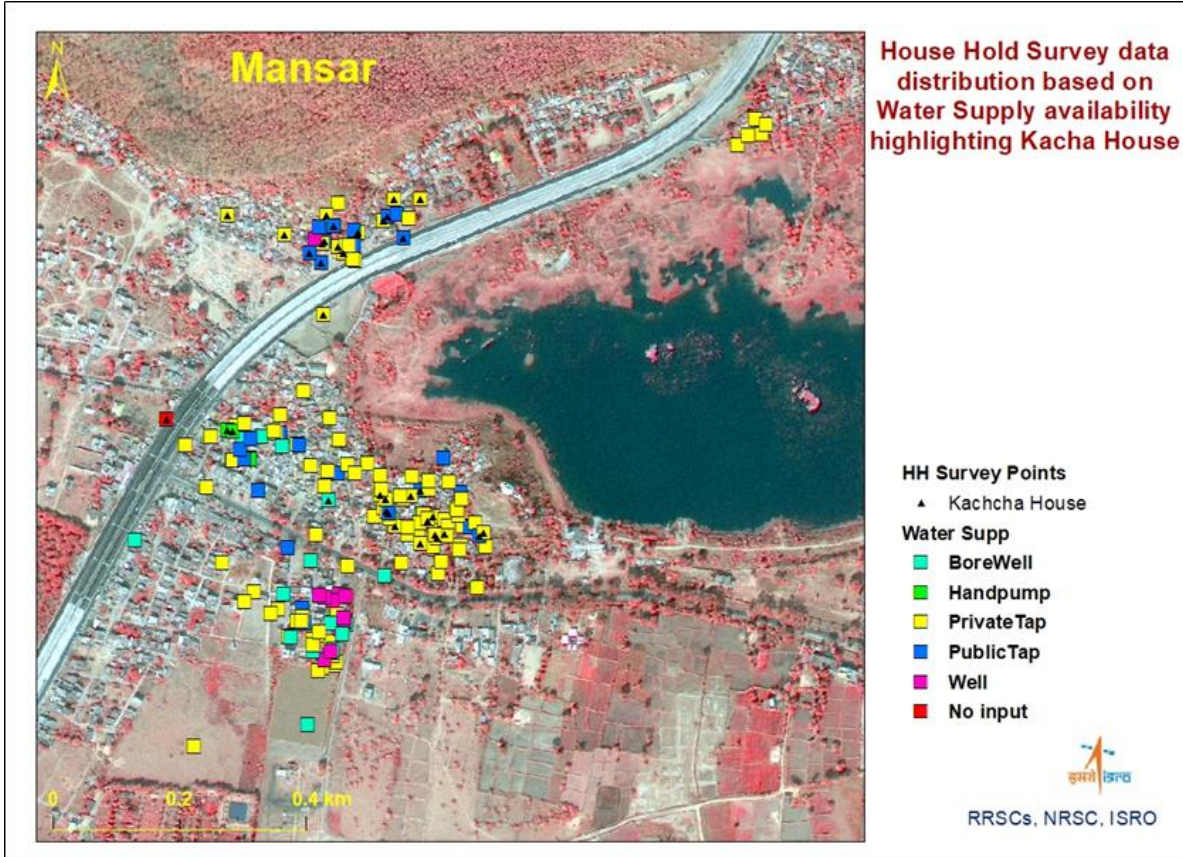
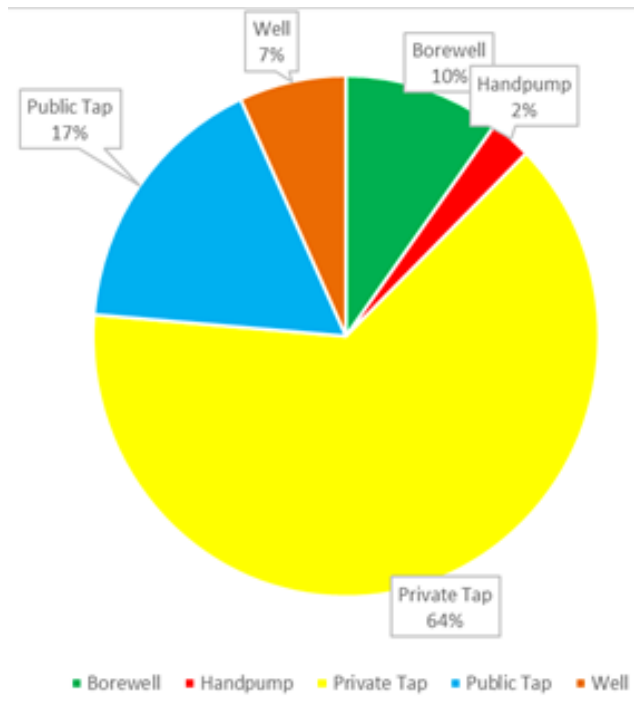


Figure 32. types of water connections in Mansar.



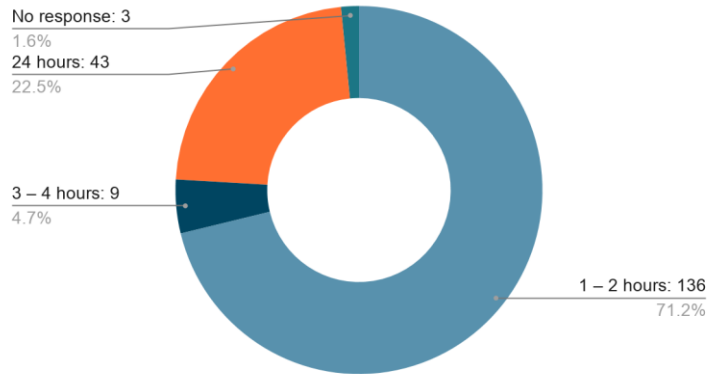
### Connections

- As per the household survey, only 64% i.e., 120 households have private tap connections.
- 17% i.e., 32 households use public taps.
- 10% i.e., 19 households have borewells.
- 7% i.e., 13 households have wells.
- 2-3 households use a hand pump as a mode of water supply.

### Duration of water supply



**Duration of Water Supply**



Around 23% of the households are having water supplied throughout the day, while more than 70% of the households receive water for 2 hrs per day and 4.7% of the households receives water for 4 hrs per day.

**Source of water supply**

Primarily water is pumped from the Pench reservoir to the filter plant which also serves the surrounding region. Then this filtered water is taken to the overhead tanks into the city and further is supplied to the private and public taps.

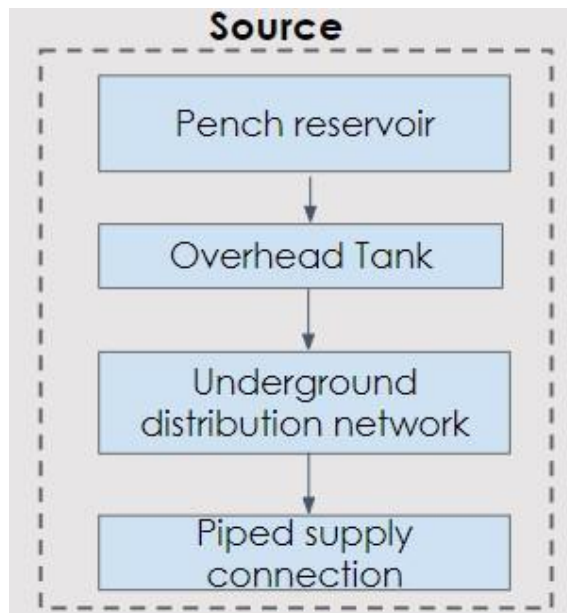


Figure 35. Source of water supply.

Wells and Borewell are the secondary sources for the water.

**Future Demand**

According to the census for the years 1991, 2001 and 2011 population for the Mansar city were 5182, 6459 and 7139 respectively. So according to the geometric method, the future projection for the years 2021, 2031 and 2041 will be 8289, 9624 and 11174 respectively. 135 litres of water is required for per person per day, considering the loss of 15% the future demand of the water is given below:

FUTURE DEMAND - WATER SUPPLY			
1	PER CAPITA WATER SUPPLY DEMAND	135	LPCD
2	WATER LOSSES	15	% ASSUMED
3	PER CAPITA WATER DEMAND (LPCD +%LOSS)	155.25	LPCD
4	PROJECTED POPULATION	11847	PERSON
	TOTAL DEMAND	1839246.75	LPD

Figure 36. Future demand for the water supply for Mansar city.

**4.2.2. Solid Waste Management**

SWM is one of the key components of any sanitation initiative. In India especially in rural areas, waste is a severe threat to the public health concern and cleanliness. Though, the form of waste generated in rural areas is predominantly organic and biodegradable yet is becoming a major problem to the overall sustainability of the ecological balance.

The waste management in rural areas can be initiated through sensitization and cooperation of people. The process of waste segregation and collection is to be encouraged for a collective disposal and treatment. Inorganic wastes can be recycled locally or can be collected to be sold off for recycling.

To assess the current scenario of Solid Waste Management, a survey was conducted to gather information about the collection, treatment and disposal of the generated waste. It was found that 89% of the waste generated is collected at door-to-door level using a collection cart. (as shown in the fig. below) The rest of the households are into false practices of open dumping or no waste management.

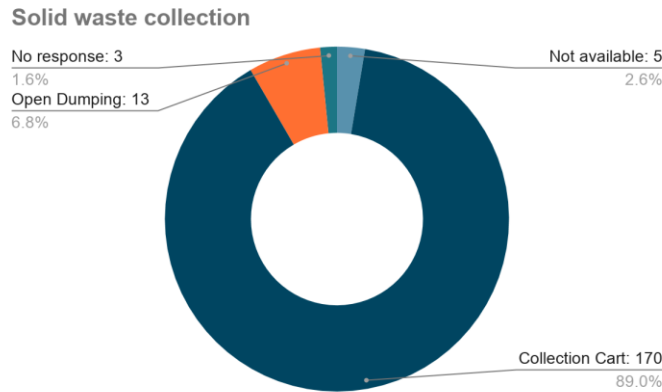


Figure 37. Pie chart showing SWM in Mansar village.

There is no treatment facility available at Mansar. All the waste collected is dumped into an open ground with no segregation or any other preliminary treatment.

The waste collection efficiency is to be improved as there is still a gap in waste collection. Also the issue of open dumping needs to be addressed to avoid and hazards to the environment as well as the inhabitants in the village area, including the livestock. There are areas which still have no waste collection facility. There is no treatment facility for the collected waste whatsoever. The collected waste is dumped in an open ground nearby the village. Thus a proper treatment facility like a composting and recycling plant is necessary.

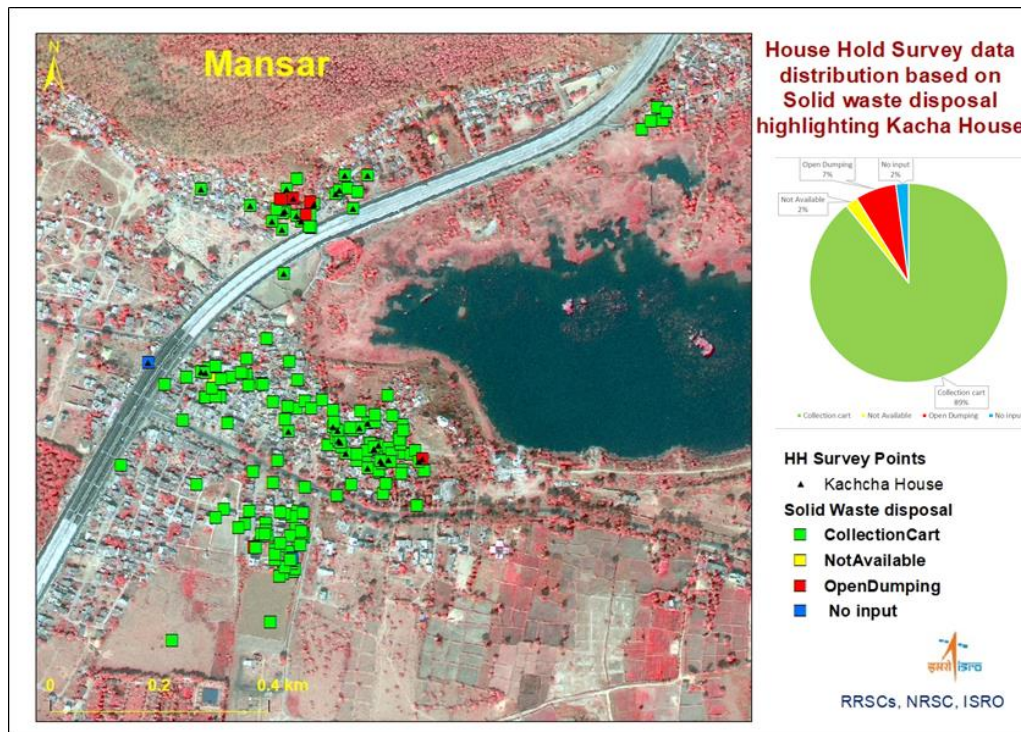


Figure 38. Map showing solid waste disposal as per household surveyed data.

As per the survey done for a sample size of more than 150 Households, the results show that 89% of the area is accessible for waste collection carts. A small area is still facing the collection issue and thus open dumping of waste is being practised. To eliminate this practice, primarily collection of waste and then its proper treatment needs to be implemented.

### 4.2.3. Social Infrastructure

The Social Infrastructures data is analyzed for the present scenario as well as for the future population of the year 2041 according to RADPFI guidelines and Spatial analysis using ArcGIS mapping software.

Existing Educational Facilities

Existing Health Care Facilities

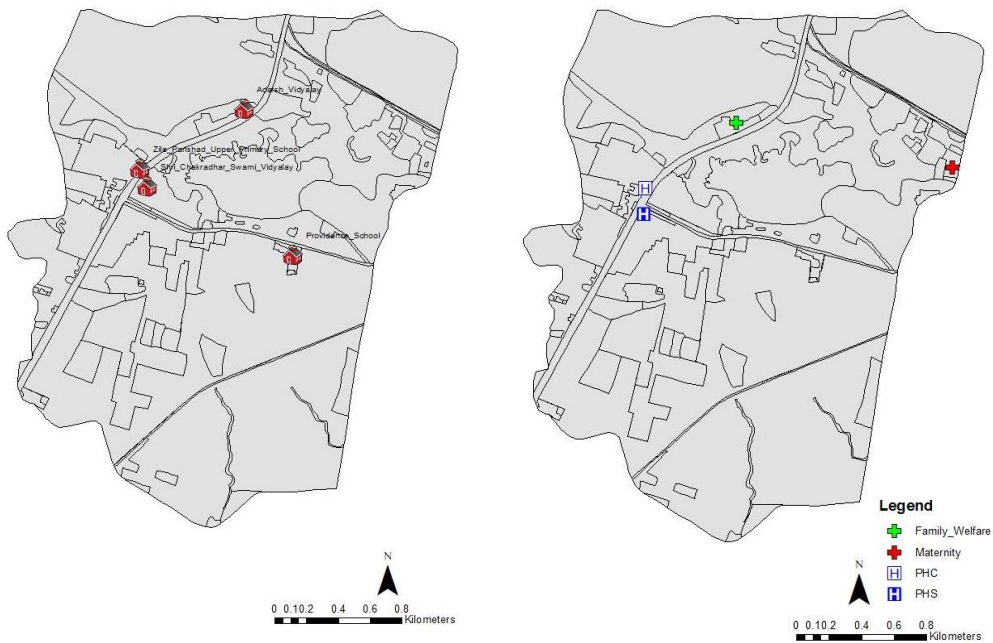
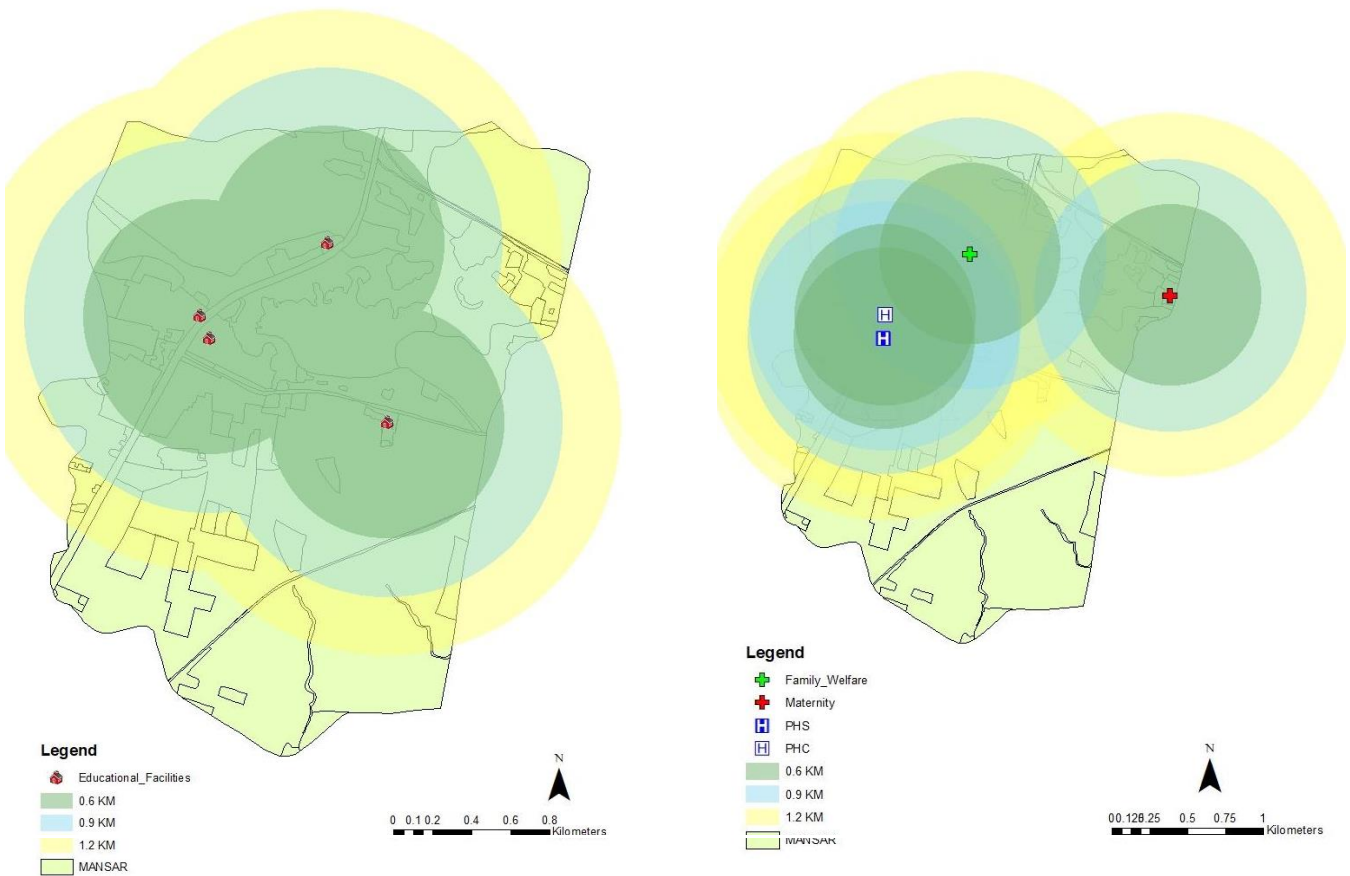


Figure 21. Map showing Locations of existing Social Infrastructure Facilities.

Existing Social Infrastructure as per census data of 2011, Pre Primary schools are eight, Primary schools are two middle and secondary schools are 4 and 3 resp. SSC is one. Other higher education facilities are present within 5-10 km from the village. Healthcare Facilities include PHC, Maternity and welfare centre, Dispensary and clinic are present within the village. Other speciality hospitals are within range of 5-10 km from Mansar in Ramtek and Nagpur area.



Existing educational facilities are within 1.2 km away from the overall Mansar area. Existing healthcare facilities are accessible within 1.2 km from the central and northern part of Mansar. Within 5km-10km all the social infrastructure facilities are accessible from Mansar. Nearby Police station in Ramtek and Nearby Fire station is in Nagpur.



Table SEQ Table | \* ARABIC 3. Existing Infrastructure facilities- Comparison with URDPFI guidelines and future projection.

	Type of School	Standard	Existing	Desired	Deficiency	Gap %	Observations
Education	Pre-Primary/ Anganwadi	1 for 2500	8	5	-	0	
	Primary & Middle	1 for 5000	6	2	-	0	Has 2 primary and 4 middle schools.
	Secondary/ High	1 for 5000	3	2	-	0	
	Sr. Secondary	1 for 7500	1	1	-	0	
	Higher Ed.(Colleges)	1 for 10 lakh	0	0	-	0	Depends on Ramtek and Nagpur provide college facilities nearby (above 5km distance)
	School for challenged	1 for 45,000	0	0	-	0	Ramtek and Nagpur cover requirement of Mansar population.
Healthcare	PHS	1 for 5000	1	2	1	50	Public Health service required for future population
	Dispensary	1 for 15,000	1	1	-	0	
	PHC	1 for 45,000	1	0	-	0	
	CHC	1 for 10 lakh	0	0	-	0	
	Maternity	1 for 45,000	1	0	-	0	
	Family welfare	1 for 50,000	1	0	-	0	
	Veterinary	1 for 50,000	0	0	-	0	
Socio- cultural : There is no shortage of facilities in Mansar.							
Nearby Police station- Ramtek; Nearby Fire station - Nagpur							

As the population of Mansar is above 5000 and it is a census town, RADPFI guidelines are not considered. As per URDPFI guidelines, there is a need for a PHS for the future population within the village. Mansar has sufficient basic social infrastructure facilities for present as well as for future projection. Quality of education facilities and medical facilities needs to be improved.

#### 4.2.4. Agriculture

Agro climatic zone: Mansar falls under Eastern Vidharbha region (Agro climatic zone). Soils of this region are heavy to medium, average rainfall of this region is 1200 mm. Main crops grown in this region are Paddy, Jowar, Soybean, Tur, Mung, and Urid.

Agro Ecological situation: Moderately high rainfall zone, slightly moist, very deep soils under jowar, rice, wheat, spices and oilseeds like sunflower Irrigated situation. Nagpur district has a low percentage (< 20 per cent) of irrigated area to the total cultivable area. Amongst the various tehsils Mouda (75.8%) has the largest cultivable area and Ramtek has the lowest (23.6%).

Table 4. Agriculture produces and irrigation status.

Taluka	Total No. of Villages	Scarcity Villages	Geographical Area	Net Swon Area	Gross Cropped Area	Cropping Intensity	Irrigated Area (Major, Medium & Minor) as given by Irrigation deptt.	% irrigation potential to gross cultivated area
Ramtek	157	151	114290	28015	46284	164.9	11980	34.03

Table 5. Agriculture produces and state average comparison.

Taluka: Ramtek					Unit: Kg/ha	
	2011-12	2012-13	2013-14	2014-15	2015-16	State Avg.
CROP- Tur	323.3	713.8	50	329.6	342.4	829
CROP- Soybean	891	790.5	202.5	222.5	204.2	1531
CROP- Cotton(Lint)	288.6	349.1	241.5	208.5	255.9	276
CROP- Wheat	1037.4	1064.5	619.8	937.4	473.5	1527
CROP- Gram	647.8	707.8	452	531.7	254.3	765
CROP- Rice	1797.4	1670.6	1376.5	733.8	1065.8	2333

Table 6. Financial aid given and worked proposed.

Taluka	Work Phy. (ha)	No. of Works	Amount Fin.
Ramtek	2175	1287	2546.93

1st Phase work of Jalyukta Shivar Abhiyan project plan of Nagpur dist. Annual year plan 2015-16

Ramtek Taluka has higher cropping intensity of 164.9 in comparison to Maharashtra state cropping intensity of 134.3, But overall production is quite below the state level avg values. If proper resources and knowledge is made available to them, than their will be high chances of increase in overall production and boost in economy.

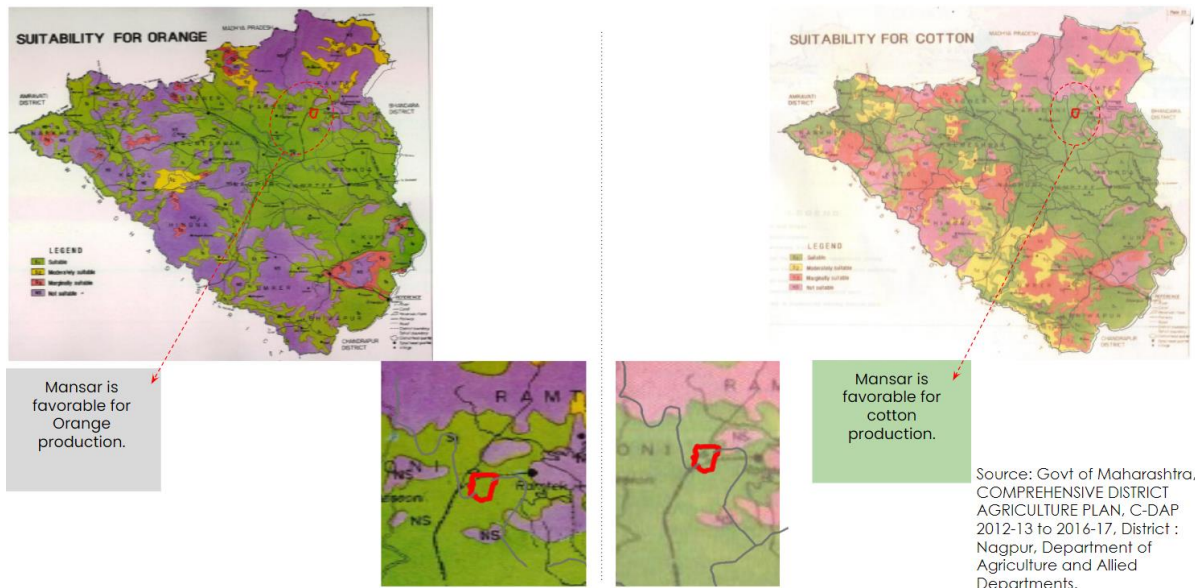


Figure 40. Land suitability for oranges and cotton production in Mansar.

Ramtek milk society collects the highest 1600 LPD milk and it should be supported for more production. Nagpur district is not self-sufficient in milk requirement and about 150000 litre of milk/day is brought into the district from outside. Many proposals were proposed like Distribution of milch animals, Strengthening/ Modernization of existing Veterinary Hospital/Dispensaries, etc.

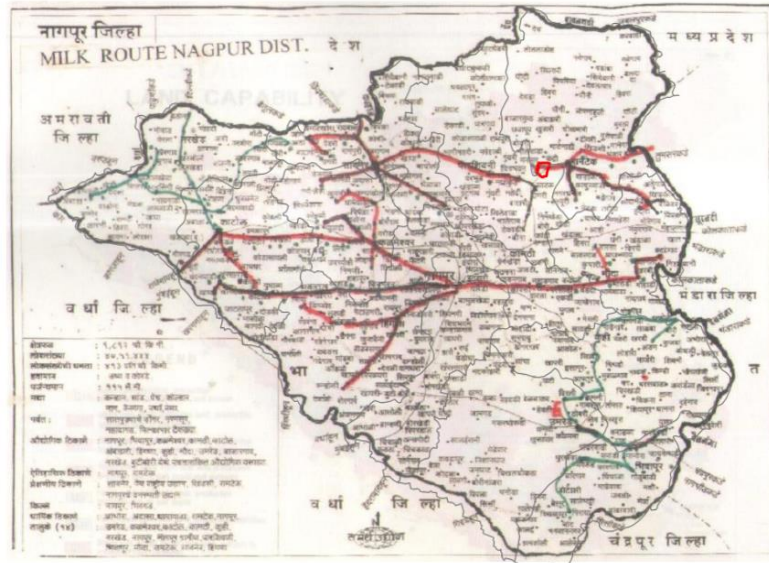


Figure 41. Milk route for Nagpur District.

#### 4.2.5. Economy

The economic analysis of the village comprises the study of monthly household income, major source of household income and education level of people to get the holistic scenario of livelihood opportunities in the village. This study is based on Household survey and Census data from the Ministry of Rural Development. The analysis indicates that, monthly income of 72% HH is less than 5,000 and majority of the population is involved in manual casual labor works followed by cultivation and other activities. The livelihood opportunity is the major concern for the village. Literacy rate, lack of opportunities for appropriate skill development and lack of higher education is the major reason behind the poor livelihood of the village economy.



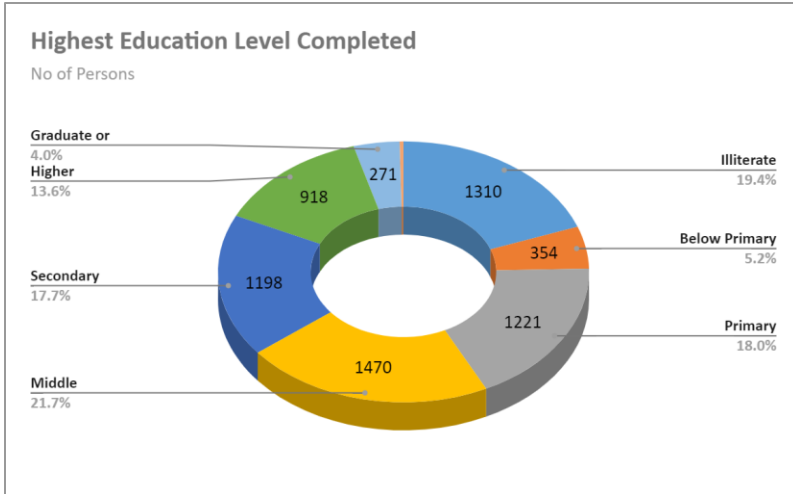


Figure 42. Highest Education Level Completed.

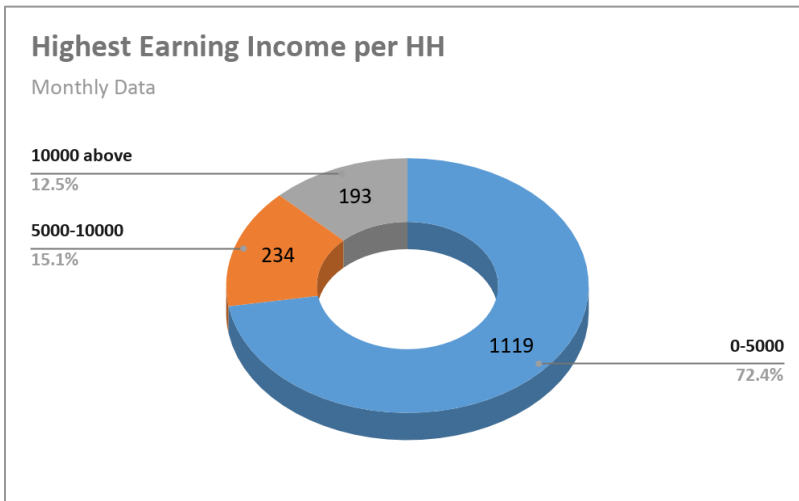


Figure 43. Highest Earning Income per Household.

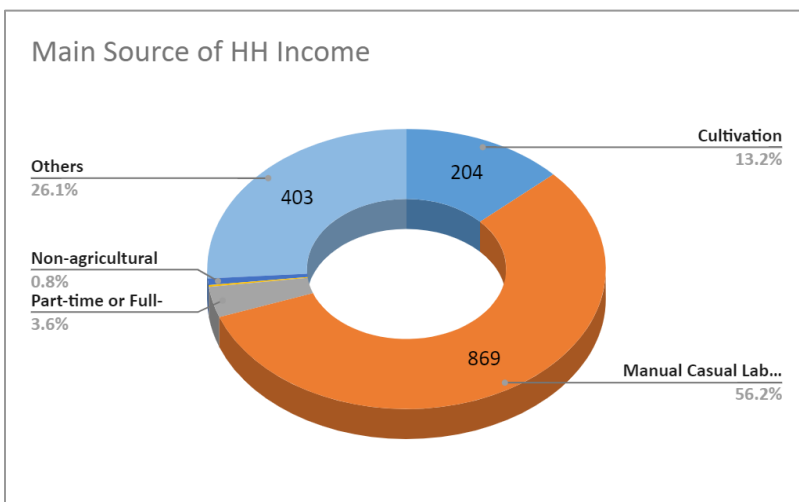


Figure 44. Main Source of Household Income.

Around 35 % population (988) of Mansar is engaged in farm activities, while 65% of workforce (1873) in non- farm work activities and around 32 % (905) of women are part of the workforce. Around 60% (1713) of the workforce is employed in other than agriculture activities i.e industries and industrial related activities. This indicates the presence of industries in or around Mansar.

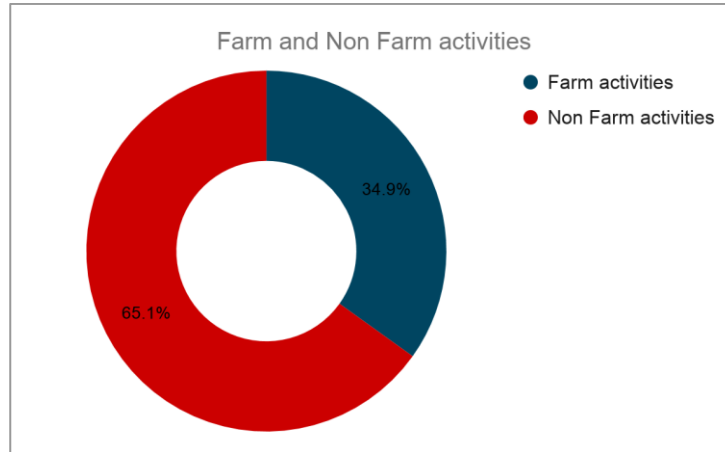


Figure 45. Population Involved in Farm and Non-farm Activities.

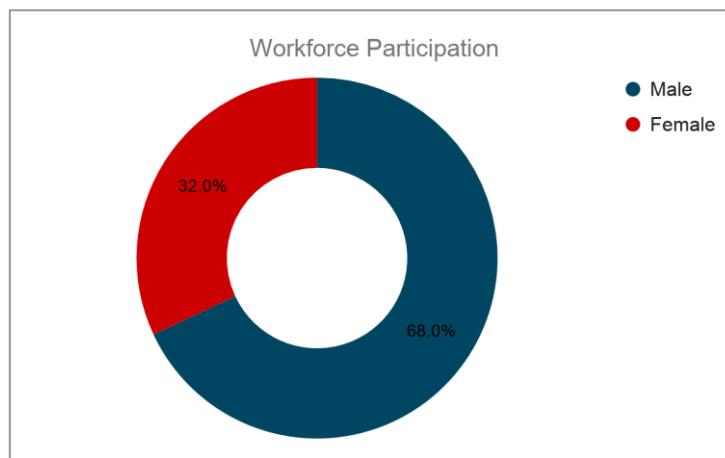


Figure 46. Workforce Participation of Male and Female Population.

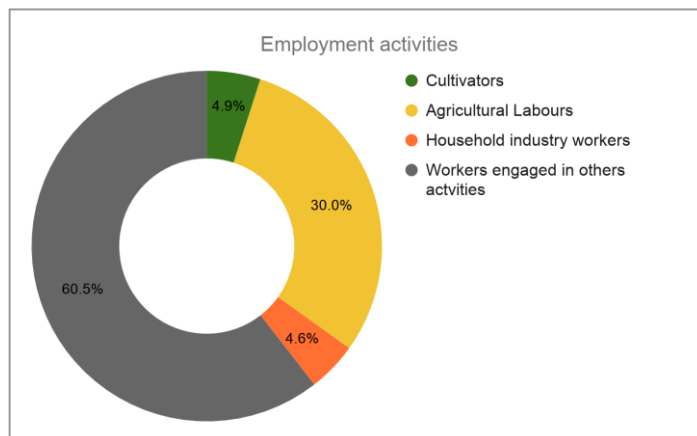
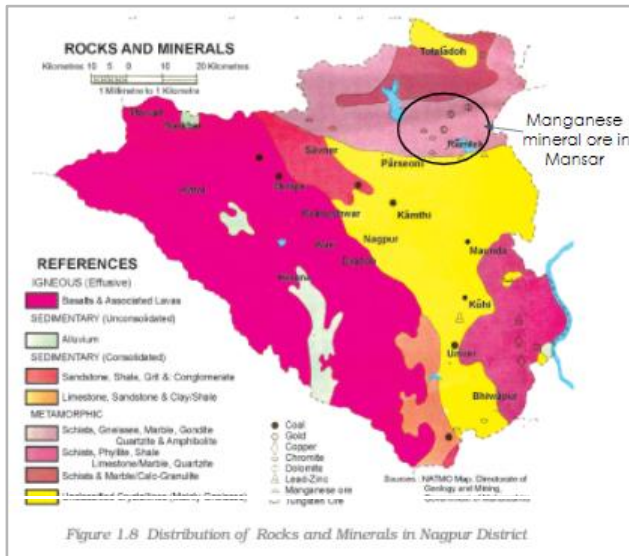


Figure 47. Employment Activities in Mansar.

Mansar village is known for underground manganese mines. Total area of land is 149.06 Hectare and is taken on lease by MOIL. The annual production of Manganese Ore in Mine is 125000 T. The 149.06 Ha ML consists of 5 leases located at Chargaon, Khairi, Mansar, Parsoda, Kandri. Total annual income from mine is 119.29 crores and total annual contribution to the economy is 29.05 crores. Total number of employees working in the mine are 632.



**The key findings of the study are -**

- Agriculture and Tourism are the major employment generation sectors which can boost the overall economy of the village
- Though 42% of land is under agriculture but majority of population is involved in casual labour work. It indicates that provision should be given for skill development opportunities
- Issues affecting the Agricultural Growth:
  - Dependence on rains, Shortage of irrigation facilities for cultivation
  - Neglected agro processing units and services
- Irrigation potential of the Village (Presently only 34%) has to be enhanced to tap the potential of cultivable land.
- Mansar village can be developed as a tourism destination to boost the economy.

**4.2.6. Tourism**

Every year around 2-5 lakhs people visit Nagpur during different times and festivals like Dhamma chakra Parivartan, Marbat festival, etc. also there is tourist footfall to visit other heritage and cultural places like Dragon temple, Paradsinga, Adasa, Raman science centre, etc. exact figure of the tourist footfall is not available for Nagpur, but there is lot of potential in developing the local heritage and tourism spot in the region to promote the tourist industry (*Nagpur CDP for 2041*). Mansar is popularly known as a halt point for the journey towards North-West of Nagpur. Mansar holds a historical significance associated with the Archaeological Site revealing several layered structures made of fired bricks and a Buddhist Stupa making it a Buddhist religious place too. It

is also a religious place for the people belonging to the Mahanubhav cult. An annual festival between the month of March and April is celebrated at the Krishna temples situated here. It also holds an ecological significance due to its topography, water catchment and forest areas.

**List of tourist places at Mansar (as per the appearance order from Nagpur towards Ramtek)**

- Park / Recreational Place
- 1. Ramdham cultural park
- Religious / Cultural places
- 2. Jama Masjid
- 3. Shila Aai Temple
- 4. Krishna Temple 1 (Mahanbhav Pantha Devasthan)
- 5. Krishna Temple 2 (Mahanbhav Pantha Devasthan)
- 6. Hanuman Temple
- 7. Buddhist Temple (Bodhisatva Nagarjuna Santha Temple) & Museum
- Heritage Structures
- 8. Excavated Stupa over Hindimba hill
- 9. Excavated brick structure over Hindimba hill.

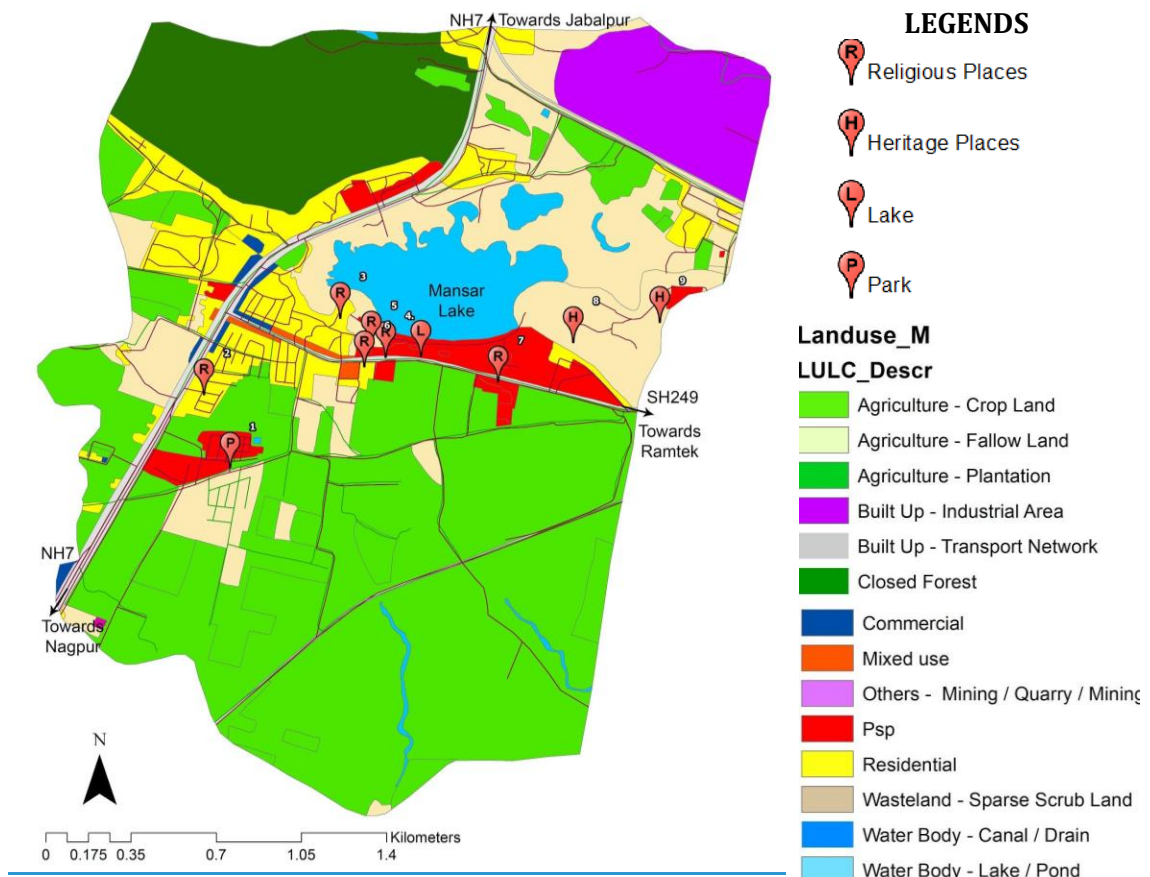


Figure 49. Map showing tourist places at Mansar.

## Prominent Tourist Places

### 1. Krishna Temple (Mahanbhav Pantha Devasthan)

An ancient temple and also an important pilgrimage place, particularly for the people belonging to Mahanubhav cult. The first temple is located at the foothill and the second temple on the hilltop adjacent to the Mansar Lake. Pedestrian pathway leads towards the first temple and the stairway to the second temple. Annually a spiritual festival is celebrated between the month of March and April at the temple precinct.



Figure 50. Krishna Temple & Mansar Lake.

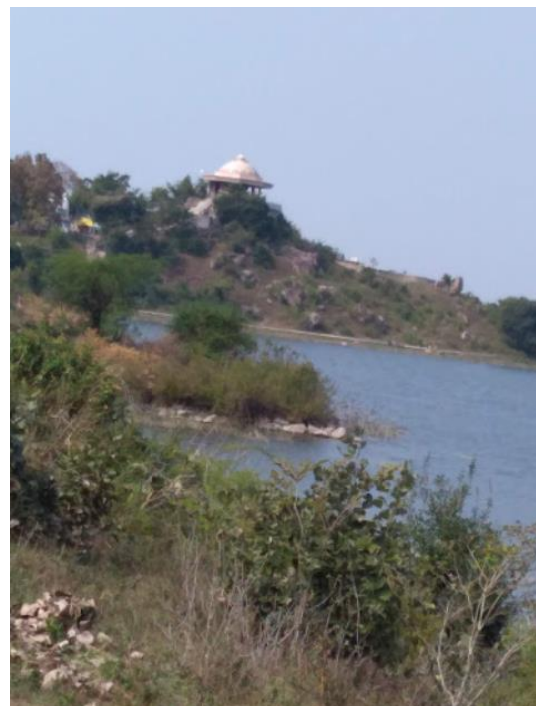


Figure 51. Krishna temple Stairs.

### 2. Buddhist Temple (Bodhisatva Buddha Vihar)

Important pilgrimage place in relation to the adjacent Buddhist stupa at A.S.I site.

### 3. Bodhisatva Nagarjuna Museum

Houses some Buddhist relics, located adjacent to the Bodhisatva Buddha Vihar.

### 4. Excavated brick structure & Stupa over Hindimba hill

An archaeological site consists of various excavated shrines, a palace complex (identified as Pravaraपुरa which was the capital of the Vakataka king Pravarasena II), artifacts and a Buddhist stupa. From the foothill it appears to be an earth mound but as soon as we reach the top of the mound, we come across a grid of excavated walls surrounding a sprawling pyramidal brick



structure. It is similar to the beautiful ruins of Nalanda. On climbing further, we get a spectacular view of lush green surroundings and the Ramtek temple complex.

The multi-storeyed brick structure stands at a height of 15 m and holds a plinth or adhishthana adorned with alternating niches. A sacrificial fire-pit can also be seen next to the massive structure. As we explore further, we reach another majestic structure that served as the residence of the Vakataka king, Pravarasena II (400-415 CE), and is known as Pravarpura.



*Figure 52. Excavated Brick Structure (A.S.I site)*

*(Source: IncredibleIndia.org.in)*

### **Other places with potential to be a Tourist place**

#### **Mansar Lake**

It is a fine lake from which rice fields and beetle wines were irrigated, and after which the village gets its name “Mansar” or the “Jewel Tank”. Located at the foothills of the Hidimba hills (A.S.I site) the lake is currently undeveloped and is used for fishing purposes.



*Figure 53. Mansar Lake.*

## Nearby tourist places

### 1. Khindsi Lake

A beautiful lake located 11 km from Mansar surrounded by a forested hill with boating, water sports facility. M.T.D.C has built some Holiday Homes on a hill which offers a panoramic view of the lake and the surrounding countryside.



Figure 54. Khindsi Lake.

(Source: <https://nagpur.gov.in>)

### 2. Ramtek Temple

Ancient Ram temple located 13 km from Mansar inside an ancient fort built on a hilltop during the Wakatak period. Lord Ram is believed to have halted here along with Goddess Sita and Lord Lakshman during their exile period.

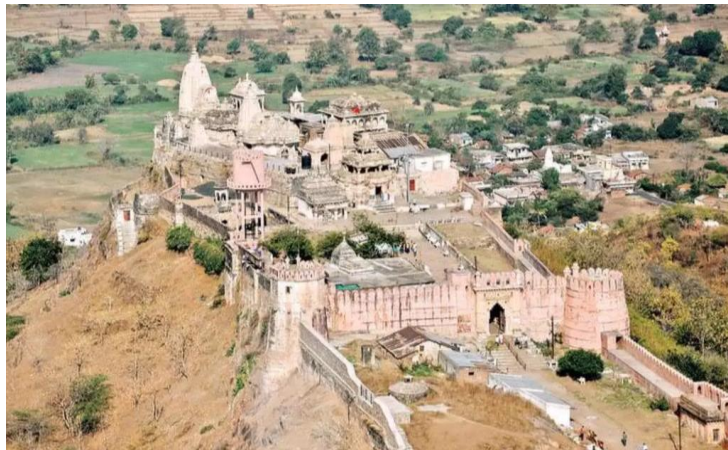


Figure 55. Aerial view of Ramtek Temple.

(Source: <https://nagpur.gov.in>)

### 3. Ambala tank and temples

Pilgrimage tank located 13 km from Mansar at the foothill of the Ramtek temple. It has an array of temples surrounding it.



*Figure 56. Amabala Tank, Ramtek.*

#### 4. Poet Kalidas Memorial

A sandstone structure 15 km from Mansar at the foothill of the Ramtek temple commemorates the famous Sanskrit playwright Kalidas. Kalidas is believed to have written his famous play “Meghdootam” at Ramtek.



*Figure 57. Kalidas Memorial, Ramtek.*

#### 5. Pench National Park

It is a Tiger reserve located 30 km from Mansar, spread across 1015 sq. km is shared by Maharashtra and Madhya Pradesh (758 sq.km in Madhya Pradesh and 257 sq. km in Maharashtra). This area was the inspiration for Rudyard Kipling’s famous “The Jungle Book”. It is named after the Pench river which meanders through the park like a Python. The park forms a prime habitat of Tiger, Leopard, Blue bull, Deer, Wild dog, Monkey, Flying squirrel, Porcupine. It offers a view of over 200 local and migratory birds. The best time to visit is between October to June.





Figure 58. Pench National Park.

(Source: [www.penchnationalpark.com](http://www.penchnationalpark.com))

## 5. Priority Defining and SWOT analysis

Based on the field survey data analysis and response from the residents, the following development priorities were defined for Mansar -

<p><b>Identified Concerns:</b></p> <ul style="list-style-type: none"> <li>● Community space/ hall</li> <li>● Education</li> <li>● Employment</li> <li>● General cleanliness (garbage and gutterline)</li> <li>● Hospitals and medical treatment centers</li> <li>● Housing</li> <li>● Market expansion</li> <li>● Open Spaces/ Gardens/ Grounds/ Parks</li> <li>● Public toilets</li> <li>● Public transport</li> <li>● Roads &amp; streetlights</li> <li>● Sewerage lines</li> <li>● Water supply</li> </ul>	<p><b>Priority 1: Education</b> (Provision for Higher education, English medium schools, Colleges, ITI, Vocational training centers, etc.)</p> <p><b>Priority 2: Employment</b> (Facilitation for industrial growth providing employment, entrepreneurship initiatives, etc.)</p> <p><b>Priority 3: Roads &amp; streetlights</b> (Provision of streetlights, reflective signs for better vision, better road conditions, cleanliness, widening and maintenance of cement or tar roads.)</p> <p><b>Priority 4: Water supply</b> (Provision of taps, water lines, 24 Hour water supply of purified and clean water, etc.)</p> <p><b>Priority 5: Public toilets</b> (especially near bus stops)</p> <p><b>Priority 6: Hospitals and medical treatment centers</b> (Provision of hospitals, clinics, and aid centers for residents as well as their cattle, better facilities for health infrastructure)</p> <p><b>Priority 7: Open Spaces/ Gardens/ Grounds/ Parks/ Community spaces/halls</b></p>
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Common concerns observed were related to clean water supply, employment, roads and streetlights and education opportunities.

Based on the available studies, primary and secondary data, a SWOT analysis for Mansar is carried out. The results are as follows:

<b>Strength:</b>	<b>Weakness:</b>	<b>Opportunities:</b>	<b>Threat:</b>
<ul style="list-style-type: none"> <li>• Accessibility</li> <li>• Rich in terms of resources</li> <li>• Well connected with National and State Highway</li> <li>• Good electrical infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>• Infrastructure/services</li> <li>• Poor healthcare</li> <li>• Employment and Qualification Gap</li> <li>• No provision for common toilets</li> <li>• Waste disposal system</li> <li>• Open drainage system.</li> </ul>	<ul style="list-style-type: none"> <li>• Tourism</li> <li>• Facilitation for setting up industries for employment generation.</li> </ul>	<ul style="list-style-type: none"> <li>• Mining industry</li> <li>• Frequent droughts and lightening issues</li> </ul>

The most common issues identified pertain to education, employment, water, roads and street lighting, public spaces, gardens, and toilets. Special considerations have been made while making proposals to address these issues based on the opportunities in the respective villages.

## 6. Organizational Structure



## 7. Proposals

### 7.1. Housing

#### Housing in new locations

With expanding population in the villages and to cater to the estimated future population, new locations/ areas for proposed residential development. The areas contiguous with the existing residential lots may be reserved for future residential developments. The areas towards the south of the present built-up (east side of the national highway) to be marked for future development. Also, the areas towards the west of the national highway shall be the second preference. Both these areas are away from the environmentally sensitive areas of the lake and the hillocks and may not have negative impacts. However, the conversion of agricultural lands into non-agricultural uses will remain an issue for discussion.

While proposing new residential developments, special focus shall be given to the economically weaker sections. Smaller lots of lands shall be made available to the EWS families under subsidized schemes, very much like the MHADA schemes in Maharashtra. The planning of new housing layouts shall be based on the idea of provision of amenities on equitable basis. There shall be planned provision of open spaces, public spaces/community halls, amenities like borewells/ water taps, areas reserved for neighborhood shops, there may also be reservations for religious buildings. Quality buildings for housing with roads and services shall be the priority and the mechanisms to achieve the same shall be facilitated.

The following map shows the possible scope for future development. According to land capability studies, the soils at these places have severe limitations that reduce the choice of plants or require special conservation practices.

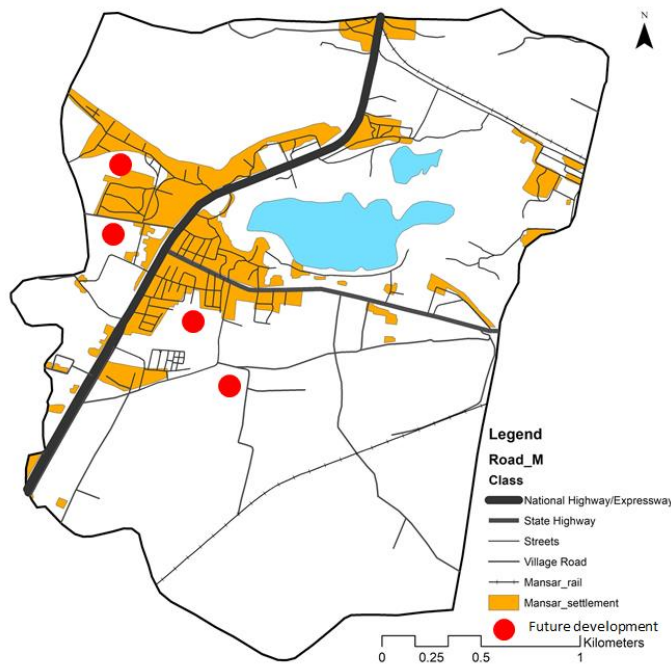


Figure 59. Scope for Future housing Development

### **Improving the existing housing stock of dilapidated and non serviceable kaccha houses.**

Pradhan Mantri Gramin Awaas Yojana (PMGAY) is a social welfare programme to provide housing for the rural poor in India. The broad purpose of the scheme is to provide financial assistance to some of the weakest sections of society for them to upgrade or construct a house of respectable quality for their personal living. The vision of the government is to replace all temporary (kutchcha) houses from Indian villages. Under this scheme, the upgradation of dilapidated and non serviceable kaccha houses can be undertaken.

### **7.2. Water supply**

As per the analysis, Mansar village has water bodies around the village, most of the households have private tap connections followed by private wells and borewells and rest of the population is depended upon the public taps and handpumps.

Most of the water supplied into the village is pumped from the Pench reservoir, which fulfils the water demand for the village.

South Side of the village has clay soil which is mostly used for agricultural purpose. This soil cannot hold the water, therefore, check dams and farm pond are made to harvest the rainwater.

According to the future demand 1839246.75 LCD of water is required for the Mansar village till 2040, therefore to further store and regulate the future demand following scheme is proposed:

#### **Schemes for water supply:**

##### **Swajal scheme:**

##### **Objective:**

To provide de-centralised, preferably solar energy-based piped water supply through community-designed, implemented, maintained and safely managed single village water supply schemes. The programme would also sustain the ODF status.

##### **Vision:**

Community-led drinking water projects to be called 'Swajal' aiming at providing sustainable and adequate drinking water in an integrated manner to the rural masses. It is envisaged that the State government in partnership with rural communities; shall plan, design, construct, operate and maintain their water supply and sanitation schemes; so that they get potable water and attain health and hygiene benefits; the State Government

and its sector institutions shall act as supporter, facilitator and co-financier and as per need shall provide technical assistance, training and cater for bigger construction works and sectoral contingencies.

### **Components of the scheme:**

#### **Groundwater based schemes.**

##### ***Mandatory components***

- Construction of bore-well/tube well or an existing such structure of required yield with proper casing.
- Installation of the pump of required capacity with a dry run sensor.
- Sensor to regulate the pump operation.
- Pipes of required sizes and length, quality for water delivery (raising main) to the tank and for the distribution network.
- Required number of stand posts within the village (location and number to be decided by the community).
- A recharge structure for source sustainability. The type of structure is to be decided in consultation with the State Ground Water Dept/Agency.
- Soak pit for safe disposal of wastewater around every stand-post.
- If the GP resolves to provide piped water supply to (i) to schools; (ii) to Anganwadis; etc, then providing the necessary infrastructure for such connections with multiple hand wash units.

##### ***Optional components***

- Community water treatment unit to address the quality issue.
- An online chlorination unit if disinfection of water is anticipated (only if required).
- An LED light powered by a battery charged through a solar panel for drawl of water at night.
- Sensors with required data logging facility to measure (i) groundwater level in the bore/tube well (ii) discharge (iii) leakage.
- Cattle troughs.

#### **Surface water or spring-based schemes.**

##### ***Mandatory components***

- Identification of a sustainable surface water source in consultation with the community. Sustainability of source is to be certified by the Water Resources Department of the State.
- Construction of infrastructure required (intake structure) and filtering arrangement.
- Installation of the pump of required capacity with a dry run sensor.
- Sensor to regulate the pump operation.
- Pipes of required sizes and length, quality for water delivery (raising main) to the tank and for the distribution network.
- Required number of stand posts within the village (location and number to be decided by the community).

- Soak pit for safe disposal of wastewater around every stand-post.
- If the GP resolves to provide piped water supply to (i) to schools; (ii) to Anganwadis; etc, then providing the necessary infrastructure for such connections with multiple hand wash units.

**Optional components**

- An LED light powered by a battery charged through a solar panel for drawl of water at night.
- Sensors with required data logging facility to measure (i) discharge (ii) leakage.
- Cattle troughs.

**7.3. Transportation Sector:**

Main issues encountered with the transportation sector were related to road maintenance and the supporting infrastructure. The main need at the village level was connecting the internal parts of the village for providing a better connectivity to the services followed by improved infrastructure for effective and convenient public transport. The supporting infrastructure includes provision of street lights on the internal roads, reflective signs for better vision, better road conditions by strengthening and widening the existing roads, maintenance of roads with regards to cleanliness and improved public services such as public toilets.

Following proposals are recommended for Mansar –

- Making provision for Intermediate Para Transit (IPT), the auto rickshaw stands, 3-wheeler, 6-wheeler and cycle rickshaws stops to cover the intermediate distances.
- Bus terminals connecting to Nagpur which already exist, the frequency of services can be increased, and stations could be maintained by providing better facilities such as clean public toilets.
- Condition of internal village roads can be improved under the central schemes. Maintenance of existing roads, cleaning and filling can be done.
- Provision of streetlights on the internal roads and reflective signs can also be made under central schemes.

**Suggested schemes to streamline the project with –**

<p>Pradhan Mantri Gram Sadak Yojana (PMGSY).  <b>Component:</b> Inter-village connectivity  <b>Thrust area:</b> Provision of connectivity to unconnected</p>	<p>Streetlights national program.  <b>Component:</b> Village Street Lights</p>	<p>Aajeevika Grameen Express Yojana (AGEY).  <b>Component:</b> Public Transport</p>
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habitations and upgradation of existing road networks <b>Government:</b> Central	<b>Thrust area:</b> Provision of smart and energy efficient LED Streetlights <b>Government:</b> Central	<b>Thrust area:</b> Provision of road transport services <b>Government:</b> Central
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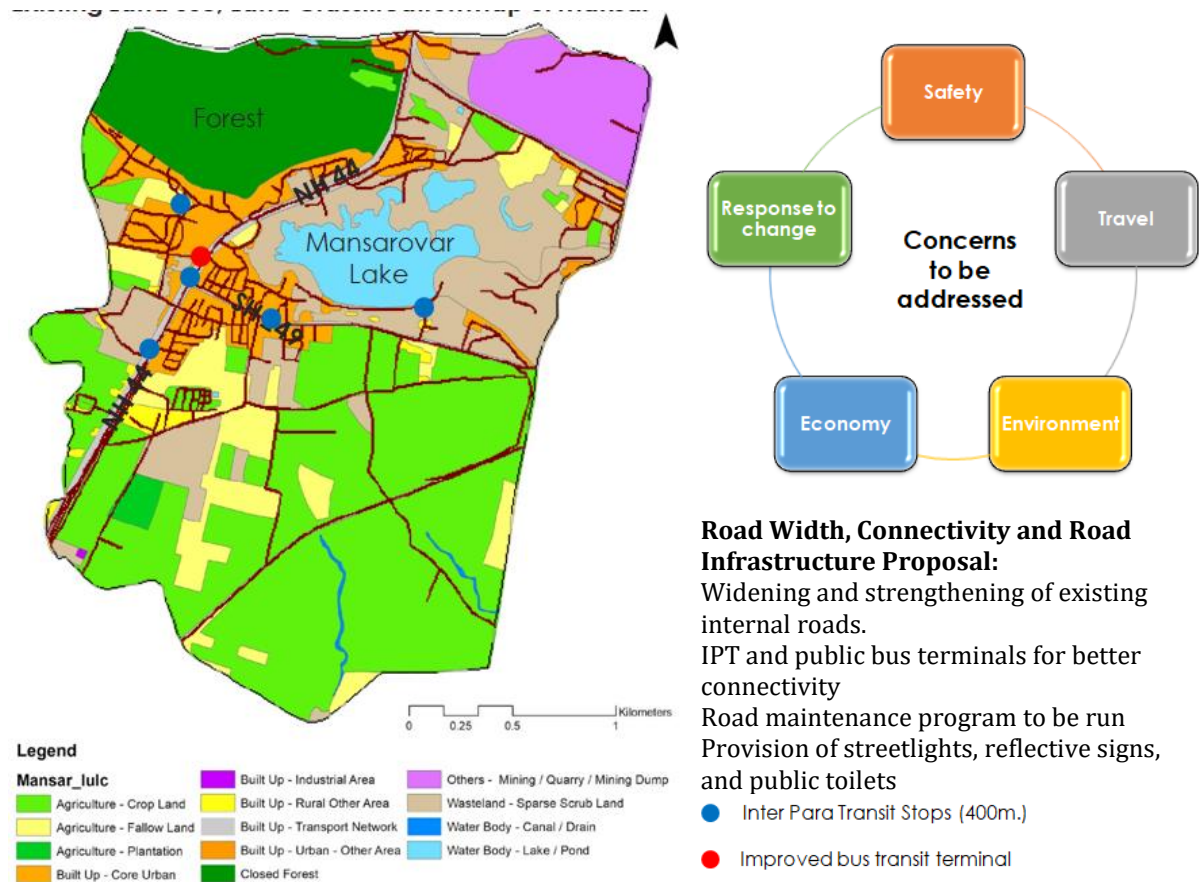


Figure 59. Transportation proposal.

### 7.4. Solid waste Management

There are various ways to manage solid waste and a few of them are listed below along with the area required to set up such practice.

Table 7. As per RADPFI, 1 hectare land can accommodate following capacity for the respective practices.

SWM Practice	Capacity (Tonnes)
Composting	84



Bio methanation	125
Gasification	50
Incineration	125
Landfill	Remaining

**Composting:**

Decomposition of organic waste is a natural process. Rural waste generation is largely organic in nature and can be put to an organized method of producing compost manure.

A composting site for biodegradable waste collected in the village can be accordingly built on a site away from the habitation as well as water body, close to the agricultural fields, where the manure generated can be put to use.

**Biomethanation:**

It is a process of anaerobic decomposition which results in the production of Methane.

**Gasification/ Pyrolysis:**

It is a thermochemical decomposition of organic material at high temperatures in the absence of oxygen.

**Incineration:**

It is a waste treatment process involving combustion of organic substances. The thermal treatment of waste converts it into ash, gas, and heat which in some cases can be used to generate electricity.

**Recycling :**

The non-biodegradable waste generated of some value like, paper, plastic, metal can be sold off through the central recycling chain through scrap dealers.

**Landfilling :**

Despite composting, re-use and recycling, some waste remains untreated/unmanaged which requires final disposal, either by incineration or by land filling.

By the Year 2041, more than 2 MT of waste is to be managed and thus a waste management practice is to be followed in the cluster.

**Waste Management Process**

This five-step waste management process should be followed irrespective of the processing technique being used. Based upon the category of waste, the waste is to be processed for further action of disposal into the Landfill.

As per the guidelines for land requirement for the Waste Processing techniques, a multipurpose treatment plant should be set up which shall include the following processes :

1. Segregation Conveyor Belts
2. Organic Waste
  - a. Composting
  - b. Biomethanation
3. Inorganic Waste
  - a. Incineration
4. Disposal at Landfill Site



Figure 60. Waste Management process.

### Institutional Structure

Since SLWM is a component of Total Sanitation Campaign, the institutional structure that is in place for TSC is also responsible for SLWM. However, since this is a relatively new component, efforts will be required to build the capacity of stakeholders at the state and district levels to facilitate the GP in implementing a safe waste management program.

- SLWM resource team at state level: states should decide on technologies suitable to their areas.
- SLWM resource team at district level.
- Explore the need for qualified persons at GP for O&M and enable GP to make provisions.
- Involve Self Help Groups (SHGs), other community groups, and private sector / entrepreneurs for SLWM as a 'Village Level Sanitarian' (service provider)
- Enable basic monitoring/recording systems at GP level for indicators identified through Swachh Bharat Mission.

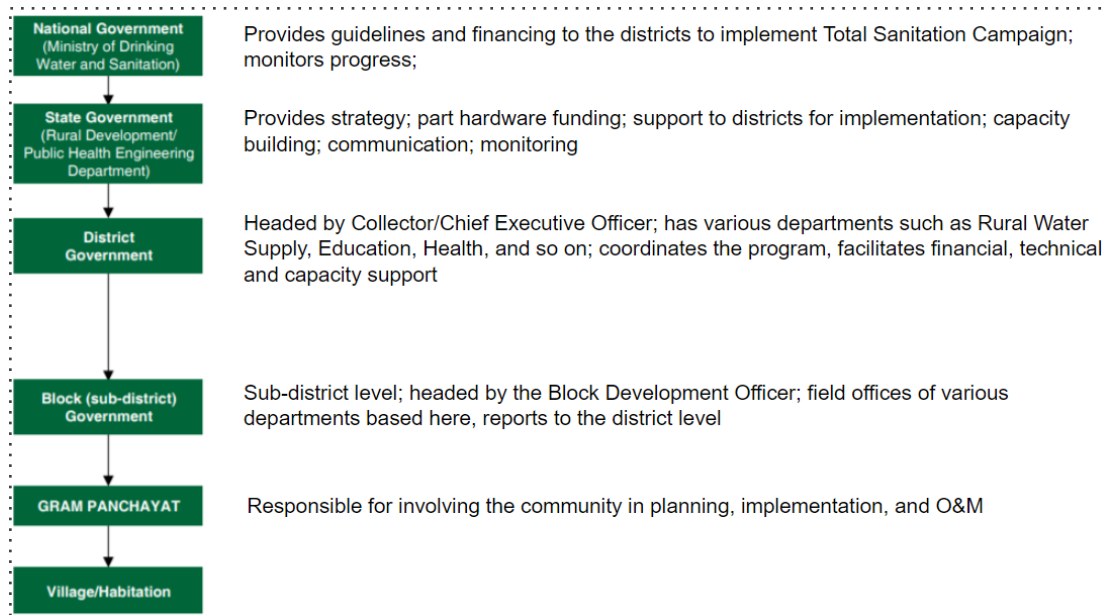


Figure 61. Roles and Responsibilities Flow Diagram.

### GP responsibility

At the village level, the GP should ideally have the overall responsibility for ensuring safe management of waste. It should hold individual households and institutions in the village responsible for the management of their waste, through household, institutional or community waste management facilities

The GP, and households and institutions within it, should be responsible for the construction of SLWM facilities at village, household and institution levels, respectively. GP-led O&M can include hiring workers and buying vehicles for collection and transportation of waste.

### SWM Site Location

The Location of the SWM site is decided upon the following Criteria and accordingly a space has been allocated for the purpose in the Gram Panchayat.

- Located at the outskirts of the village
- Accessible
- On vacant/uncultivated land
- Located in the natural depressions with slight slopes
- Site should be such as to avoid surface water and groundwater pollution.

## 7.5. Economy

Provision of scientific storage facilities as the resources are falling short to support the cropping intensity of the village.

### **Community Participation -**

A general awareness programme on the schemes for the farmers and a training programme for the entrepreneurs for construction, maintenance, and operation of rural godowns should be organized at village.

**Skill development** can be provided for following purposes in Agriculture Sector

- Awareness for Encouraging community irrigation
- Skill development for efficient water & crop management practices
- Marketing of agricultural produces
- Educational programmes for new agriculture technologies

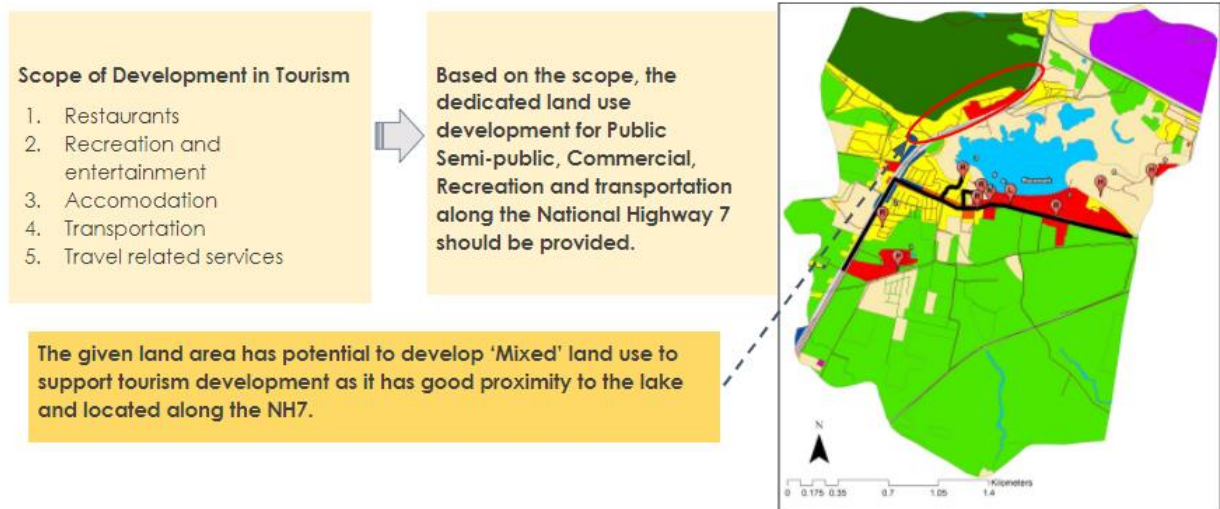
### **Schemes for Skill Development:**

**Pradhan Mantri Kaushal Vikas Yojana (PMKVY)** - Under the PMKVY, the central government provides skill training courses in different industrial verticals through authorized training centers. National Skill Development Corporation will be the governing authority and will take care of -

- Funding and incentivising
- Enabling support services
- Shaping/creating

PMKVY scheme provides a variety of agriculture related courses. The existing infrastructure of PMKVY in Mansar can be shared to nurture agricultural skill development. To Enhance the physical access of water on the farm & water use efficiency to increase the overall crop yield in the cluster construction of 'farm Pond' is crucial as the village has good rainfall, good run off is available and ponds will aid groundwater recharge. Individual Farmer/Farmer Group/Cooperative etc. could be the potential beneficiaries of the scheme.

As analysis indicates that tourism can boost the economy of the village, it is necessary to understand the scope of tourism development in the village and estimate the future spatial changes in land uses. The following figure discusses the anticipated land use changes required to make Mansar village as a tourist destination.



## 7.6. Tourism Proposals

Mansar is significantly known as a halt point, located at the junction of NH7 & SH249. NH7 leads towards Pench National park: Tiger reserve & SH249 leads towards Ramtek: a religious place.

Tourist places at Mansar (as per the appearance order from Nagpur towards Ramtek)

- Park / Recreational Place
  1. Ramdham cultural park
- Religious / Cultural places
  2. Jama Masjid
  3. Shila Aai Temple
  4. Krishna Temple 1 (Mahanubhav Panth Devasthan)
  5. Krishna Temple 2 (Mahanubhav Panth Devasthan)
  6. Hanuman Temple
  7. Buddhist Temple (Bodhisattva Nagarjuna Santha Temple) & Museum
- Heritage Structures
  8. Excavated Stupa over Hidimba hill
  9. Excavated brick structure over Hidimba hill

### Proposals

- The Mansar lake (currently underutilised) should be developed to spearhead the blooming of Mansar village as a Eco Tourism Destination.
- Also, the renowned Archaeological sites can be leveraged for promoting Eco Tourism.
- To foster the tourism activities, Human resources should be developed in the form of Tourist guides and Information technologist via training programs and professional courses for local youths.
- Bus stops near Park along NH7 & near Religious places along SH249 supported by IPT



infrastructure for last mile connectivity.

- Amenities like eateries, drinking water kiosk, public toilet, solid waste disposal facilities and locker rooms etc at all the destinations.
- The connectivity among the various tourist destinations and with the nearby tourist places such as Ramtek, Pench National park etc should be enhanced.

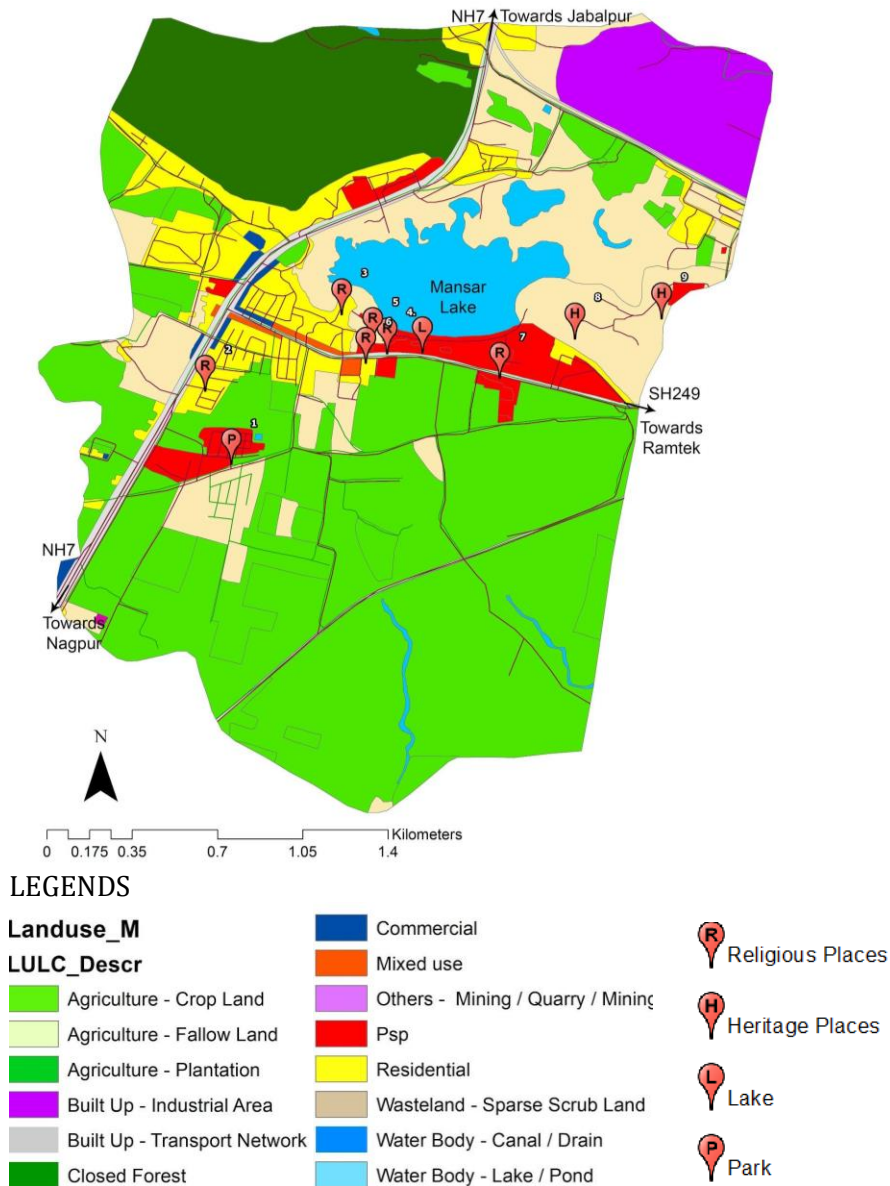


Figure 63. Map showing tourist places at Mansar.

**Tourism Proposals: Trail and Circuits**

**Tourism Trail**

The trail or route provides a themed and interpreted journey through the urban or rural landscape, creating links between sites, attractions and other tourism businesses by providing information and storytelling along the way.

- Start Point: Ramdham Park (well known Spot)
- End Point: Excavated brick structure & Stupa over Hindimba hill
- Trail length = 3.25 Km & Total trail time= 5.65 Hrs

**Tourism Circuits**

A Tourist circuit is defined as a route on which at least three major tourist destinations are located such that none of these are in the same town, village or city”. At the same time they are not separated by a long distance.

<p>Nagpur-Mansar-Ramtek-Nagpur Religious circuit</p> <ul style="list-style-type: none"> <li>•Start &amp; End Point: Nagpur City via NH 7 &amp; SH249</li> <li>•Destination Point: Ramtek</li> <li>•Circuit length = 55 Km (One way), 110 Km (Round trip)</li> <li>• Total Circuit time = 10.48 Hrs approx. 11 Hrs</li> </ul>	<p>Nagpur-Mansar-Pench-Nagpur Natural Heritage circuit</p> <ul style="list-style-type: none"> <li>•Start &amp; End Point: Nagpur City via NH 7</li> <li>•Destination Point: Pench National Park</li> <li>•Circuit length = 70 Km (One way), 140 Km (Round trip)</li> <li>•Total Circuit time= 7.33 Hrs approx. 7.5 Hrs</li> </ul>
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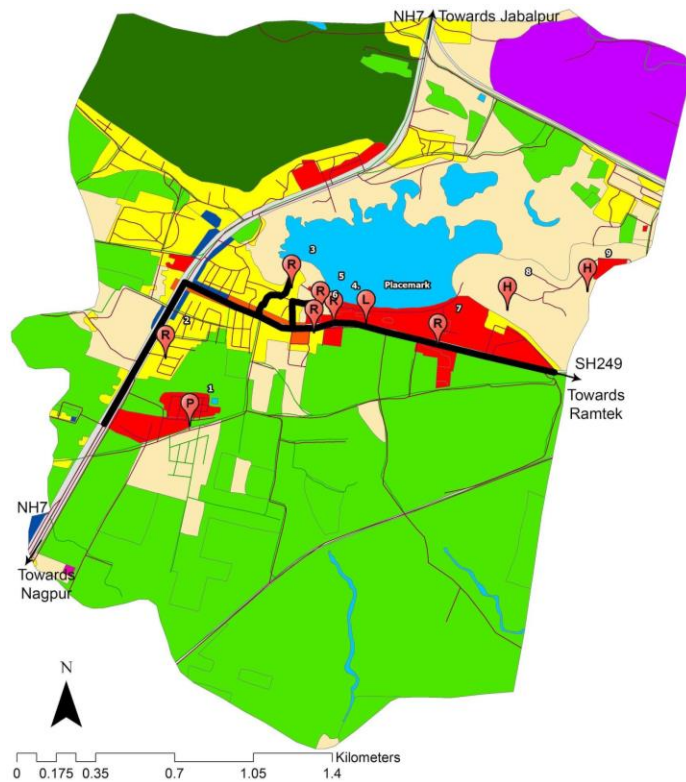




Figure 64. Map showing tourist places at Mansar.

## 8. Conclusion

As observed from the survey and analysis, there is tremendous potential with Mansar village that it may be developed as a model village with all the basic and other amenities, can be developed as a model village. It has the capacity of being a central place and growth centre for the surrounding villages. Given its location at the junction of a national highway and a state highway, proximity to the important tourist locations (like religious, archeological and forest), with ample land to expand for housing and other non-agricultural uses (like manufacturing units), it will be very important to seriously look into the prospects for this village.

The base preparation with the help of geo-spatial maps and data will definitely will be very helpful in conceiving the overall development plan for Mansar.