

**SPATIAL DEVELOPMENT PLAN  
FOR  
PATHRERI GRAM PANCHAYAT  
AMBALA DISTRICT  
HARYANA**

**CHANDIGARH COLLEGE OF ARCHITECTURE**

**FOR  
MINISTRY OF GRAM PANCHAYAT,  
GOVERNMENT OF INDIA**



# INTRODUCTION

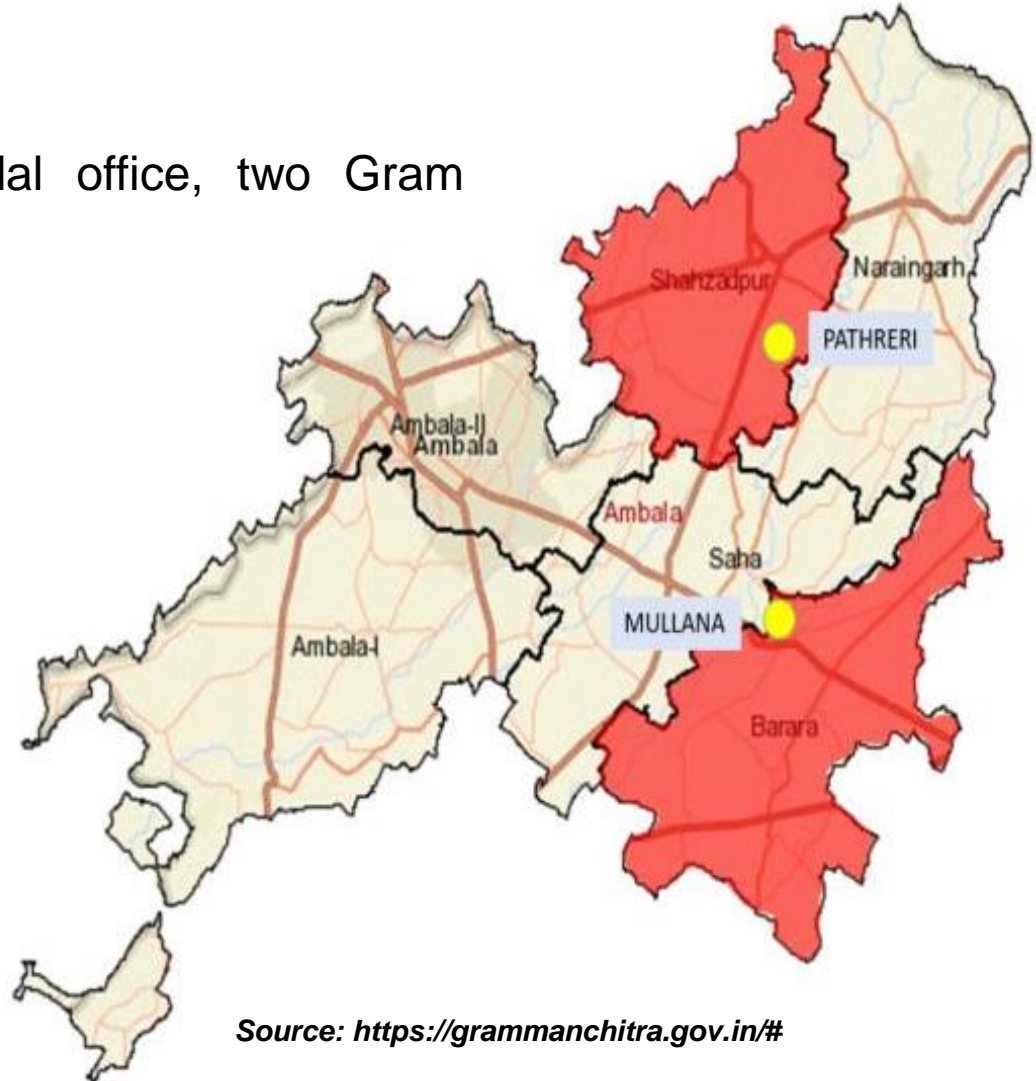
Ministry of Panchayati Raj Government of India assigned the project of preparation of Spatial Development Plan for two Gram Panchayats in the state of Haryana to the Chandigarh College of Architecture.

After discussion with the state nodal office, two Gram Panchayats namely :

1. Pathreri, Block Shahzadpur
2. Mullana, Block Barara.

A dedicated team of faculty members, post-graduate students and staff participated in preparation of this report.

NRSC & NIC are the technology partners for the project.



Source: <https://grammanchitra.gov.in/#>



# METHODOLOGY

## I. DATA COLLECTION

### A. Primary resources:

- Household Survey (Sample size of 100 households)
- Physical Site visits
- Oral History
- Telephonic interviews and VC with concerned government authorities and elected members

### B. Secondary resources:

- Data from Grammanchitra website
- Data provided by ISRO and NRSC
- Data provided by NIC
- Census 2001 and 2011
- Bhuvan Panchayat website
- Data collected from websites of various government departments
- Ambala District Gazetteer
- Revenue Maps and Jamabandi
- Other written sources – Books and Documents
- Google Earth

## II. CURRENT STATE ASSESSMENT

## III. ANALYSIS OF DATA

## IV. PROPOSALS



## LOCATION AND EXTENT

- The Gram Panchayat of Pathreri (Pin code 134202) is located in Block Shahzadpur, District Ambala in the state of Haryana.
- Its Parliament Constituency is Ambala and Assembly Constituency is Ambala City.
- According to the 2011 Census, the Gram Panchayat covers an area of **739 hectares** and comprises of the settlement of Pathreri village and its surrounding agricultural land.



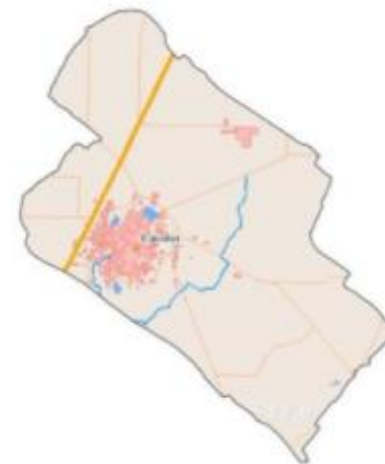
STATE- HARYANA



DISTRICT- AMBALA



BLOCK- SHAHZADPUR



GRAM PANCHAYAT- PATHRERI

Source: <https://grammanchitra.gov.in/#>





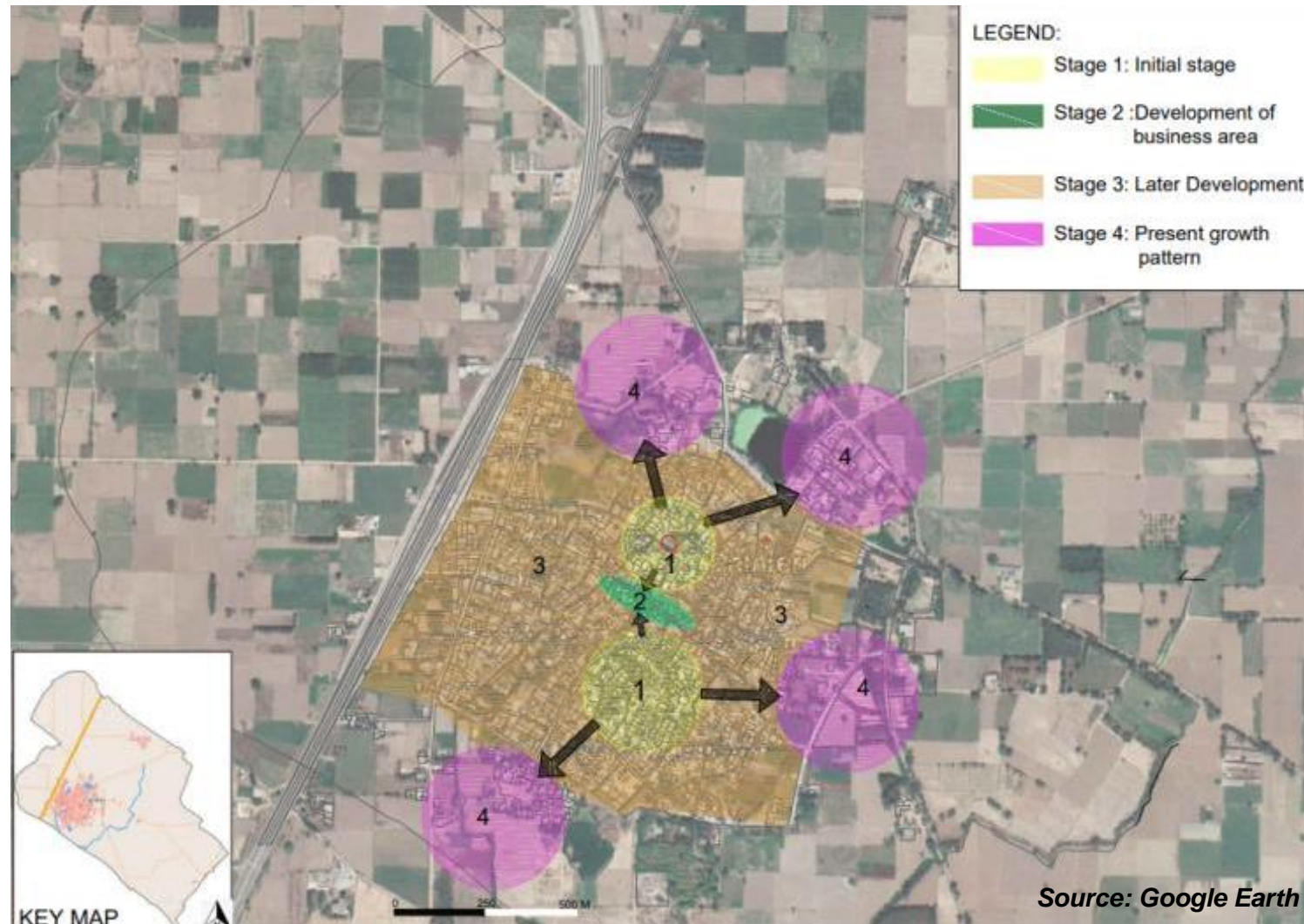


## ABOUT PATHRERI

- The village elders date the establishment of Pathreri around 1187 AD. According to oral history, the village was established by Rana Manpal Singh, descendent of Rana Har Raj, a Rajput.
- The Rajput community is till date one of the most prominent resident communities of the village. The Nagar or Gram Khera is a religious precinct dedicated to the village deity and is the founding building of the village. The Nagar Khera of Pathreri is also called Dhobi Khera and it is believed that no 'dhobi' can reside in the village. It is near this Khera that the first settlement grew.
- A Shiv temple located outside the Abadi area is one of the oldest and the most prominent temple. Shivratri is the most important festival of the village and people from the neighboring villages also visit during this time.
- The Ambala Gazetteer 1923-24 records the history of this area to the late 18th century when the neighboring town of Shahzadpur was established as a stronghold by the Sikhs from Patiala. It is noted that the surrounding villages came under the jurisdiction of the Shahzadpur family. Some old havelis belonging to Sikh families existed near the central area i.e. near the Gram Khera. These families shifted to cities with time and the havelis were turned to ruins and are now nonexistent.
- According to oral history, a large number of Muslims migrated from Pathreri to Pakistan during partition. The migrants from Pakistan, who were allotted land in Pathreri village mostly sold their lands and moved to other towns and cities.



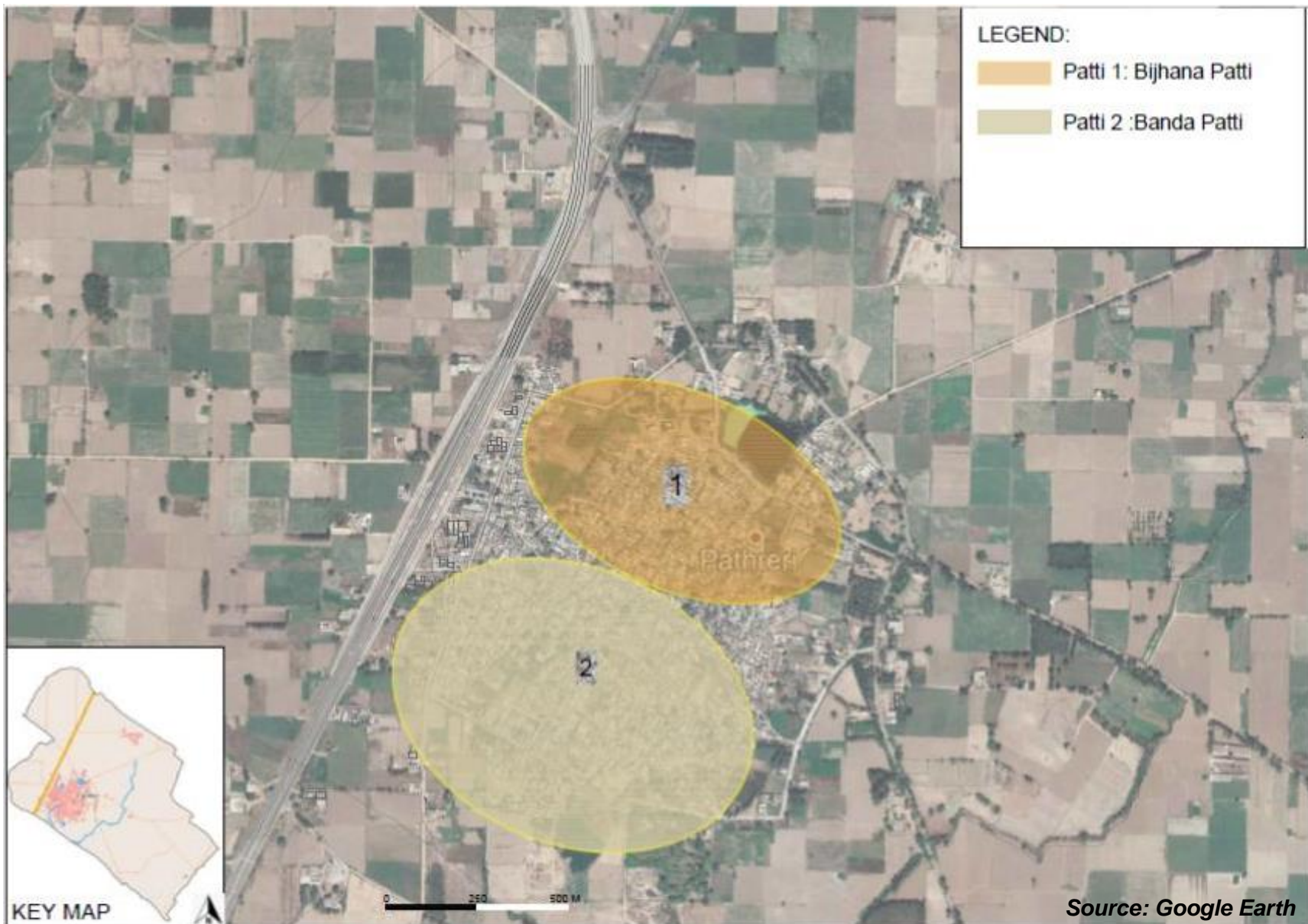




After an analysis of the primary resources, a pattern of growth has been conjectured:

- The first stage being the settling of the Rajput community and the Valmiki community.
- The second stage can be seen as the development of the central market when probably the business class started settling in the village.
- The third stage is the development of the present fabric.
- The fourth and the last stage is the identification of areas where new construction is being observed.





The present village *abadi* area is divided into two patti: Bijhana Patti and Banda Patti, a sketchy division as per the description provided on site by the residents has been conjectured in the above map.

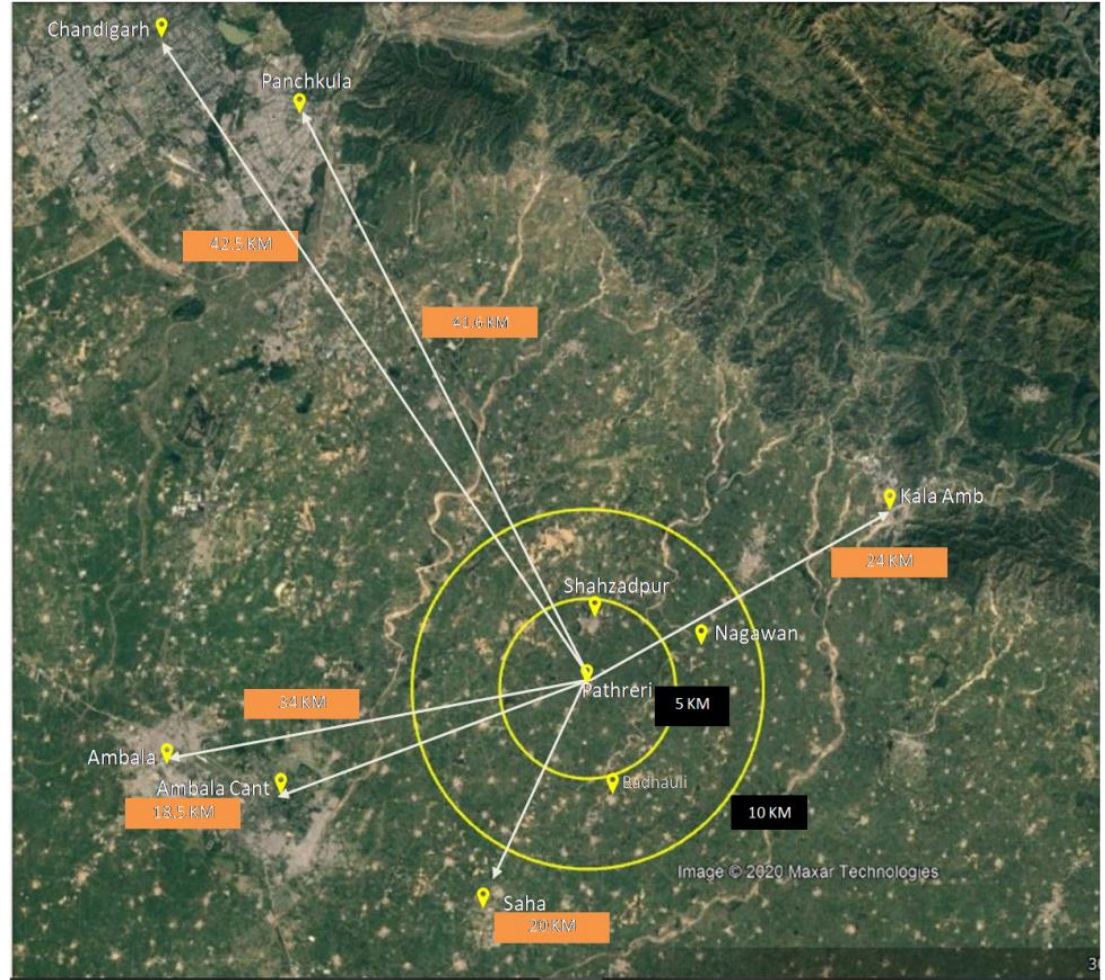




# SUSTENANCE

## 1. LIVELIHOOD

As per household survey the residents of the village commute to surrounding Gram Panchayats for their livelihood which includes owning and working on agricultural land in Nagawan and Shahzadpur, in the factories and industries located in Saha and Bhadauli in commercial establishments, shops and various government and private offices located in Ambala, Chandigarh and Panchkula, Kala Amb, Shahzadpur and Saha.



Source: Google Earth



## 2. EDUCATION

There are a number of government and private schools and colleges imparting education at undergraduate and postgraduate levels in close proximity (15 km radius approx.) to the GP. These institutes award degrees in the fields of science, arts and commerce. Simultaneously some students come to study in the government senior secondary school located in Pathreri.

### 5 km radius

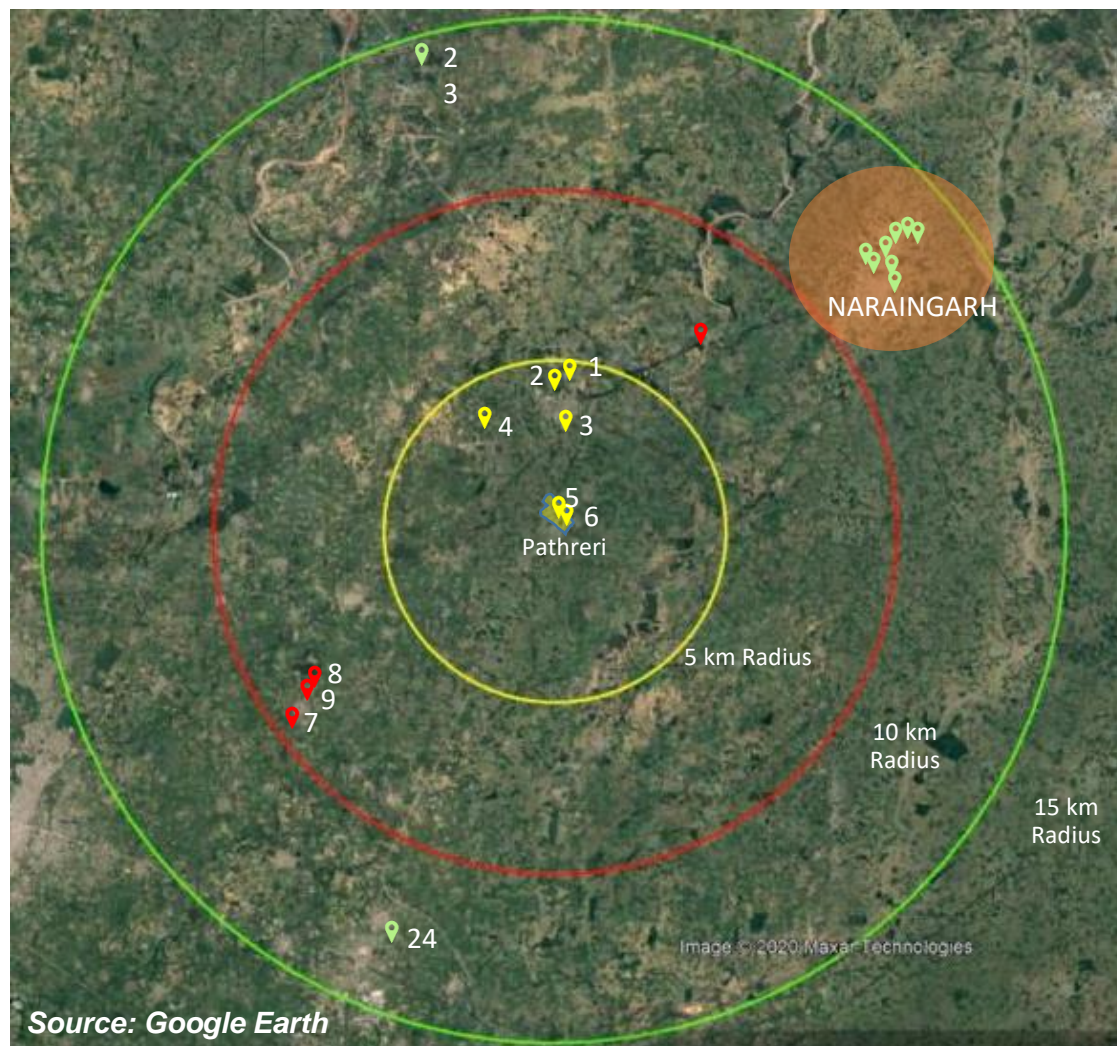
1. ICL Institute Of Management & Technology, Shahzadpur
2. M.R.S.D. Senior Secondary School, Shahzadpur
3. Maa Bhagwati Niketan Public School, Shahzadpur
4. ICL Group Of Colleges, Sountli
5. Saheed Naresh Kumar Sr. Sec. School, Pathreri
6. Girl's School, Pathereri

### 10 km radius

7. Bala Ji Public School , Pilkhani
8. Dasmesh Middle School, Pilkhani
9. Govt. Primary School Pilkhni
10. Govt Girl's College, Badagarh

### 15 km radius

11. N R M High School, Naraingarh
12. Narayangarh High School, Naraingarh
13. Kidzee, Naraingarh
14. Bali Model School, Naraingarh
15. D.A.V. Public School, Naraingarh
16. Government Senior Secondary School, Naraingarh
17. Smb Geeta School, Naraingarh
18. VSK International Play School, Naraingarh
19. Govt. College Naraingarh
20. Aarya Senior Sec School , Naraingarh
21. Govt PG College, Naraingarh
22. Sd High School, Naraingarh
23. JNV Panchkula, Mauli
24. Rajiv Gandhi Govt. College, Saha





### 3. HEALTHCARE

Residents of Pathreri depend on the town of Shahzadpur, Naraingarh and Saha for higher level of medical facilities including Emergency, OPDs and IPD services.

#### 📍 5km radius

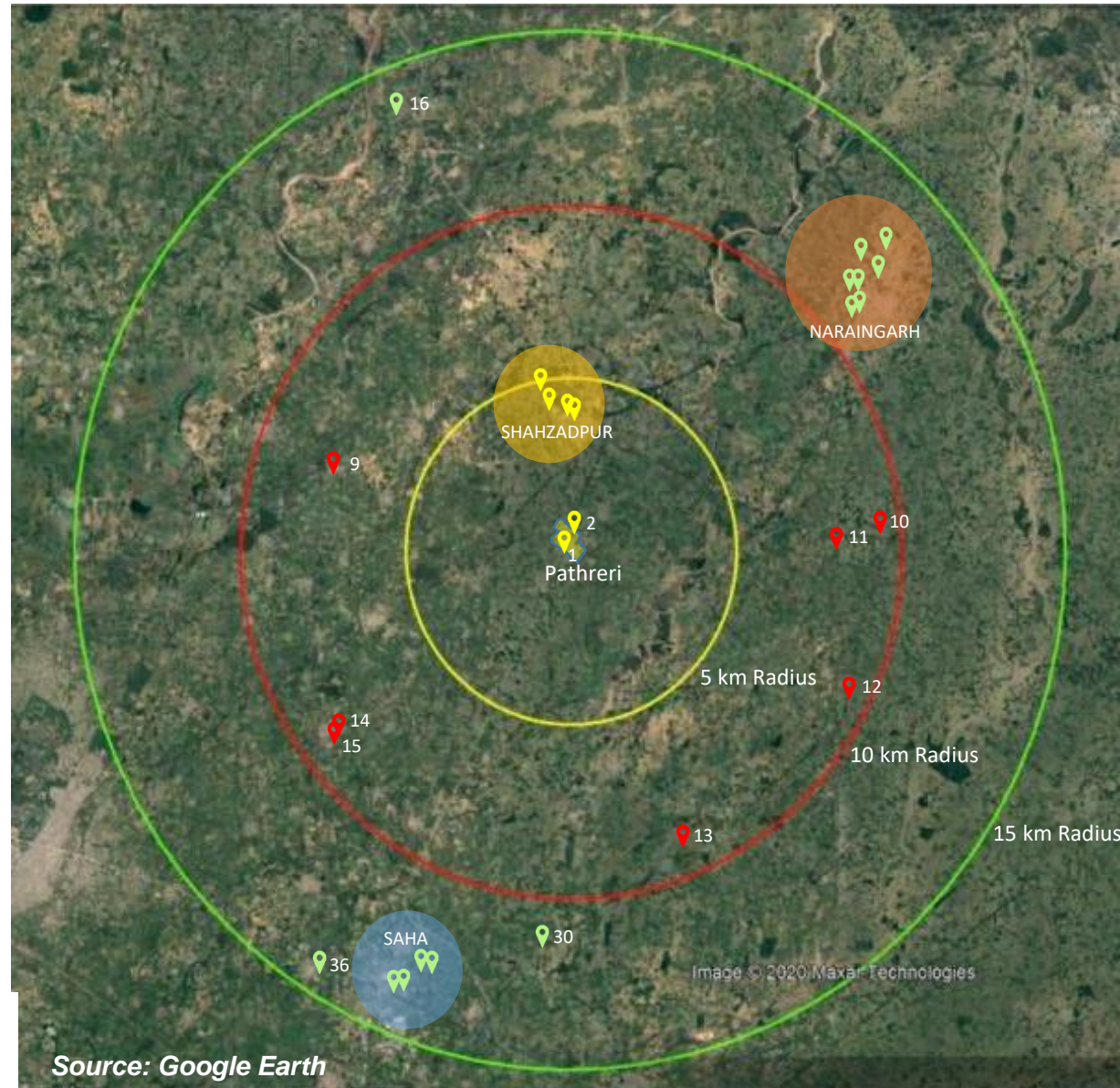
1. Primary Health care, Pathreri
2. Animal Hospital, Pathreri
3. Goyal Clinic, Shahzadpur
4. Dr. Sita Ram Clinic, Shahzadpur
5. Kanelwon Hospital, Shahzadbadpur
6. Gramin Healthcare, Shahzadpur
7. Ashish Clinic, Shahzadpur
8. Mittal Clinic, Shahzadpur

#### 📍 10 km radius

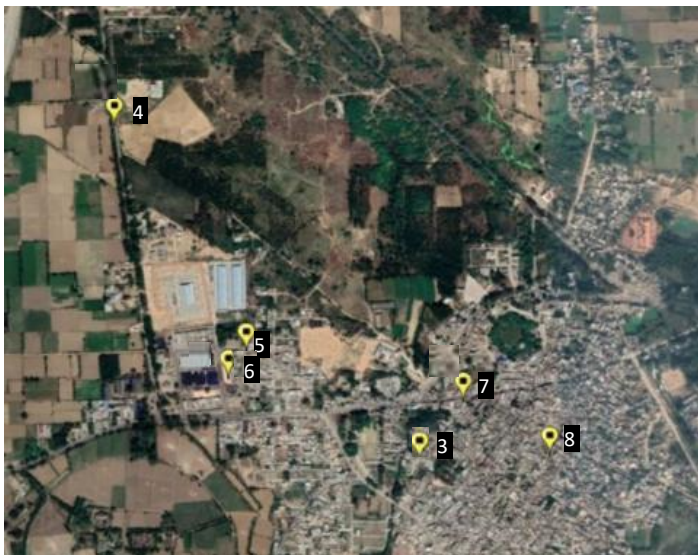
9. Doctor Mika Clinic, Patvi
10. Jiwan Jyoti Hospital, Okhal
11. Animal Hospital, Lakhnoura
12. Shri Balaji Medicose, Kalalty
13. Govt Subhealth Center, Kalalty
14. Govt Dispensary, Pilkhani
15. PHC Pilkhani, Pilkhani

#### 📍 15 km radius

16. Government Primary Health Care, Mauli
17. Orthocare Wellness Clinic, Naraingarh
18. Dr. Kapil's Multispeciality Dental Clinic, Naraingarh
19. Ananya Homeocare, Naraingarh
20. Tayal Hospital, Naraingarh
21. VSK Ultrasound And Healthcare Clinic, Naraingarh
22. Civil Hospital, Naraingarh
23. Sharda Hospital, Naraingarh
24. Hospital Vishwas Dental, Naraingarh
25. Hospital Ashirwaad, Naraingarh
26. Attry Clinic, Naraingarh
27. Dhiman Clinic, Naraingarh
28. Gulati Hospital, Naraingarh
29. Sanjay Hospital, Naraingarh
30. Govt Primary Health Centre Nahoni
31. Primary Health Centre, Saha
32. Govt Hospital, Saha
33. Triveni Hospital, Saha
34. Onkar Hospital, Saha
35. RK Hospital, Saha
36. UP Swasthya Kendra Tepla Health Care Facility, Tepla







### SHAHZADPUR

3. Goyal Clinic, Shahzadpur
4. Dr. Sita Ram Clinic, Shahzadpur
5. Kanelwon Hospital, Shahzadpur
6. Gramin Healthcare, Shahzadpur
7. Ashish Clinic, Shahzadpur
8. Mittal Clinic, Shahzadpur



### NARAINGARH

- |   |   |
|---|---|
| 17. Orthocare Wellness Clinic, Naraingarh                 | 24. Hospital Vishwas Dental, Naraingarh |
| 18. Dr. Kapil's Multispeciality Dental Clinic, Naraingarh | 25. Hospital Ashirwaad, Naraingarh      |
| 19. Ananya Homeocare, Naraingarh                          | 26. Attry Clinic, Naraingarh            |
| 20. Tayal Hospital, Naraingarh                            | 27. Dhiman Clinic, Naraingarh           |
| 21. VSK Ultrasound And Healthcare Clinic, Naraingarh      | 28. Gulati Hospital, Naraingarh         |
| 22. Civil Hospital, Naraingarh                            | 29. Sanjay Hospital, Naraingarh         |
| 23. Sharda Hospital, Naraingarh                           |   |



### SAHA

31. Primary Health Centre, Saha
32. Govt Hospital, Saha
33. Triveni Hospital, Saha
34. Onkar Hospital, Saha
35. RK Hospital, Saha



## 4. COMMERCE AND INDUSTRY

The agricultural produce grown in the GP is transported to the Anaj Mandi in Shahzadpur, factories and mills located in and around Shahzadpur, Saha and Naraingarh.

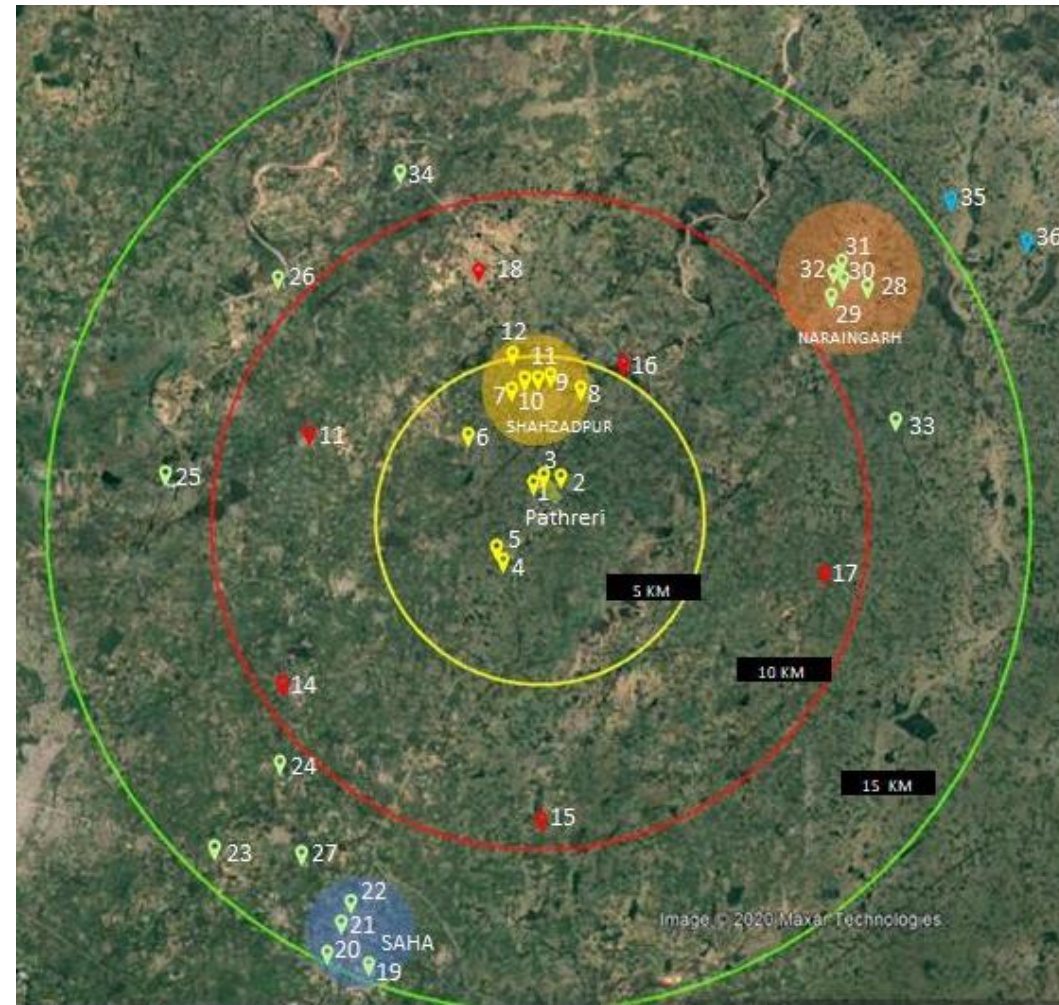
The shops in the village provides the residents with goods for daily needs but they are dependent on the above mentioned areas for additional consumer goods and materials like building materials, clothing, electrical equipment etc.

📍 5km radius

1. Power Grid Corporation Of India Limited, Pathreri- Electrical substation
2. Armaan Poultries, Pathreri- Poultry farm
3. Saw Mill, Pathreri- Saw mill
4. Venkys India Ltd., Dhamouli- Poultry farm
5. Dhamouli Petrol Pump, Dhamouli- Petrol Pump
6. Venkys India Ltd, Sountli- Poultry farm
7. Mittal Marble Industries, Shahzadpur-Marble supplier
8. Sameer Timber Traders, Shahzadpur-Lumber store
9. J K Industries, Shahzadpur- Metal fabricator
10. Anaj Mandi, Shahzadpur
11. Market, Shahzadpur
12. J K Industries, Shahzadpur- Steel and Iron Industry

📍 10 km radius

13. Pushp Industries Pvt. Ltd, Patvi- Manufacturer
14. Narindra Scientific Industries, Pilkhani- Manufacturer
15. Shree Krishna Industries, Gola- Manufacturer
16. Naraingarh Sugar Mills, Naraingarh- Sugar factory
17. Jai Maa Bala Sunderi Cattle Fodder Mill, Lakhnoura
18. Parbhat Bricks Industry, Shahzadpur- Brick Manufacturer



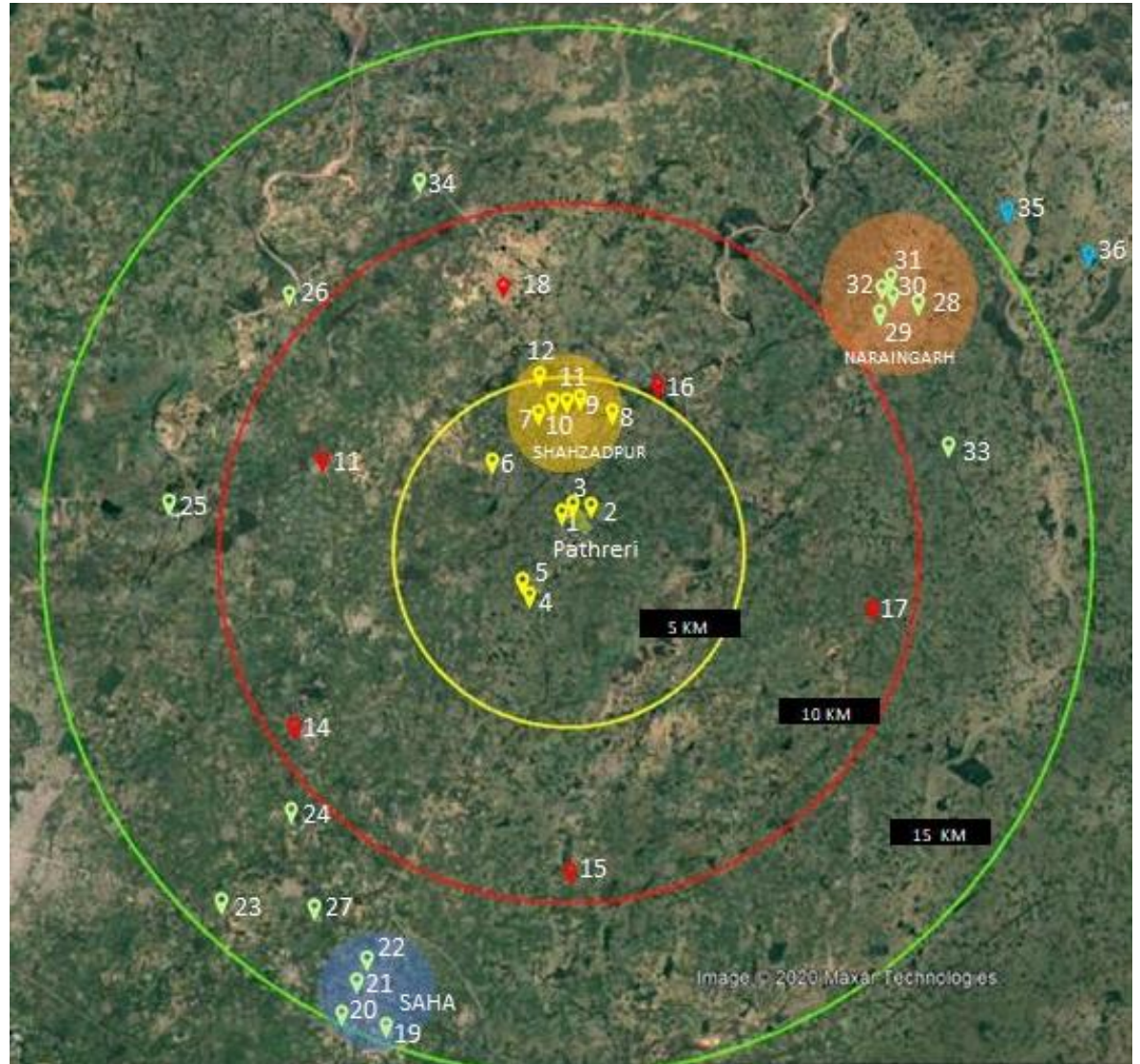


📍 15 km radius

- 19. Arco - Arihant Industries, Saha- Manufacturer
- 20. Premium Packaging Industries, Saha- Plastic Injection Molding Workshop
- 21. Kirpa Agro Industries, Saha- Agricultural service
- 22. Anaj Mandi, Saha
- 23. Amisan Industries, Kharu Khera- Foundry
- 24. Shree Nanak Agriculture Industries, Bheelpura- Industrial equipment supplier
- 25. Pragati Papers Industries Ltd, Handsera- Corporate office
- 26. Parijat Industries India Pvt Limited Unit 2, Khera Gani-Chemical plant
- 27. Garg poultry farms, Saha-Poultry farm
- 28. Ganga Ply And Decorators, Naraingarh- Plywood supplier
- 29. Harbans Industries, Naraingarh- Manufacturer
- 30. Market, Naraingarh
- 31. Anaj Mandi, Naraingarh
- 32. Market, Naraingarh
- 33. SCL Industries, Nagla- Floor mills
- 34. Gupta Lime Industry, Golpura-Manufacturer

📍 Beyond 15 km radius

- 35. Rathore Poultry Farm, Kala Amb-Poultry farm
- 36. Saini Poultry Farm, Kala Amb-Poultry farm

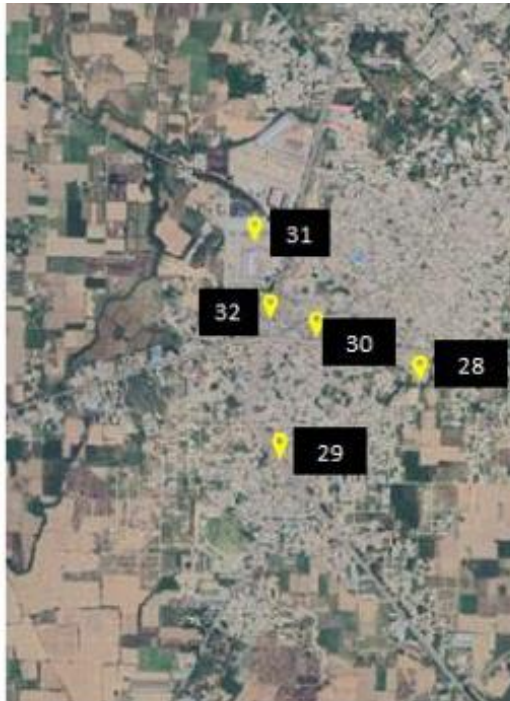






**SHAHZADPUR**

- 7. Mittal Marble Industries, Shahzadpur
- 8. Sameer Timber Traders, Shahzadpur
- 9. J K Industries, Shahzadpur
- 10. Anaj Mandi, Shahzadpur
- 11. Market, Shahzadpur



**NARAINGARH**

- 28. Ganga Ply And Decorators, Naraingarh
- 29. Harbans Industries, Naraingarh
- 30. Market, Naraingarh
- 31. Anaj Mandi, Naraingarh
- 32. Market, Naraingarh



**SAHA**

- 19. Arco - Arihant Industries, Saha
- 20. Premium Packaging Industries, Saha
- 21. Kirpa Agro Industries, Saha
- 22. Anaj Mandi, Saha



## 5. PHYSICAL INFRASTRUCTURE

### 5km radius

1. Bus Stop, Pathreri
2. SC, BC Crematory, Pathreri
3. Crematory, Pathreri
4. Community Hall, Pathreri
5. Post Office, Pathreri
6. Shahzadpur New Bus Stop
7. Sairam Gas Agency Indane, Shahzadpur
8. Post Office, Shahzadpur
9. Old Bus Stop, Shahzadpur
10. Police Station, Shahzadpur
11. Bhareri Bus Stand, Bhareri

### 15 km radius

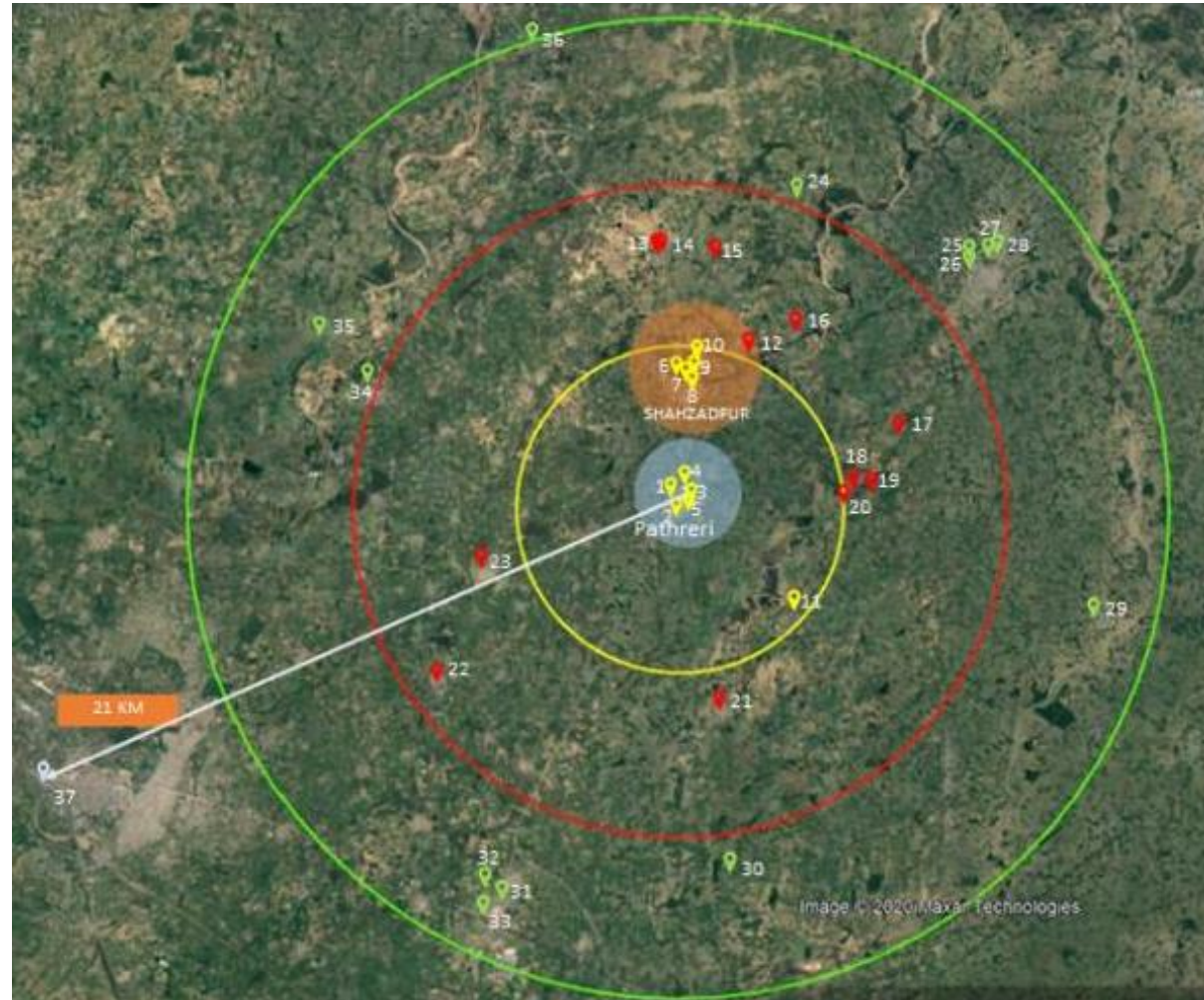
24. Community Hall Manakpur
25. Post Office, Naraingarh
26. Rashtriya Gas Sewa, Naraingarh
27. Fire Brigade, Naraingarh
28. Police Station, Naraingarh
29. Post Office, Gadauli
30. Post Office, Gokalgarh
31. Post Office, Saha
32. Narula Fire Protection Services, Saha
33. Police Station, Saha
34. Post Office, Jatwar
35. Shamshan Ghat, Samru
36. Police Station, Haripur

### 10 km radius

12. Banaundi Bus Stand, Banaundi
13. Bus Stand, Kakarmajra
14. Post Office, Kakarmajra
15. Shamshan Ghat Kalal Majri
16. Baragarh Bus Stand
17. Nagawan Bus Stand
18. Kurali Bus Stand
19. Bus Stand Momanpur
20. Bus Stand Momanpur
21. Post Office, Badhauri
22. Post Office, Pilikhni
23. Post Office, Korwa Khurd

### Beyond 15 km radius

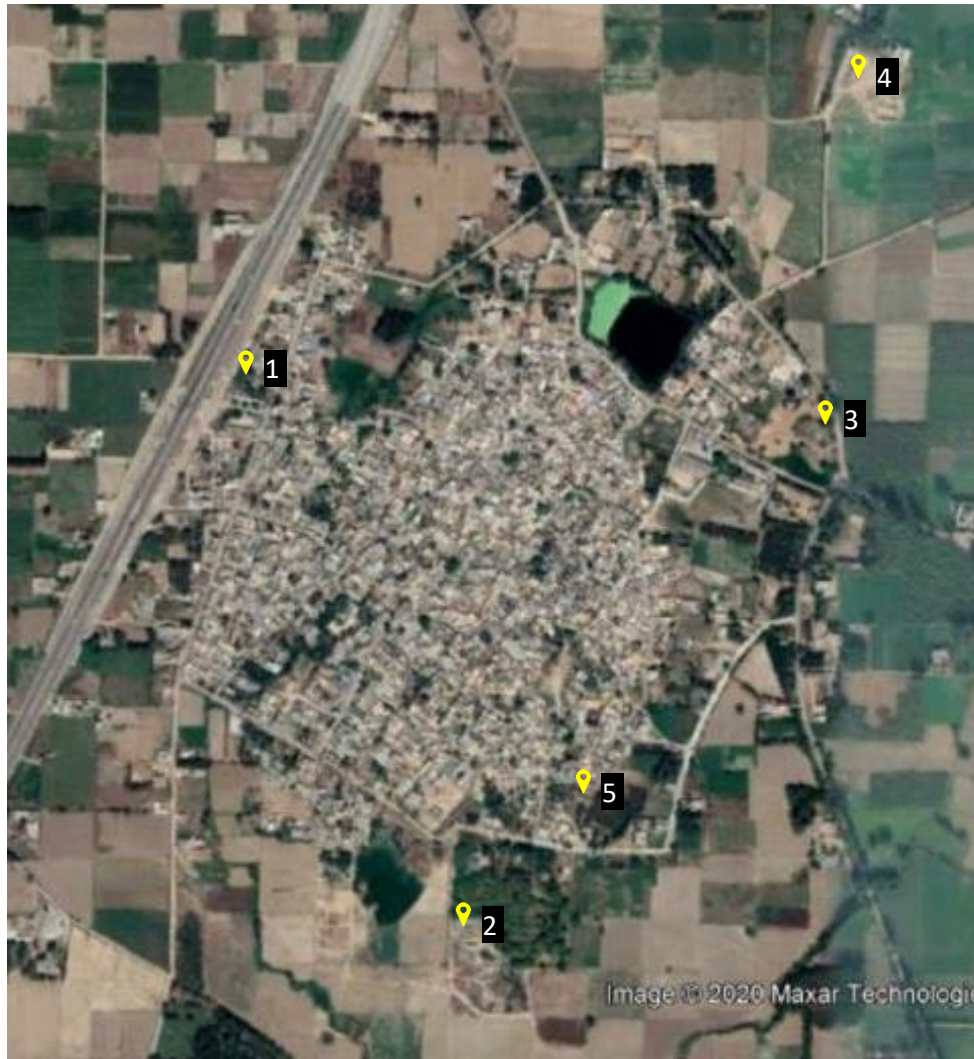
37. Ambala Cant Junction Railway Station





## PATHRERI

1. Bus Stop, Pathreri
2. Sc, Bc Crematory, Pathreri
3. Crematory, Pathreri
4. Community Hall, Pathreri
5. Post Office, Pathreri



## SHAHZADPUR

6. Shahzadpur New Bus Stop
7. Sairam Gas Agency Indane, Shahzadpur
8. Post Office, Shahzadpur
9. Old Bus Stop, Shahzadpur
10. Police Station, Shahzadpur
12. Banaundi Bus Stand, Banaundi





## 6. SOCIAL INFRASTRUCTURE

### 5 km radius

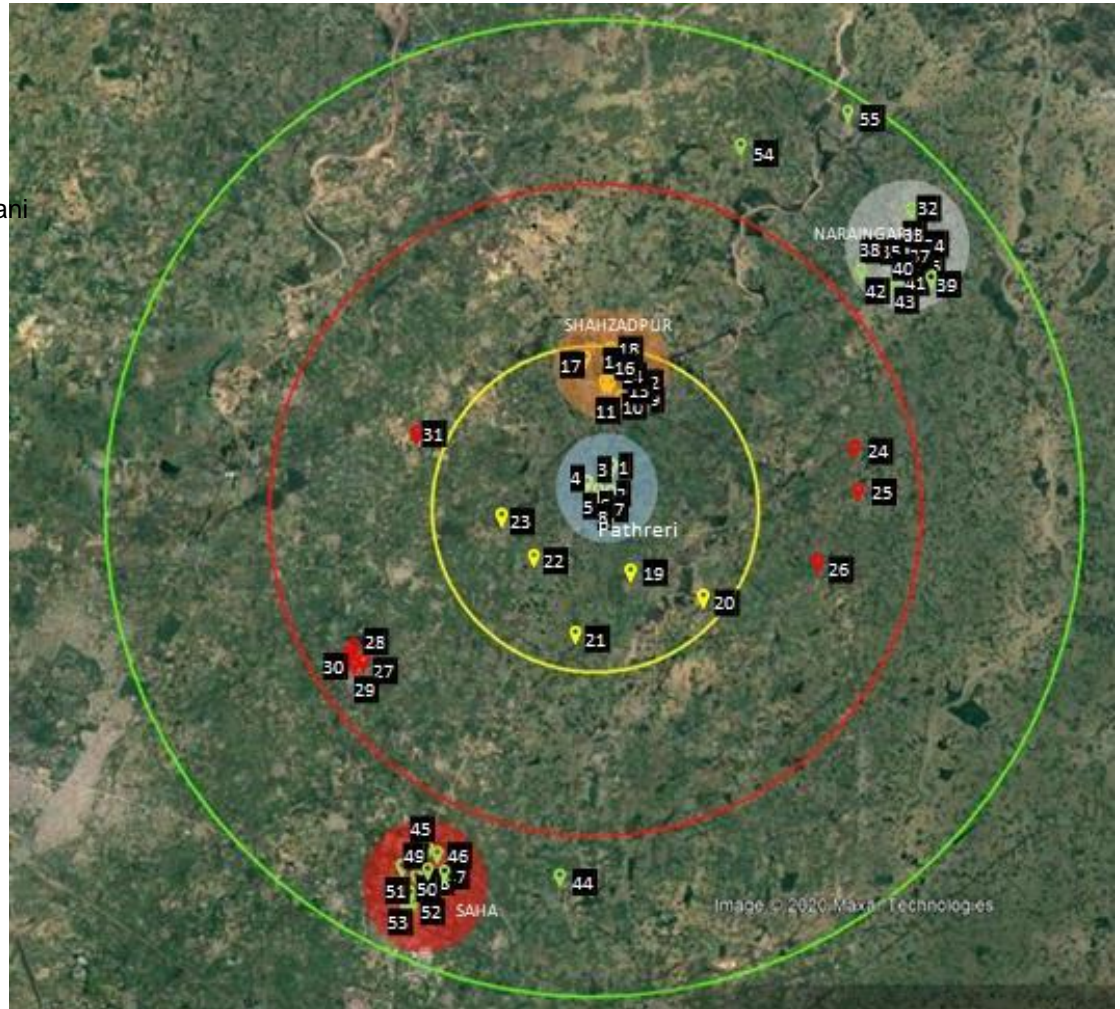
1. Shivalya Mandir, Pathreri
2. Hanuman Mandir, Pathreri
3. Radha Krishan Mandir, Pathreri
4. Deri Mandir, Pathreri
5. Ravidas Temple, Pathreri
6. Valmiki Temple, Pathreri
7. Naina Devi Mandir, Pathreri
8. Sant Ravidas Temple, Pathreri
9. Shri Guru Ravidass Ji Mandir, Shahzadpur
10. Shiv Mandir, Shahzadpur
11. Khera Mandir, Shahzadpur
12. Madina Masjid, Shahzadpur
13. Sai Mandir, Shahzadpur
14. Masjid Shahzadpur
15. Sai Mandir, Shahzadpur
16. Devi Bala Sunderi Mandir, Shahzadpur
17. Shiv Manidr, Shahzadpur
18. Shani Mandir, Shahzadpur
19. Gurudwara Shri Harpunji Sahib, Panjaton
20. Singh Sabha Gurudwara, Bhareri Kalan
21. Gurudwara Handi Khera Sahib, Dhamauli Majri
22. Gurudwara Sahib, Gharbuli
23. Vishkarma Temple, Gharouli

### 10 km radius

24. Gurudwara Sahib, Bakarpur
25. Nurani Masjid, Lakhnoura
26. Gurudwara Sahib, Kanjala
27. Shiv Mandir, Pilkhani
28. Shree Guru Ravidass Mandir Pilkhani
29. Masjid, Pilkhani
30. Guru Valmiki Mandir, Pilkhani
31. Gurudwara Sahib, Bepura

### 15 km radius

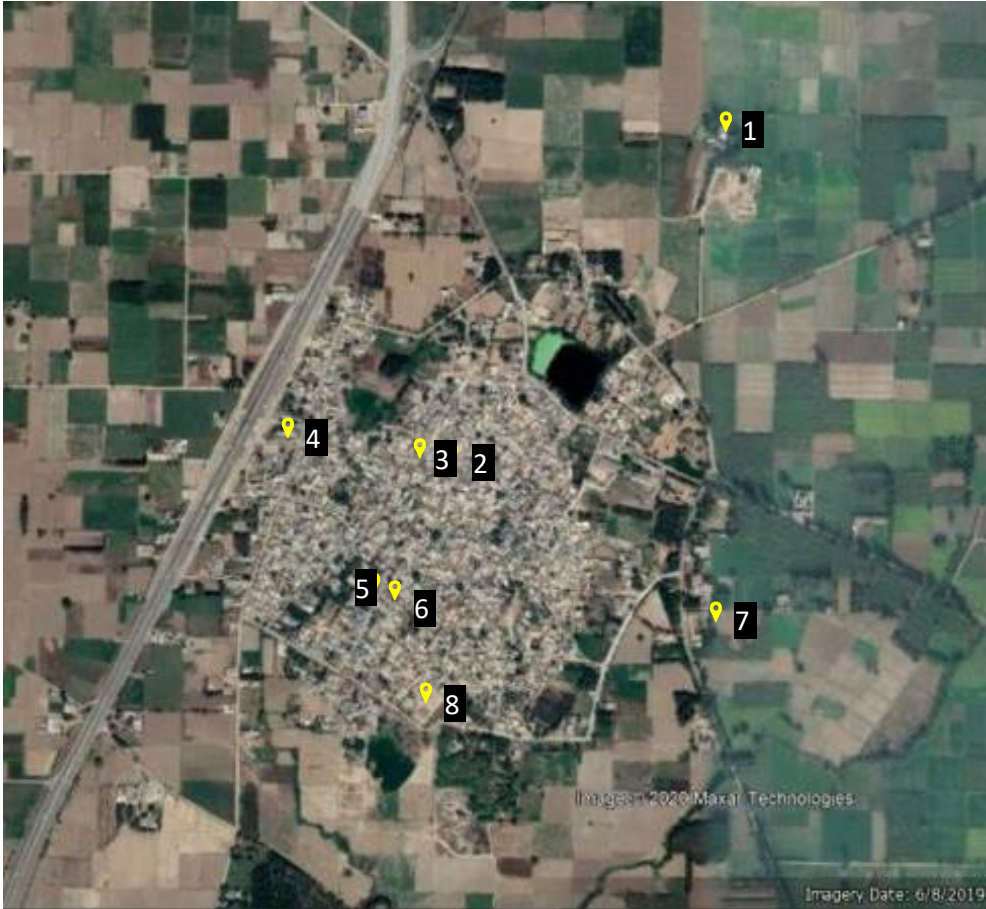
32. Shri Sai Baba Mandir, Naraingarh
33. Shri Krishna Mandir, Naraingarh
34. Harda Vala Mandir, Naraingarh
35. Hanuman Vatika, Naraingarh
36. Shiv Mandir, Naraingarh
37. Shri Raghunathji Mandir, Naraingarh
38. Gurudwara Ratgarh Sahib, Naraingarh
39. Shabir Shah Peer Rahim Tulaah Ali, Naraingarh
40. Jai Mata Mandir, Naraingarh
41. Vishwkarma Temple, Naraingarh
42. Gurudwara Sahib, Ahmadpur
43. Zuma Masjid, Naraingarh
44. Masjid, Nahoni
45. Saraswati Vidya Mandir Saha
46. Chotta Gurudwara Saha
47. Krishan Mandir, Saha
48. Gurdwara Yaadgaar Pir Buddhu Shah G, Saha
49. Guru Ravidas Mandir, Saha
50. Hanuman Temple, Saha
51. Gurudwara Singh Sabha Saha
52. Shiv Mandir, Saha
53. Vishwkarma Mandir, Saha
54. Masjid, Badi Kohri
55. Gurudwara Singh Sabha, Laha





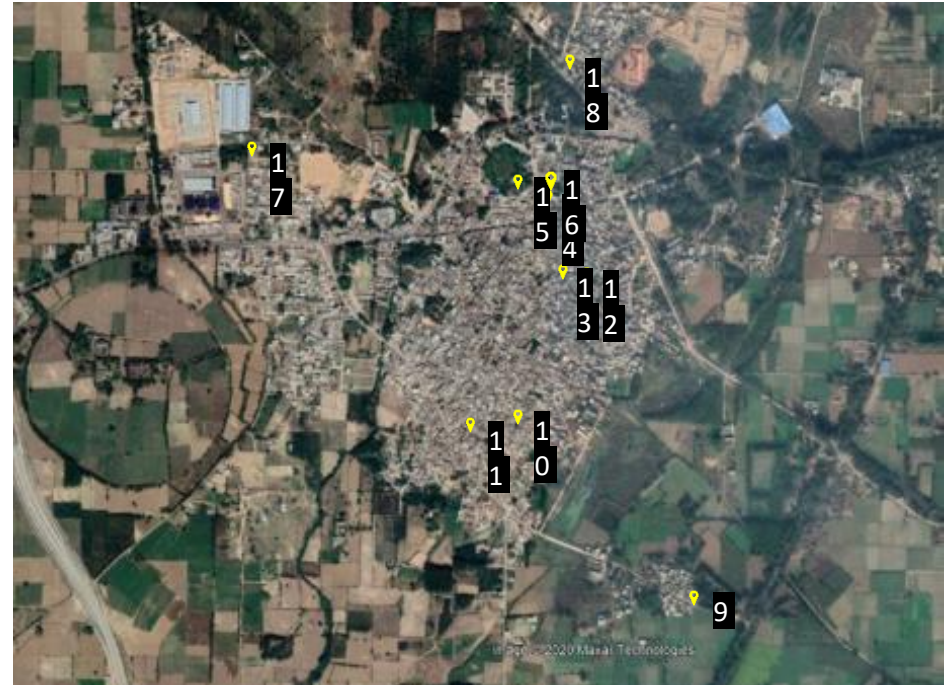
## PATHRERI

1. Shivalya Mandir, Pathreri
2. Hanuman Mandir, Pathreri
3. Radha Krishan Mandir, Pathreri
4. Deri Mandir, Pathreri
5. Ravidas Temple, Pathreri
6. Valmiki Temple, Pathreri
7. Naina Devi Mandir, Pathreri
8. Sant Ravidas Temple, Pathreri



## SHAHZADPUR

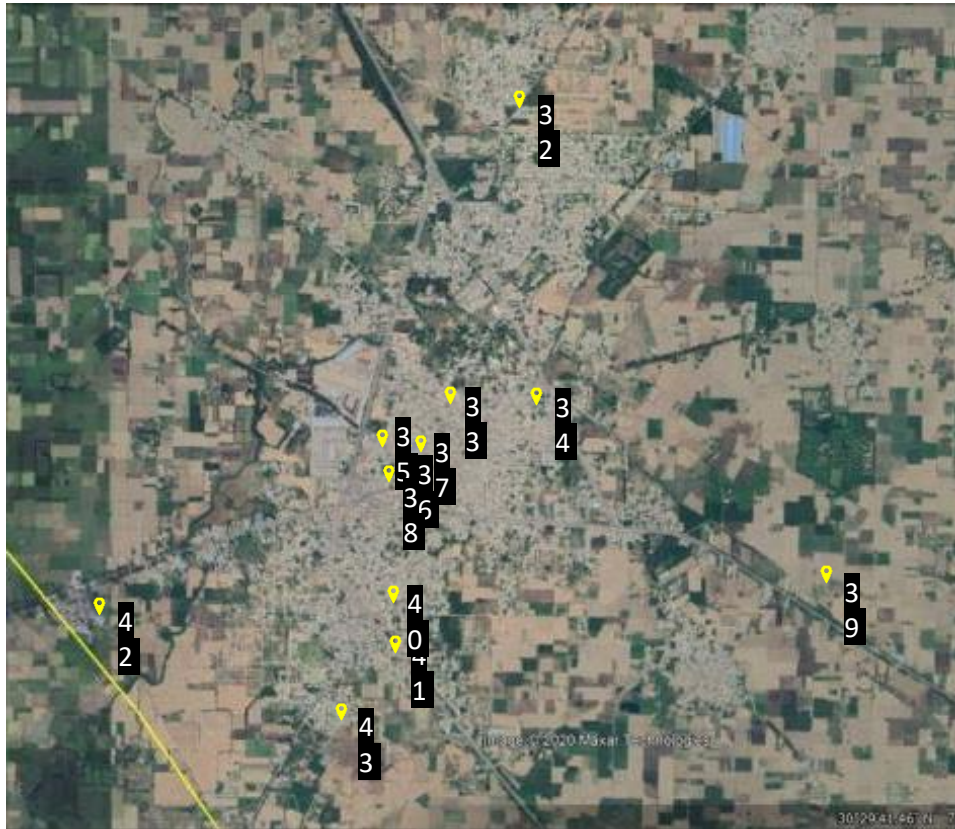
9. Shri Guru Ravidass Ji Mandir, Shahzadpur
10. Shiv Mandir, Shahzadpur
11. Khera Mandir, Shahzadpur
12. Madina Masjid, Shahzadpur
13. Sai Mandir, Shahzadpur
14. Masjid Shahzadpur
15. Sai Mandir, Shahzadpur
16. Devi Bala Sunderi Mandir, Shahzadpur
17. Shiv Mandir, Shahzadpur
18. Shani Mandir, Shahzadpur





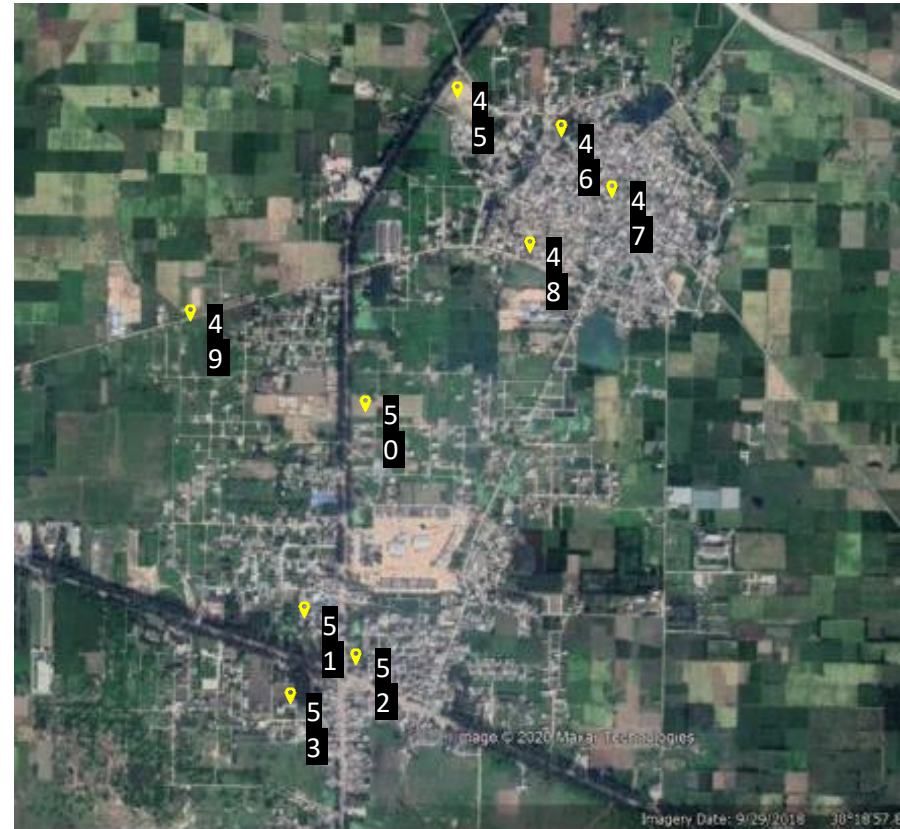
## NARAINGARH

32. Shri Sai Baba Mandir, Naraingarh
33. Shri Krishna Mandir, Naraingarh
34. Harda Vala Mandir, Naraingarh
35. Hanuman Vatika, Naraingarh
36. Shiv Mandir, Naraingarh
37. Shri Raghunathji Mandir, Naraingarh
38. Gurudwara Ratgarh Sahib, Naraingarh
39. Shabir Shah Peer Rahim Tulaah Ali, Naraingarh
40. Jai Mata Mandir, Naraingarh
41. Vishwkarma Temple, Naraingarh
42. Gurudwara Sahib, Ahmadpur
43. Zuma Masjid, Naraingarh



## SAHA

45. Saraswati Vidya Mandir Saha
46. Chotta Gurudwara Saha
47. Krishan Mandir, Saha
48. Gurdwara Yaadgaar Pir Buddhu Shah G , Saha
49. Guru Ravidas Mandir, Saha
50. Hanuman Temple, Saha
51. Gurudwara Singh Sabha Saha
52. Shiv Mandir, Saha
53. Vishwkarma Mandir, Saha





# CURRENT STATE ASSESSMENT AND FINDINGS

## 1. HOUSING

Housing Age  
Housing Condition  
Housing Height  
House Type  
Housing Material

## 2. DEMOGRAPHY

Population  
Literacy  
Digital literacy  
Workforce  
Occupation  
Caste Distribution

## 3. ECONOMY

Household economic condition  
Land values

## 4. PHYSICAL INFRASTRUCTURE

Water  
Sewage Disposal  
Solid waste disposal  
Surface drainage  
Sanitation  
Road Network  
Transport facilities

## 5. SOCIAL INFRASTRUCTURE

Community Spaces  
Education  
Health  
Religious buildings

## 6. COMMERCIAL INFRASTRUCTURE

Markets, Banks & ATM's

## 7. ENVIRONMENT



# CURRENT STATE ASSESSMENT AND FINDINGS

## HOUSING

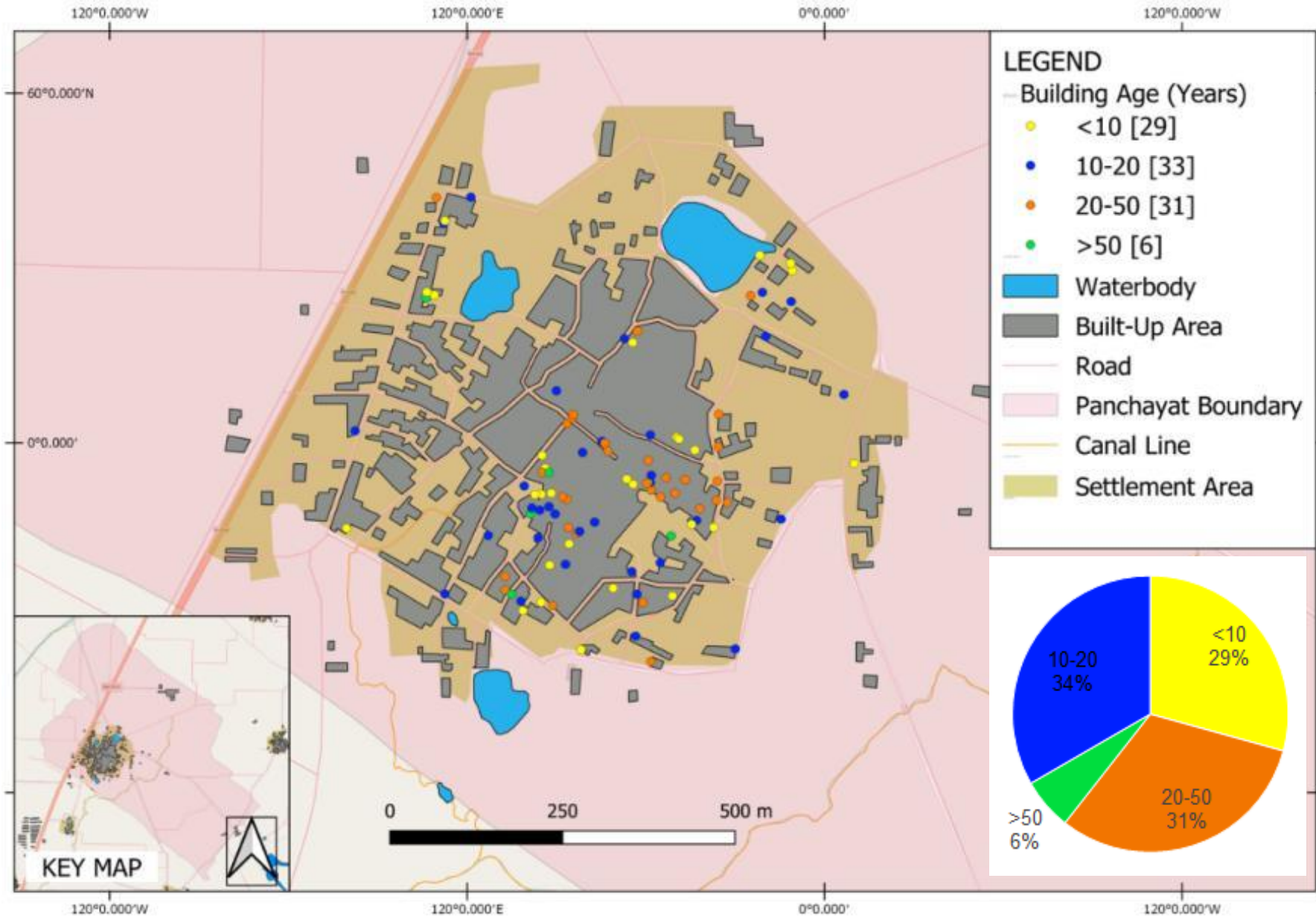
Housing Age  
Housing Condition  
Housing Height  
House Type  
Housing Material





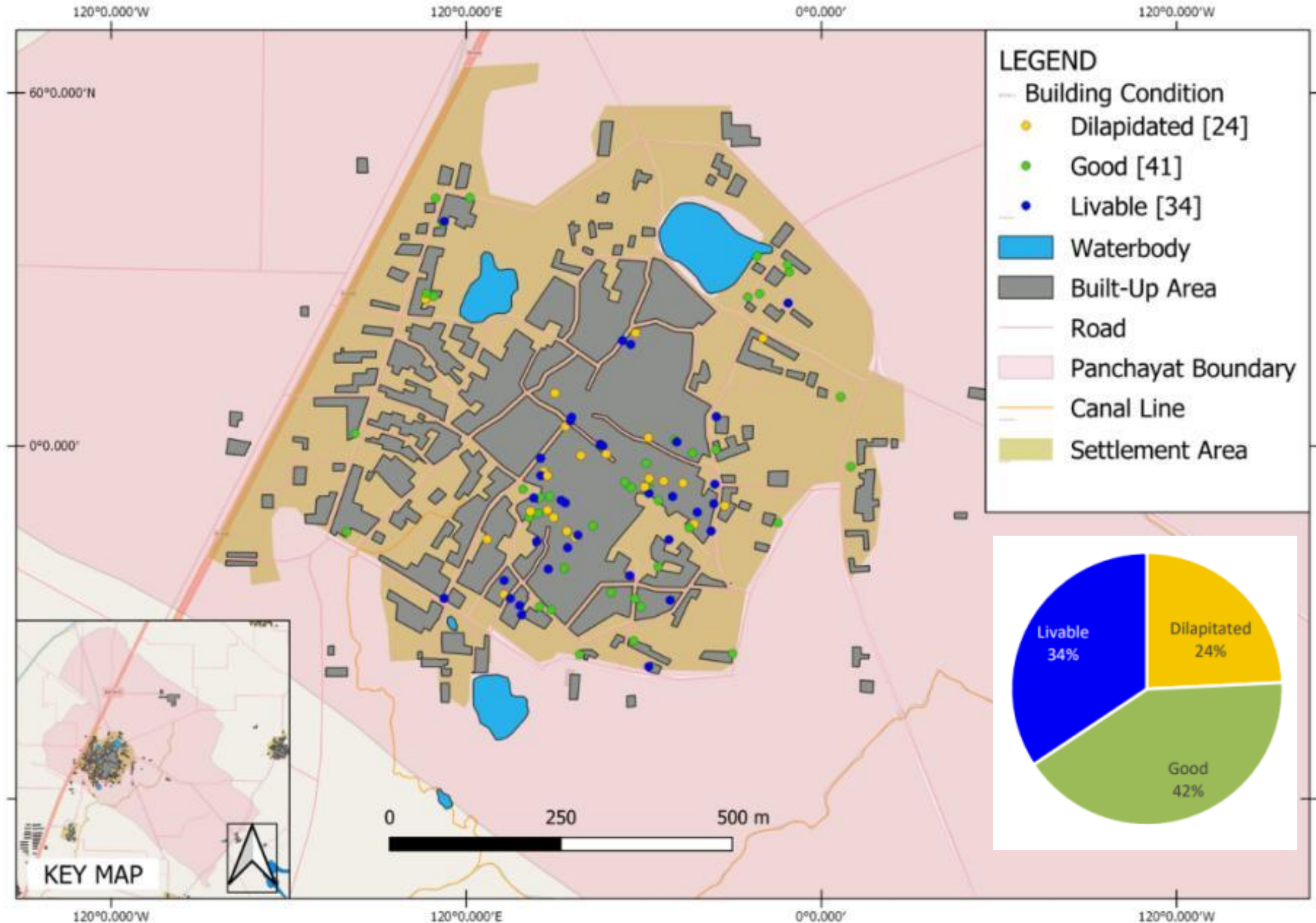
# HOUSING - AGE

(As per household survey)



# HOUSING - CONDITION

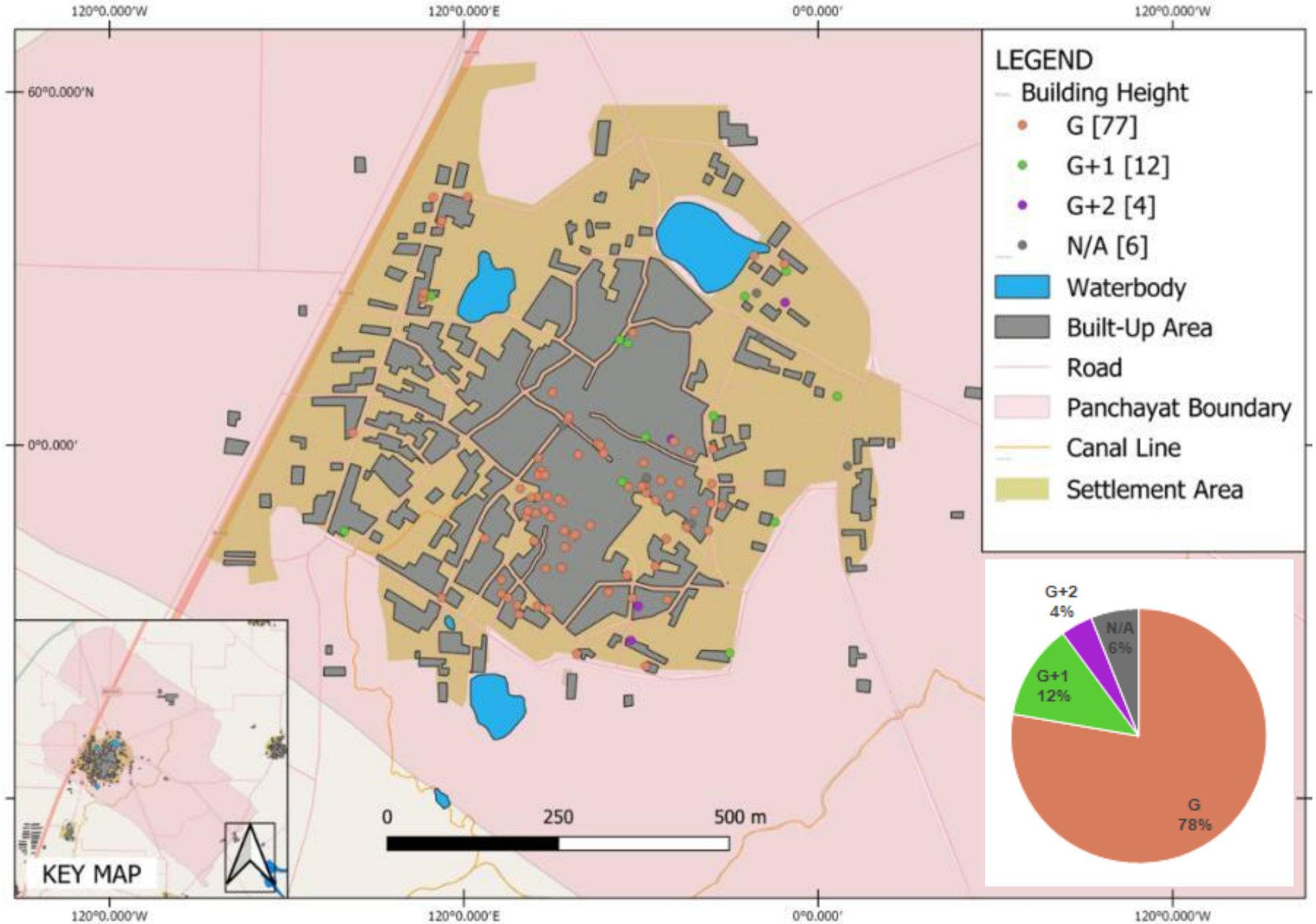
(As per household survey)





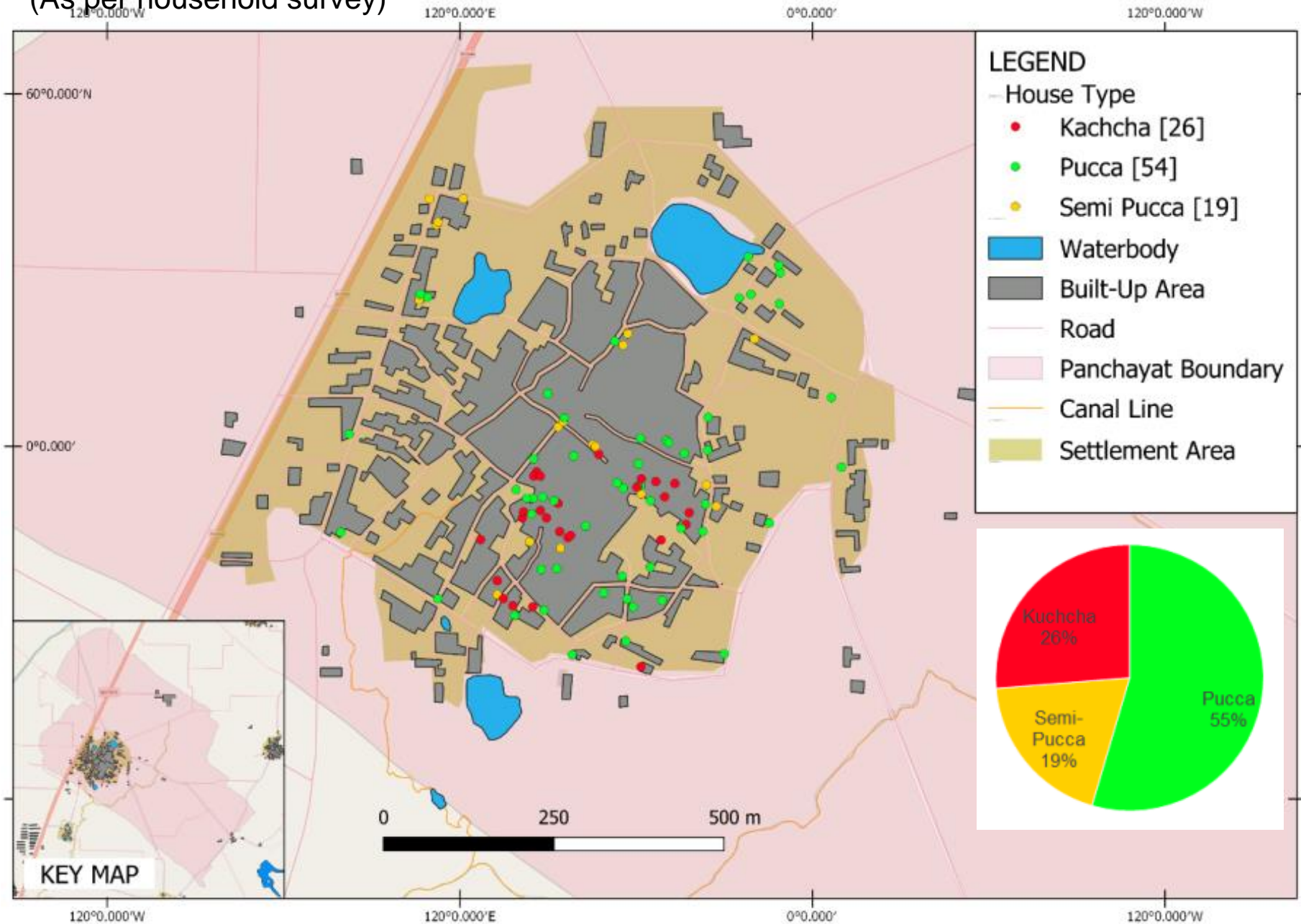
# HOUSING - HEIGHT

(As per household survey)



# HOUSING – HOUSE TYPE

(As per household survey)





# HOUSING - MATERIAL

(As per household survey)

ROOF MATERIAL	%age
Concrete	52
Mud	12
Thatch	11
Tin	4
Brick	5
Grass	1
Bamboo	1
Others	14



WALL MATERIAL	%age
Brick	92
Mud	8



# CURRENT STATE ASSESSMENT AND FINDINGS

## DEMOGRAPHY

Population  
Literacy  
Digital literacy  
Workforce  
Occupation  
Caste Distribution





## DEMOGRAPHY - POPULATION

### Total population

	Total	Male	Female
Census 2011	5645	2987	2658
Census 2001	4897	2576	2321
Census 1991	4383	2293	2090

### Population Percentage Increase

1991-2001 = 11.7%

2001-2011 = 15.27%

### Total population (0-6yrs age)

	Total Population (0-6yrs)	Male	Female
Census 2011	617	376	241
Census 2001	764	436	328
Census 1991	667	346	321



## DEMOGRAPHY - LITERACY

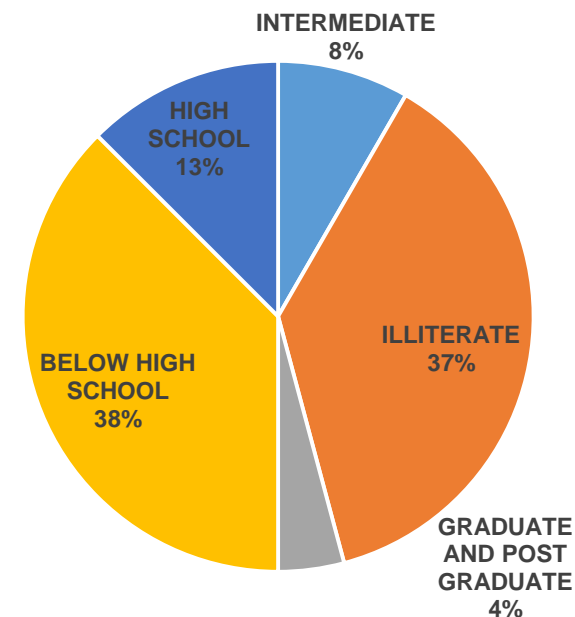
S.NO		CENSUS			
		2001		2011	
		Numbers	%age	Numbers	%age
1	Literates	2693	54.99	3909	69.2
a	Male	1597	61.9	2218	74.2
b	Female	1096	47.2	1691	63.8

### ANALYSIS:

There has been a 14.2% increase in the literacy rate of the village from 2001 to 2011

The male literacy rate (74.2%) is higher than the female literacy rate (63.8%). The gap between male and female literacy rate is of 10.4 points during 2011 which has decreased from 14.7 in 2001.

The household survey shows similar gap in the male and female literacy. Further analysis shows that only 63% of the female respondents are literates out of which the majority has a qualification of only Below High School.

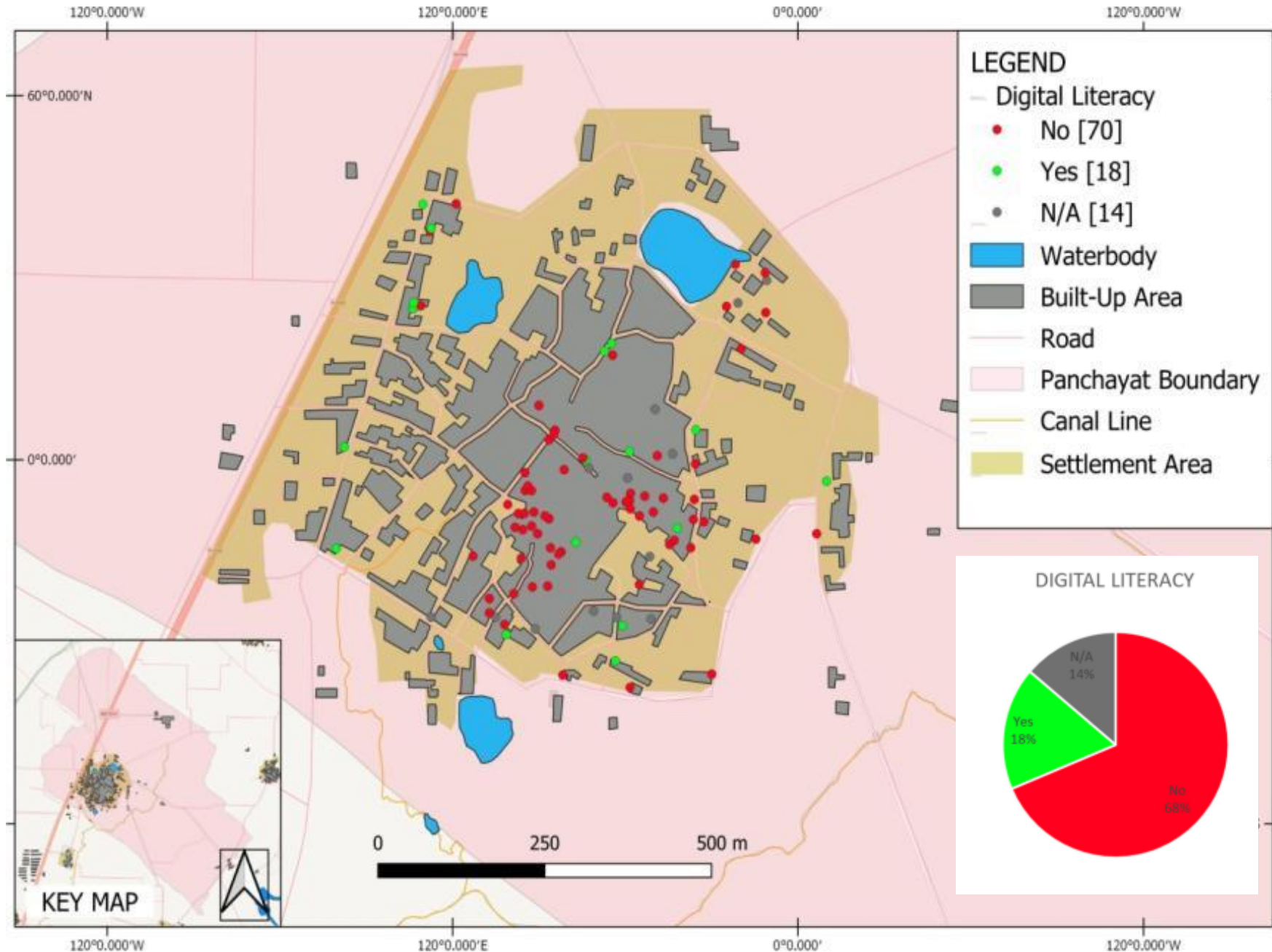


*Female literacy categorization as per household survey*



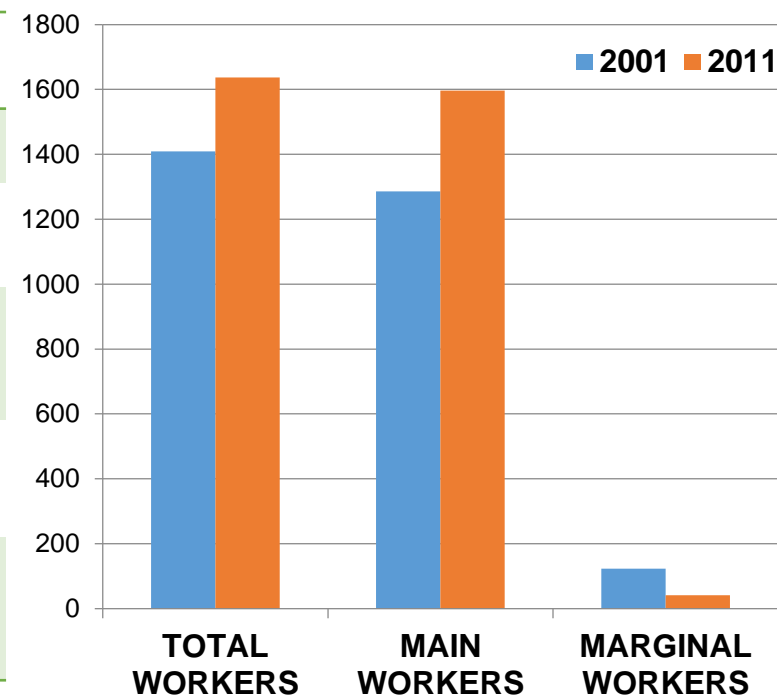


# DEMOGRAPHY – DIGITAL LITERACY



## DEMOGRAPHY – WORKFORCE

S.No	PARAMETER	CENSUS			
		2001		2011	
		Nos.	%age	Nos.	%age
1	Total workers	1409	28.7	1637	28.9
a	Main workers	1286	91.2	1596	97.4
b	Marginal workers	123	8.72	41	2.5



**Main worker:** A person who has worked for major part of the reference period (i.e. six months or more during the last one year preceding the date of enumeration) in any economically productive activity is termed as 'Main worker'.

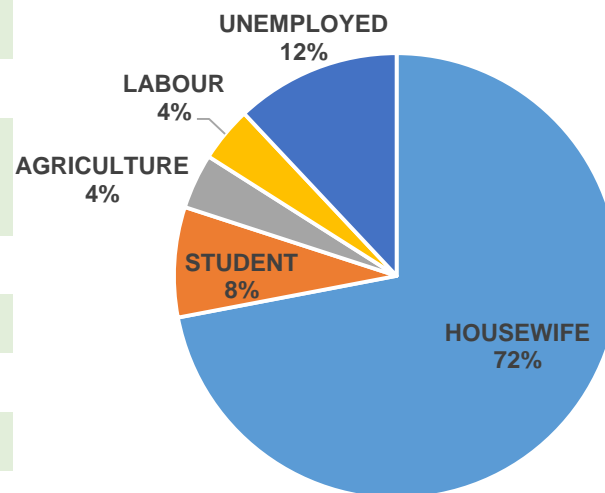
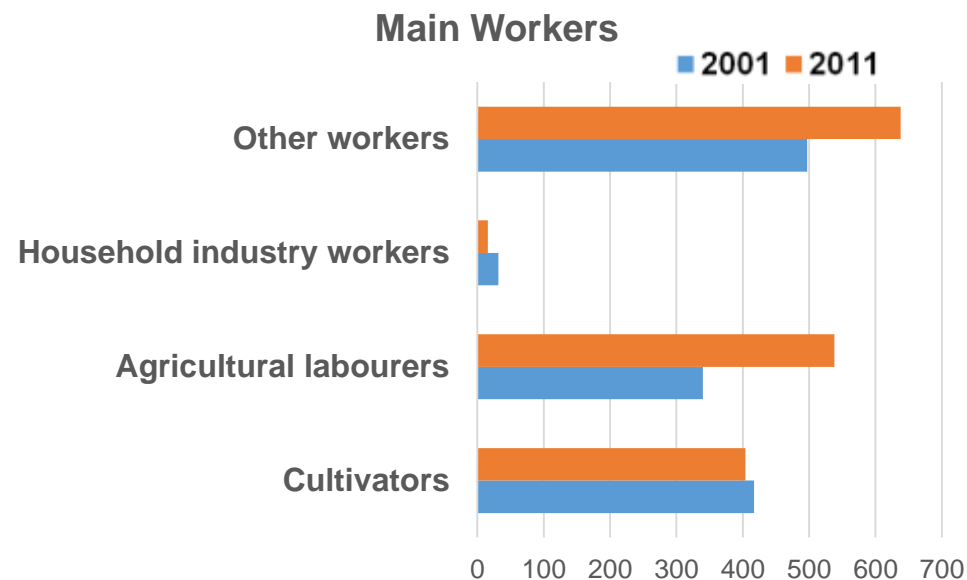
**Marginal worker:** A person who worked for 3 months or less but less than six months of the reference period (i.e. in the last one year preceding the date of enumeration) in any economic activity is termed as 'Marginal worker'.





## DEMOGRAPHY – OCCUPATION

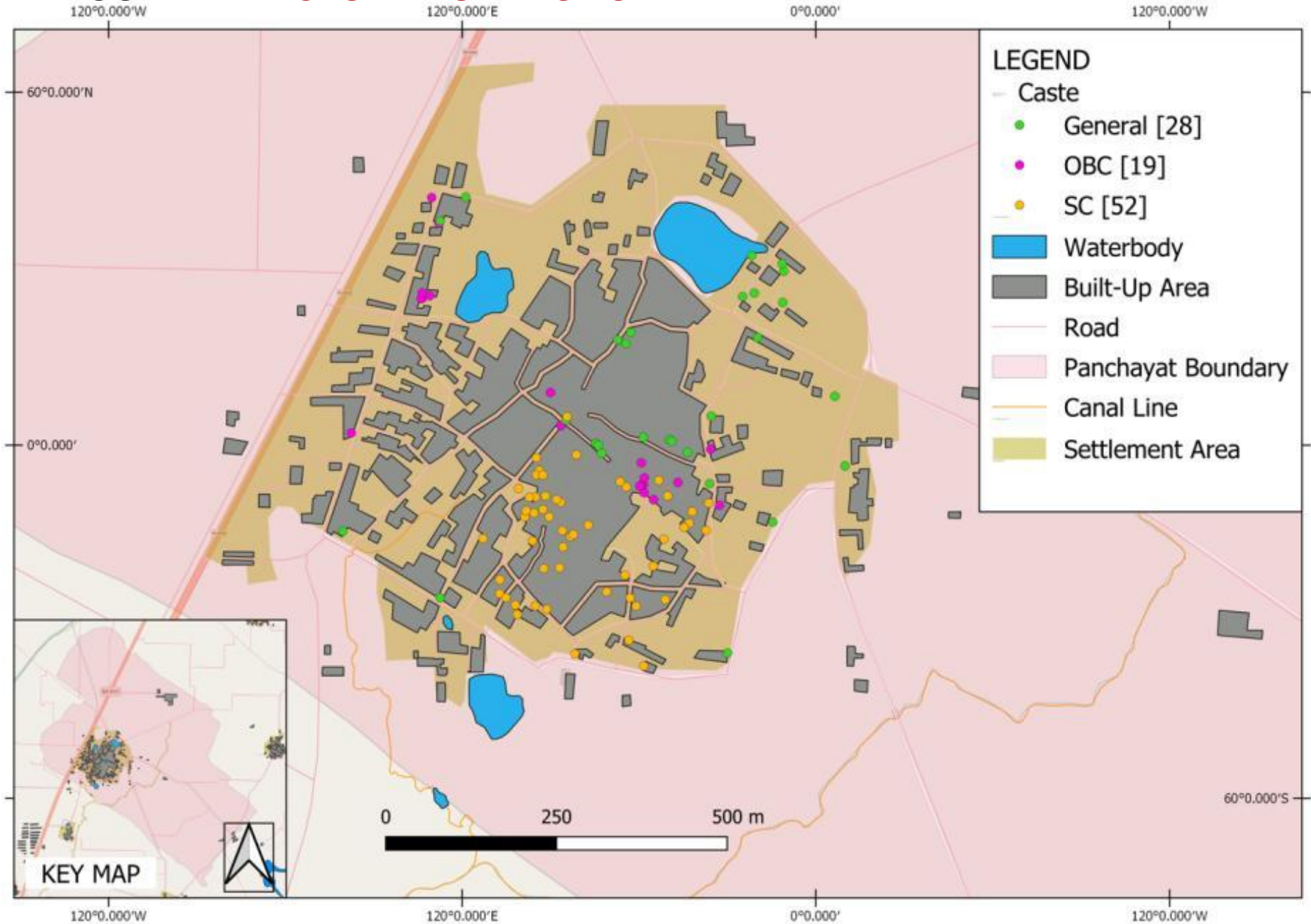
S.No	PARAMETER	CENSUS	
		2001	2011
<b>1</b>	<b>Main workers</b>	<b>1286</b>	<b>1596</b>
<b>a</b>	Male	1212	1485
<b>b</b>	Female	74	111
<b>1.1</b>	<b>Cultivators</b>	<b>417</b>	<b>404</b>
<b>a</b>	Male	405	394
<b>b</b>	Female	12	10
<b>1.2</b>	<b>Agricultural labourers</b>	<b>340</b>	<b>538</b>
<b>a</b>	Male	322	500
<b>b</b>	female	18	38
<b>1.3</b>	<b>Household industry workers</b>	<b>32</b>	<b>16</b>
<b>a</b>	Male	26	14
<b>b</b>	Female	6	2
<b>1.4</b>	<b>Other workers</b>	<b>497</b>	<b>638</b>
<b>a</b>	Male	459	577
<b>b</b>	Female	38	61



*Female occupation categorization as per household survey. Only 8% of the women respondents are generating income.*

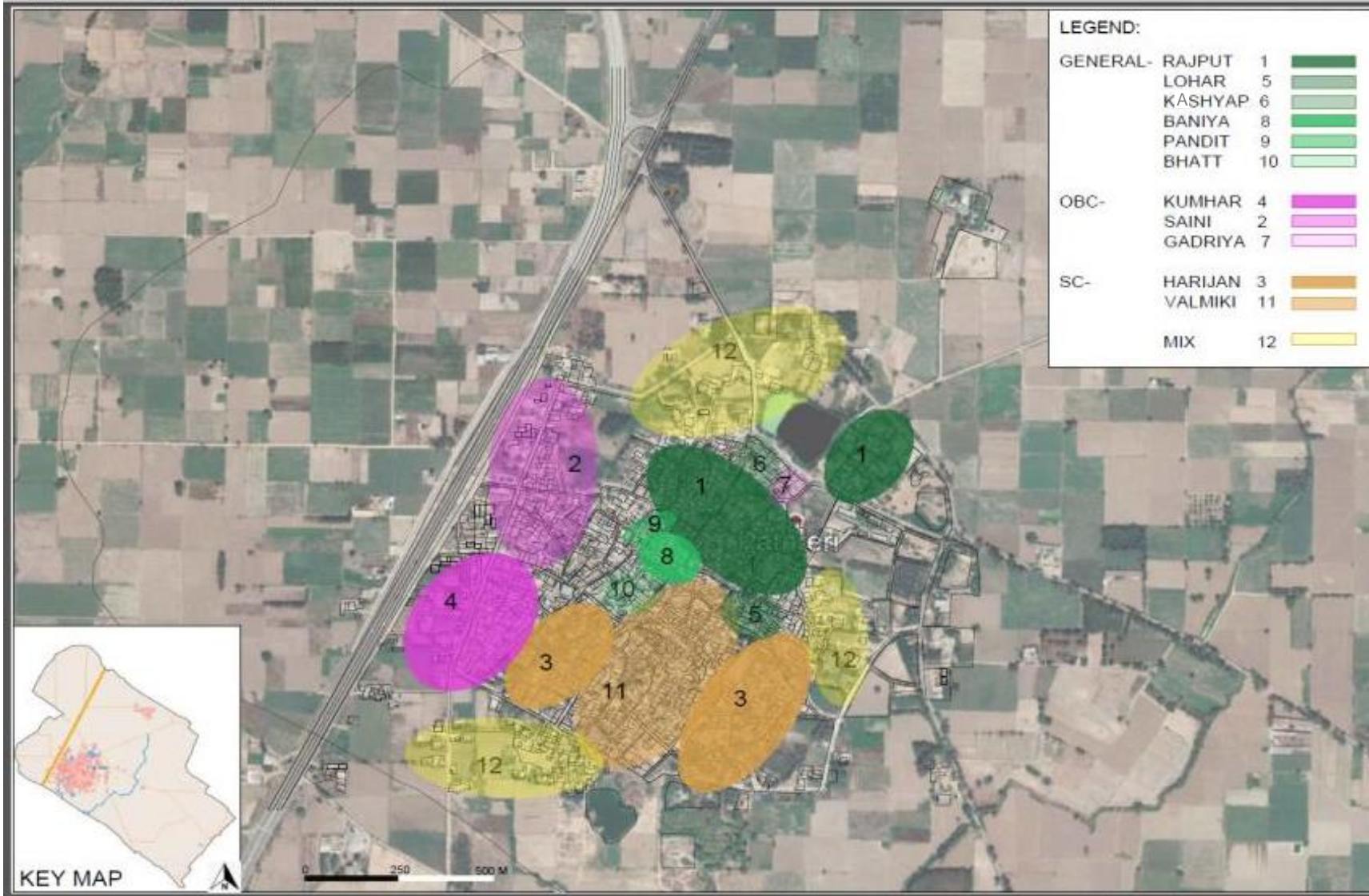


# DEMOGRAPHY – CASTE DISTRIBUTION





# DEMOGRAPHY – CASTE DISTRIBUTION



*Note: The mapping of neighbourhoods based on caste are from the data collection on site. It is not an extensive list for the village.*



# CURRENT STATE ASSESSMENT AND FINDINGS

## **ECONOMY**

Household Economic Condition  
Land Values





# ECONOMY – HOUSEHOLD ECONOMIC CONDITION

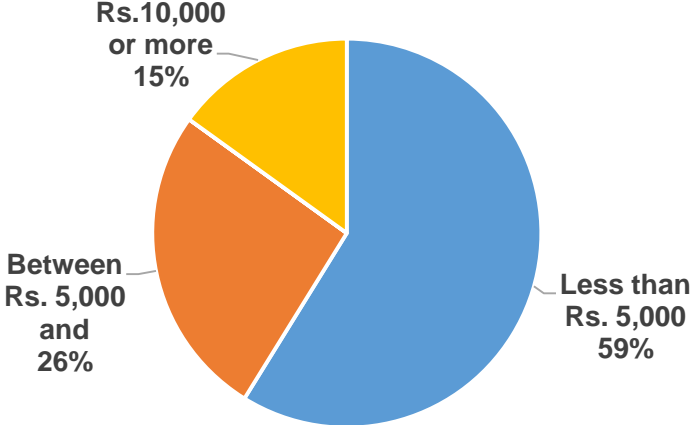
The socio economic caste census 2011 provides us data of households with highest earning member income as shown in the table below. This states that almost 59% of the households are earning less than Rs.5000.

## Households with highest earning member income as

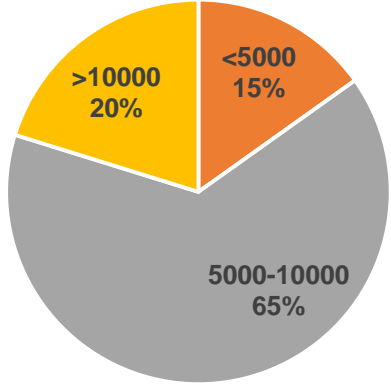
<b>Less than Rs.5000</b>	590
<b>Between Rs.5000 and Rs.10,000</b>	262
<b>Rs.10,000 or more</b>	151

Source: Socio Economic Caste Census (SECC report)

The household survey gives us statistics of monthly expenditure of families, where 65% of the households have expenditure between Rs.5000-10000 as shown in the pie chart.



Source: Socio Economic Caste Census (SECC report)



Source: Household Survey



## ECONOMY – LAND VALUES

The land values for the village near the highway are around 45-50L/Killa and the rest areas are 35-40L/Killa.

The land values near the highway are higher than the village Abadi area.



*Source: Household Survey*





# CURRENT STATE ASSESSMENT AND FINDINGS

## **PHYSICAL INFRASTRUCTURE**

Water

Sewage Disposal

Solid waste disposal

Surface drainage

Sanitation

Road Network

Transport facilities



# INFRASTRUCTURE WITHIN THE GP – WATER

**Water Availability** – The primary sources of water in the GP is groundwater, which is accessed through tube wells. The 'Abadi' area is serviced by 4 tubewells. The village pond has been contaminated by sewage and solid waste and therefore cannot be used as a source of water. There are also some handpumps in the village.

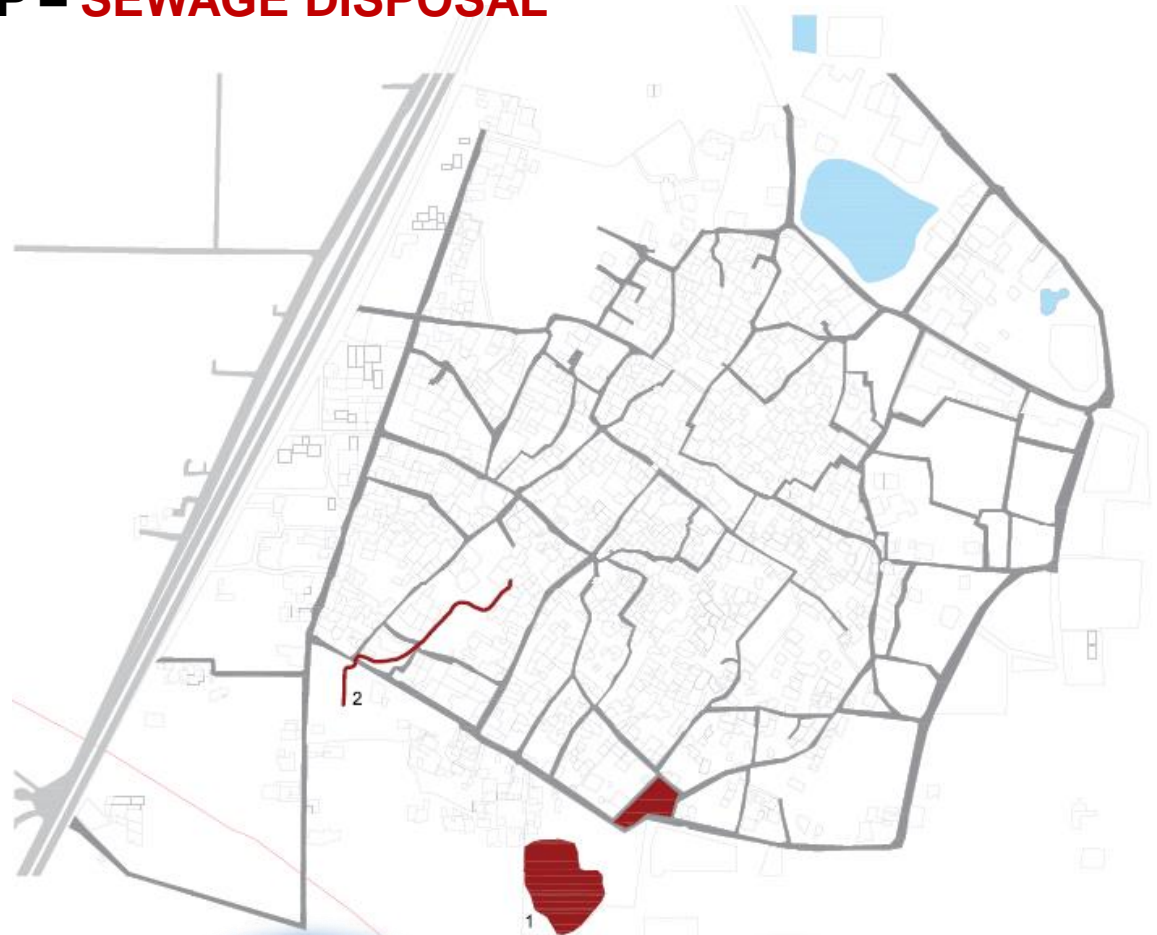
**Water Tanks** - 3 of the tubewells are connected to underground tanks and one is connected to an overhead tank. The water is supplied to the households from these tanks.

**Water Distribution Network**– The households in the village have access to the tubewell water via public or private taps. Most of the houses having private taps store the water in overhead tanks. As per the household survey, most of the public taps are in an area with high density and there is a demand for an increase in their numbers.



## INFRASTRUCTURE WITHIN THE GP – SEWAGE DISPOSAL

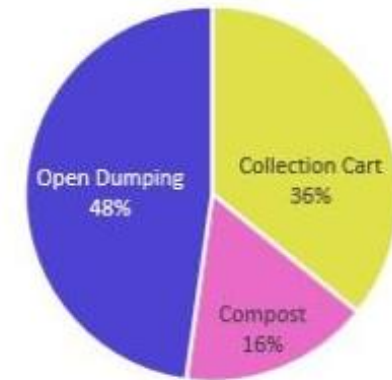
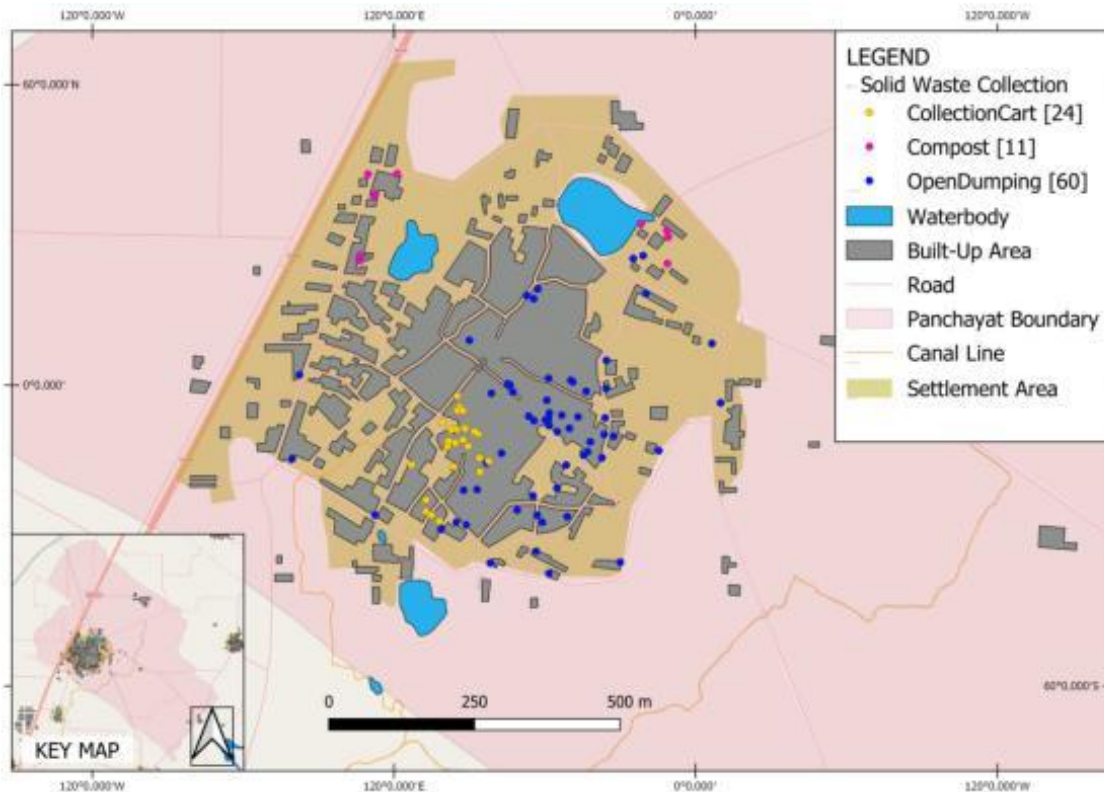
- As per the household survey, the village does not have a system for handling of sewage or solid waste.
- The current sewage disposal comprises of an unregulated system in which household sewage flows into open street drains.
- These drains also carry rain water.
- They either turn open into the village pond or feed into a 'nala' which drains into the open areas/fields on the southern side of the village. The village pond has a layer of algae growing on it.
- This has resulted in odour as well as contamination of soil and ground water.





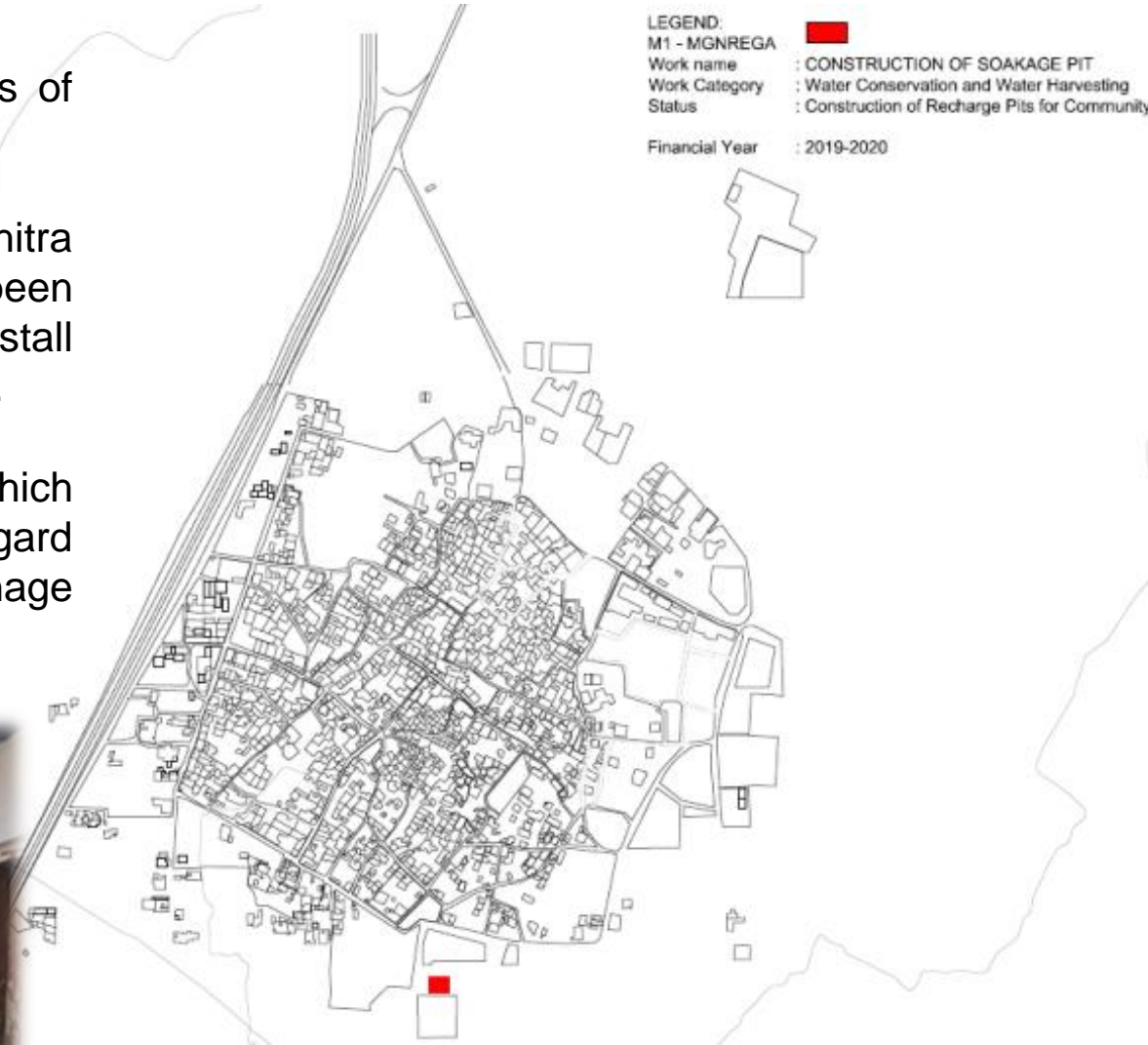
# INFRASTRUCTURE WITHIN THE GP – **SOLID WASTE DISPOSAL**

- Solid waste management system is also unregulated to a large extent.
- As per the household survey, a portion of the village is serviced by a collection cart whereas residents of the other areas rely on open dumping.
- The physical site survey showed that most of untreated solid waste was dumped at the edge of the village, although some entries in the household survey have denoted that they are practicing composting.



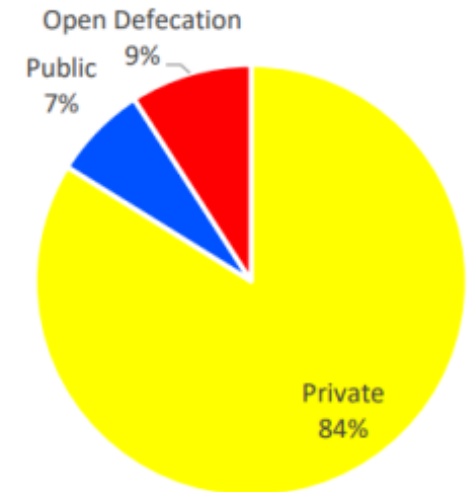
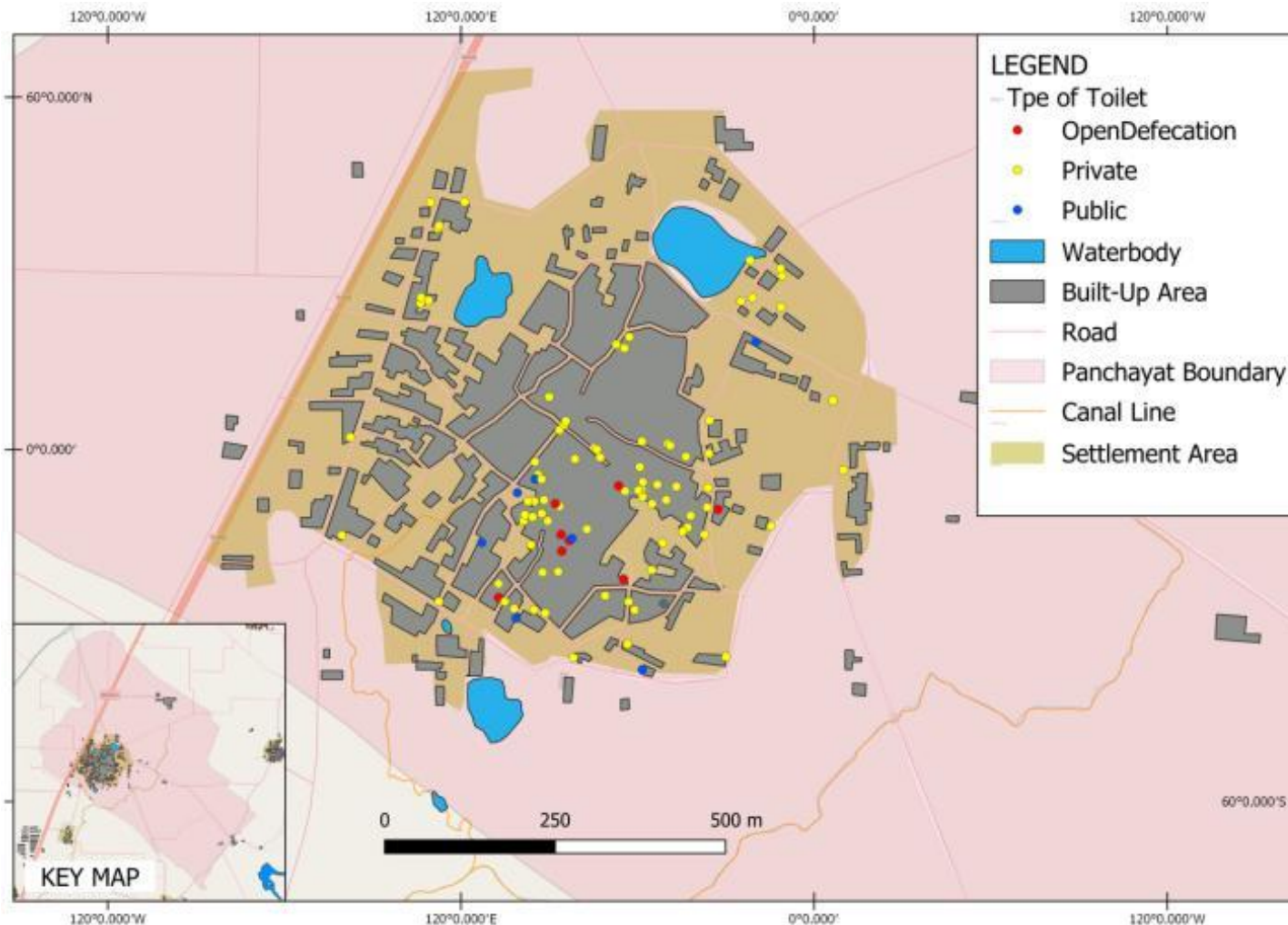
## INFRASTRUCTURE WITHIN THE GP – SURFACE DRAINAGE

- The open street drains are the means of disposal for rain water.
- Some entries on the Grammanchitra website suggest that work has been carried out under MGNREGA to install recharge pits at one edge of the village.
- However, there is no proposal which encompasses the entire village with regard to tackling the issue of rainwater drainage or harvesting.



# INFRASTRUCTURE WITHIN THE GP – **SANITATION**

As per the household survey, 84% of the sample size have private toilets, 7% have access to public toilets and 9% are reliant on open defecation.





## INFRASTRUCTURE WITHIN THE GP – ROAD NETWORK

- The village lies along the National highway 73 which is a bituminous road of width 45m wide. Roads inside the village are either CC or laid with pavers.
- Very few roads are 'kuchcha' roads.



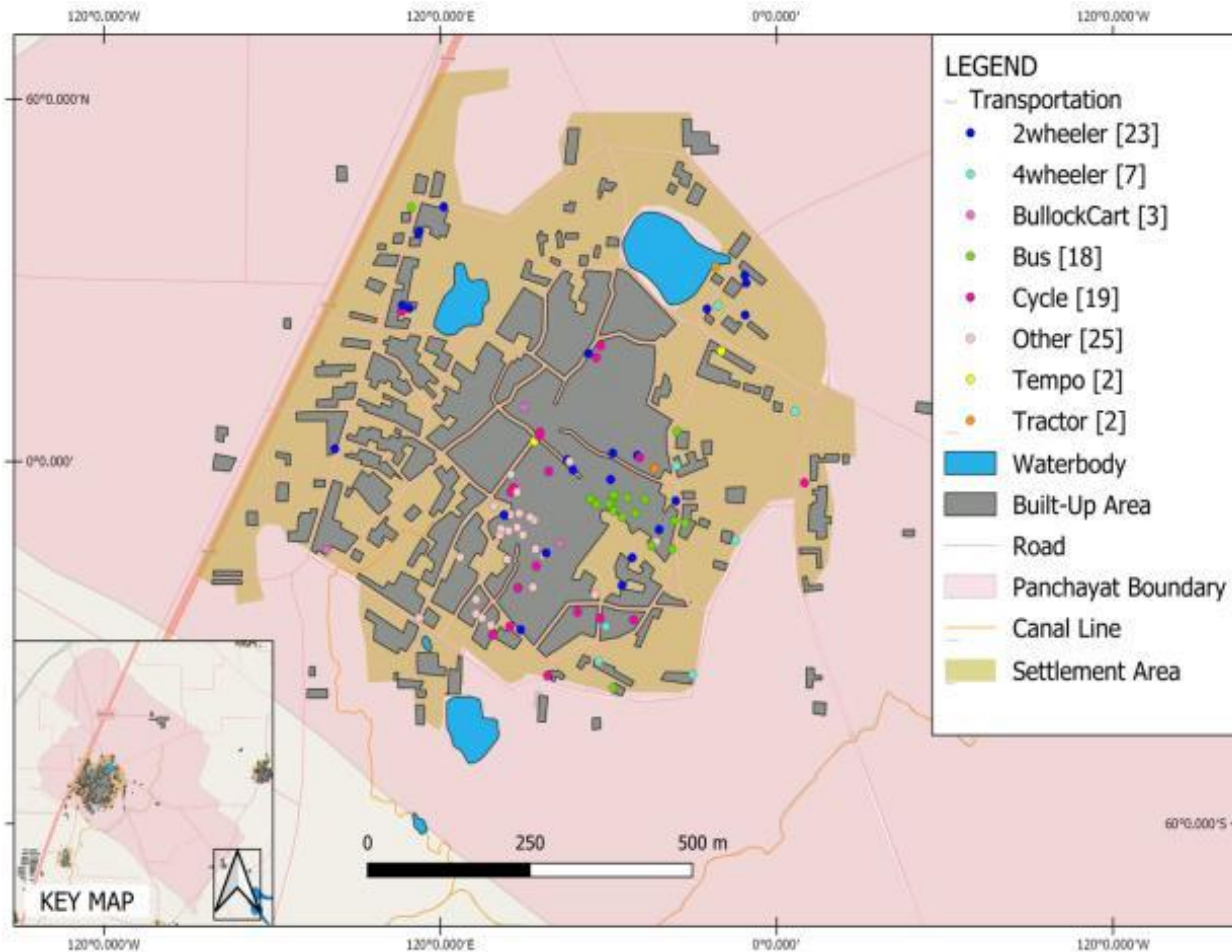
### LEGEND

	NATIONAL HIGHWAY 73
	20 FEET WIDE
	18 FEET WIDE (METALLIC)
	18 FEET WIDE (PAVER)
	12 FEET WIDE
	10 FEET WIDE



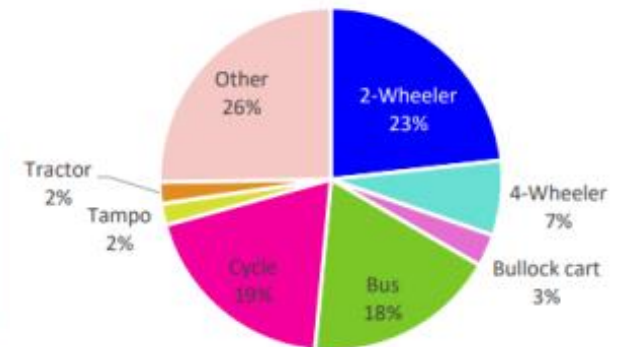
# INFRASTRUCTURE WITHIN THE GP – TRANSPORT FACILITIES

The primary survey indicates that most people are using 2-wheelers, cycles and Bus service as the major source of transportation. Other transport facilities as per the Census are given in the table below.



## COMMUNICATION AND TRANSPORT FACILITIES (Census 2011)

1	Bus Service	Yes
2	Railway Station	10+ kms
3	Auto modified Autos	Yes
4	Taxis and Vans	Yes
5	Tractors	Yes
6	Cycle pulled rickshaws (Manual and machine driven)	Yes
7	Carts driven by animals	Yes



# CURRENT STATE ASSESSMENT AND FINDINGS

## **SOCIAL INFRASTRUCTURE**

Community Spaces  
Education  
Health  
Religious buildings





# INFRASTRUCTURE WITHIN THE GP – **COMMUNITY SPACES**



**2. RAJPUT CHAUPAL**



**1. BHATT CHAUPAL**

## LEGEND

1. BHATT CHAUPAL
2. RAJPUT CHAUPAL
3. KUMHARO KI CHAUPAL
4. COMMUNITY HALL
5. RAJEEV GANDHI HALL
  
7. AMBEDKAR PARK PATHRERI
8. CREMATION GROUND
9. S.C & B.C CREMATION GROUND

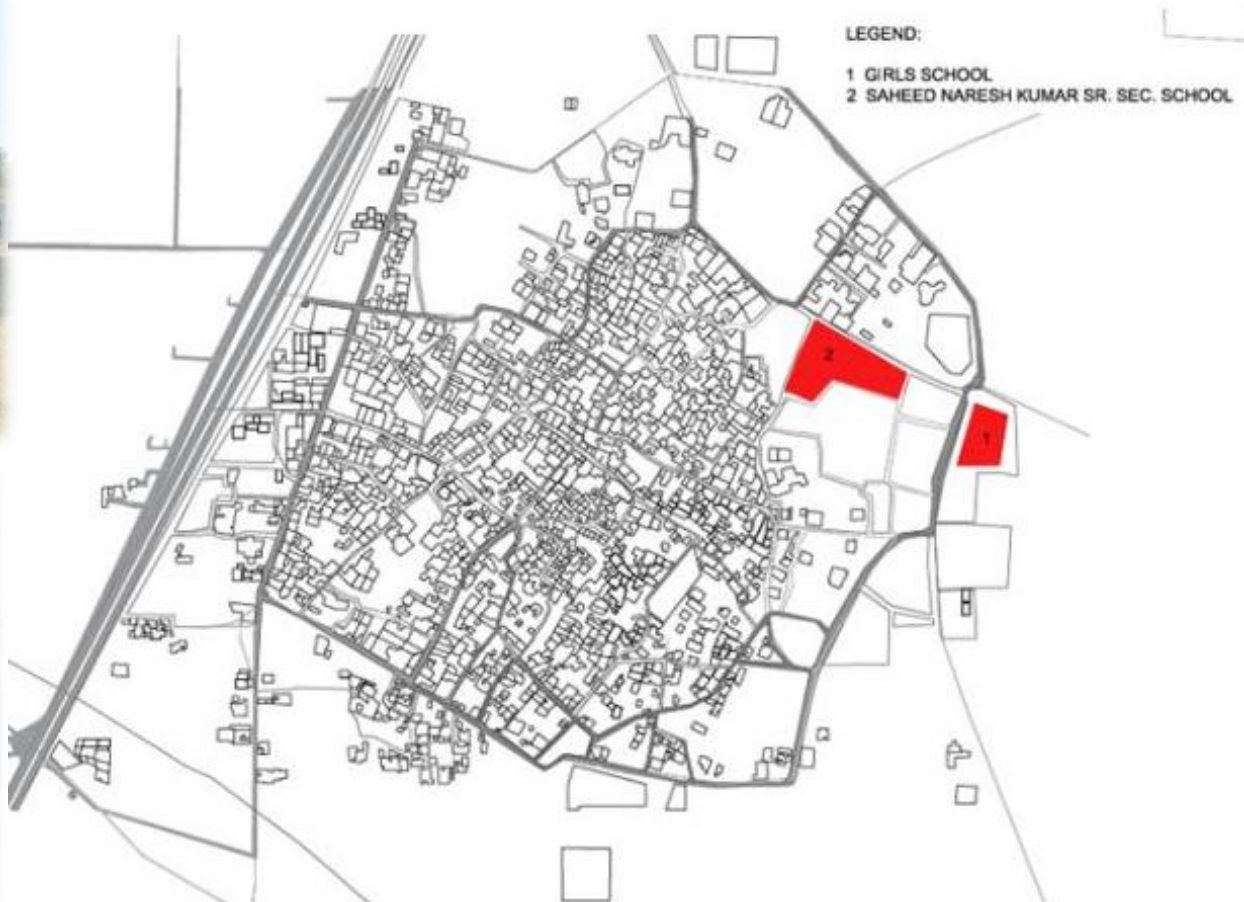


**9. CREMATION GROUND**



## INFRASTRUCTURE WITHIN THE GP – EDUCATION

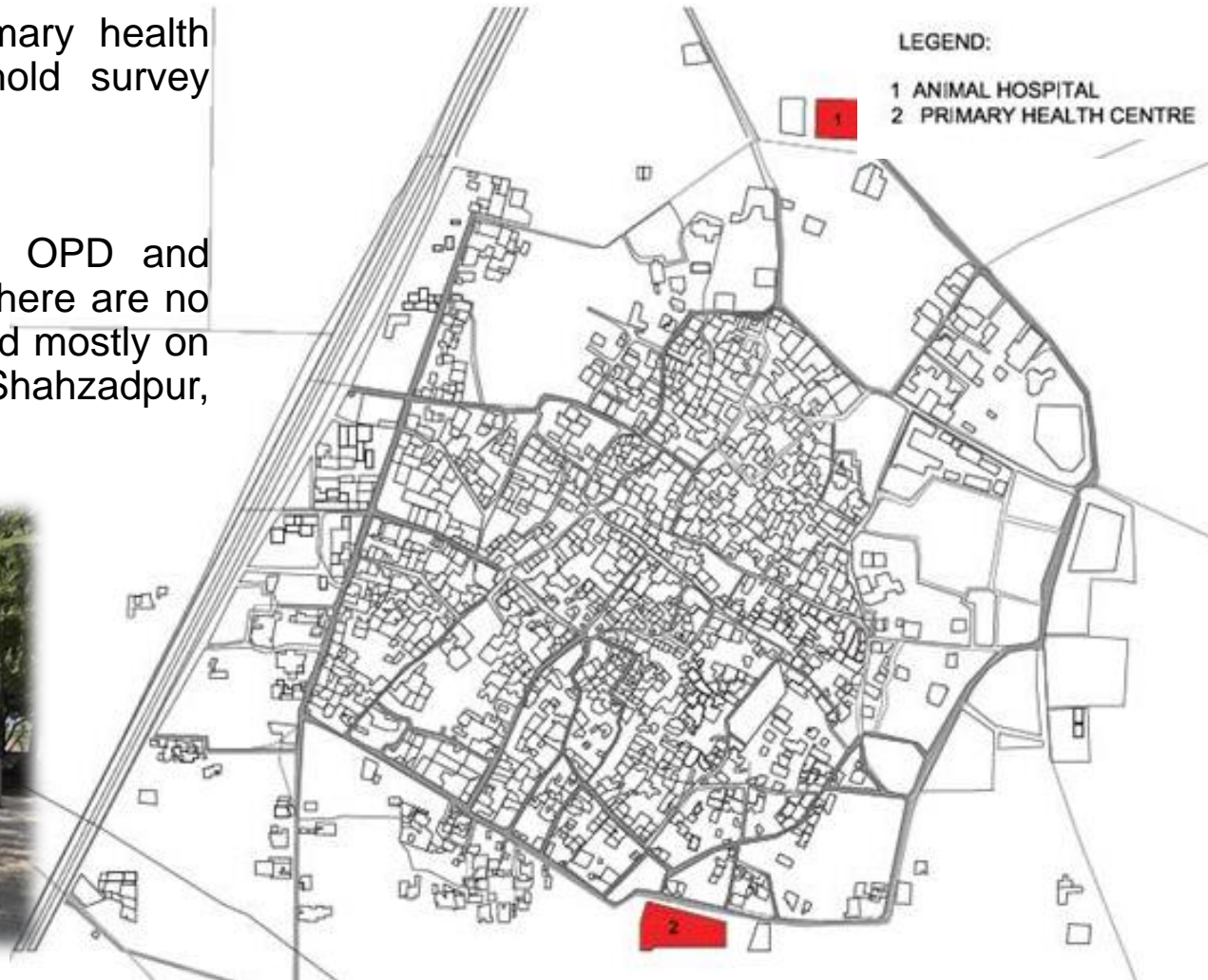
- There are sufficient institutions in Pathreri and the surrounding areas which provide education at different levels, from primary to higher education.
- Children from the surrounding villages also attend the schools located here.





## INFRASTRUCTURE WITHIN THE GP – HEALTH

- The village of Pathreri has a primary health center, which as per the household survey feedback, requires further upgrades.
- Facilities such as an Emergency, OPD and IPD's also need to be provided as there are no hospitals within the GP. They depend mostly on the advanced health facilities in Shahzadpur, Naraingarh and Saha.





# INFRASTRUCTURE WITHIN THE GP – RELIGIOUS

- There is no Masjid or Gurudwara in the village though the village has a small percentage of Sikh and Muslim families, who go to their religious shrines in the nearby villages.



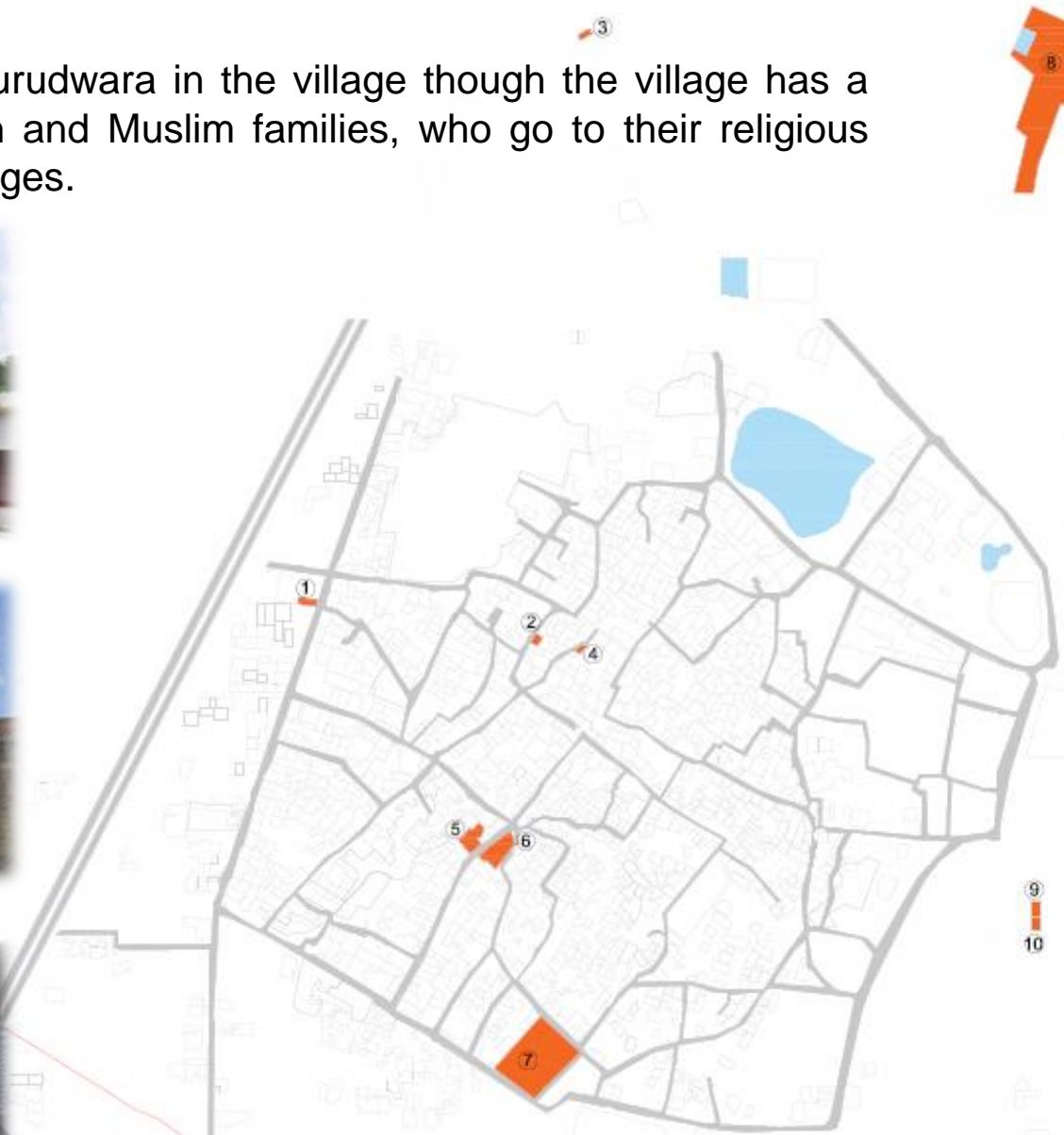
4. SHIVALAYA TEMPLE



5. RAVIDAS TEMPLE



9. NAINA DEVI TEMPLE



## LEGEND

1. DERI MANDIR
2. RADHA KRISHAN MANDIR
3. PEER KI MAJAR
4. HANUMAN MANDIR
5. RAVIDAS TEMPLE
6. VALMIKI TEMPLE
7. SANT RAVIDAS TEMPLE
8. SHIVALYA TEMPLE
9. NAINI DEVI TEMPLE
10. SHIV TEMPLE



# CURRENT STATE ASSESSMENT AND FINDINGS

## COMMERCIAL INFRASTRUCTURE

Banks and markets



# INFRASTRUCTURE WITHIN THE GP – **BANKS AND MARKETS**

The independent shops marked in the map are only the ones that were identified during the site visit. It is to be noted that other independent shops are present across the village

. The types of shops in the village are:

- Sweet shops
- Jewellers
- Grocery Shop
- Hardware store
- Furniture Store
- Computer center
- Cement shop
- Garments
- Scrap Shop
- Music Shop
- Mobile Shop
- Medical Store
- Seed Shop
- Atta Chakki
- Garments Shop
- Tea stalls





# CURRENT STATE ASSESSMENT AND ANALYSIS

## **ENVIRONMENT**

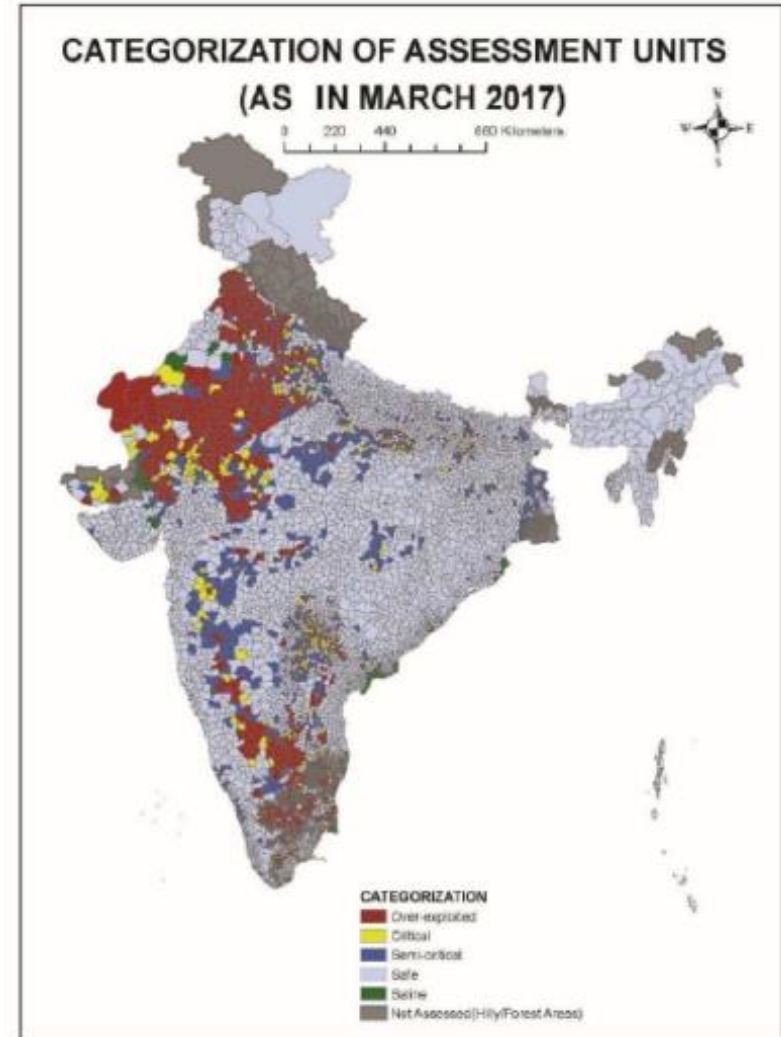
Water quality and water level  
Soil Condition  
Water Bodies



# ENVIRONMENT

## WATER QUALITY AND WATER LEVEL

- As per the National Compilation on Dynamic Ground Water Resources of India, 2017 , between the period of 2013 to 2017 the stage of ground water extraction in Shahzadpur has deteriorated from 78% to 98% and is now categorized as critical.
- The designation of 'Critical' is assigned to areas where the stage of ground water extraction is between 90-100 % of the annually replenishable ground water recharge.
- As per the above report although areas in parts of Haryana have abundant replenishable resources there have been indiscriminate withdrawals of ground water leading to over-exploitation.

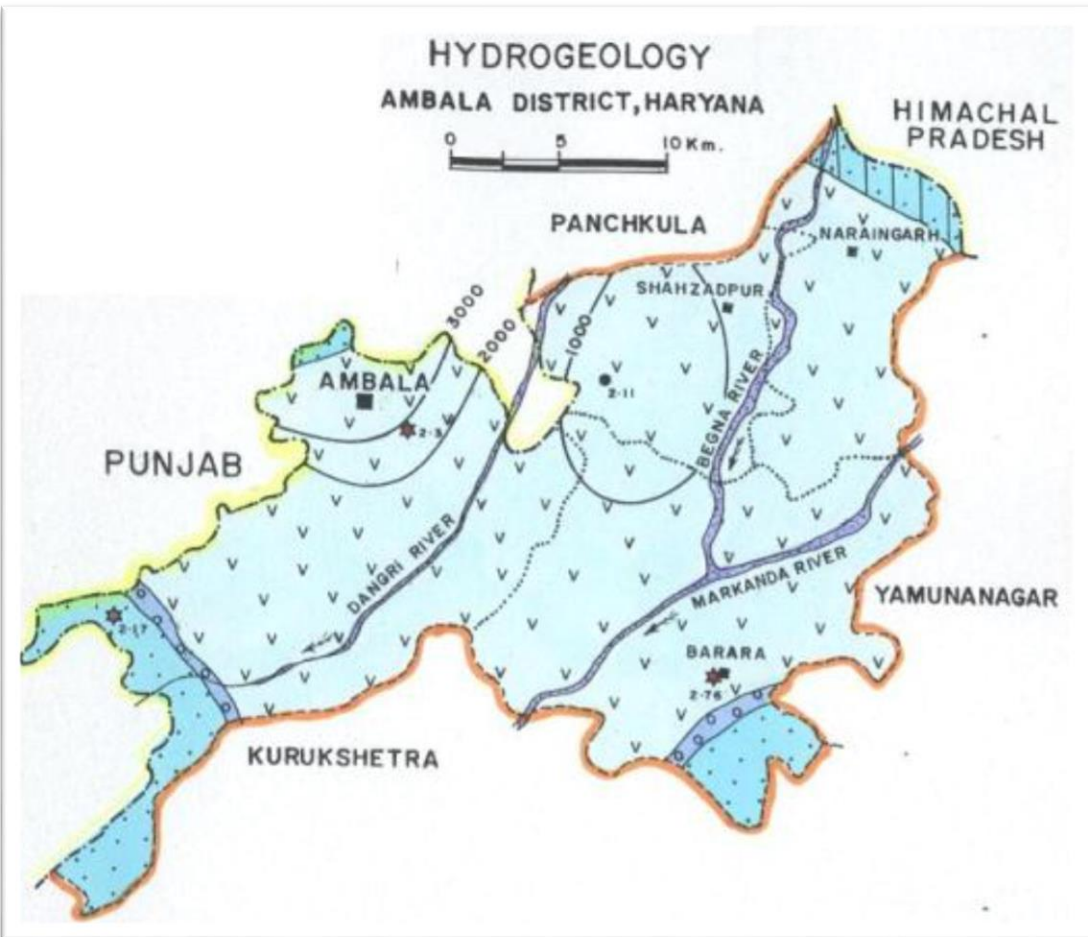


**Source:** National Compilation on Dynamic Ground Water Resources of India, 2017



# ENVIRONMENT

## WATER QUALITY AND WATER LEVEL



INDEX					
	WELLS FEASIBLE	RIGS SUITABLE	DEPTH OF WELL(m)	DISCHARGE (lpm)	SUITABLE ARTIFICIAL RECHARGE STRUCTURES
	TUBE WELLS	REVERSE / DIRECT ROTARY	50 - 440	480 - 3200	RECHARGE TRENCH WITH INJECTION WELL
	TUBE WELLS	REVERSE / DIRECT ROTARY	20 - 100	360 - 480	RECHARGE TRENCH AND RECHARGE SHAFT
	TUBE WELLS	REVERSE / DIRECT ROTARY	20 - 60	240 - 360	RECHARGE TRENCH AND RECHARGE SHAFT
ELECTRICAL CONDUCTIVITY (MICROMHOS/CM AT 25°C)		* IRON > PERMISSIBLE LIMIT (1.0 ppm)		● FLUORIDE > PERMISSIBLE LIMIT (1.5 ppm)	
		1000			

The primary source of irrigation and water supply in the GP is ground water, accessed through tubewells.

Therefore, recharging the water table becomes essential particularly in the Abadi area.

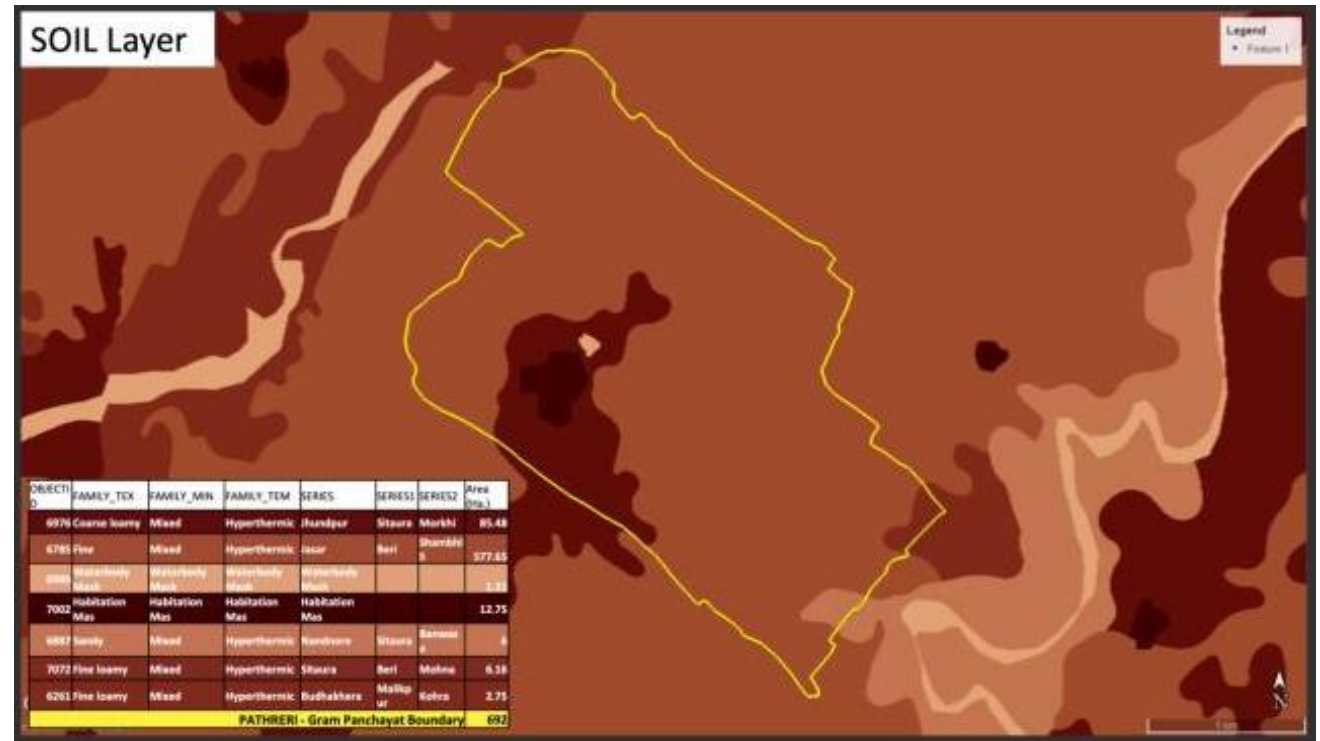




# ENVIRONMENT

## SOIL CONDITION

- The GP predominantly has coarse or fine loamy soil according to the soil health card issued by the Ministry of Agriculture and Farmers Welfare, Govt. of India.
- The soil is alkaline i.e. it has a PH level of above 7.



Source: NRSC

- The overall soil fertility is adequate with the exception of some plots where the addition of gypsum is recommended.



# ENVIRONMENT

## WATER BODIES

- A large water body, covering about 4 acres, is located on the north eastern edge of the village.
- It is essentially a pond replenished by rainwater.
- Although this water body holds religious and cultural significance for the village but it has been contaminated by sewage discharge from the residential areas.



# PROPOSAL

## FIGURE GROUND AND SPATIAL TRANSFORMATION

Housing  
Literacy  
Employment  
Solid waste collection  
Sewage/rainwater  
Miscellaneous Infrastructure





## HOUSING ANALYSIS

- As per the sample survey it is found that very few houses (approx. 6%) houses are more than 50 years old.
- Further, it was recorded that 92% of the houses have walls made of bricks with remaining 8% of mud.
- 25% of the houses are ‘kuchcha’ with bamboo/thatch/grass roof, 23% of the houses are ‘semi-pucca’ with brick/tin roof laid on a framework and 52% houses are ‘pucca’ with concrete roofs.
- The grants given under the Pradhan Mantri AwasYojna have primarily been used to lay concrete roofs on brick walls.
- This material palletete allows an economical, safe and strong structure to be built.
- However, 24% of the sample survey structures are dilapidated, thereby concluding that building standards/byelaws need to be put into place for future construction activity.
- The traditional rural character has been lost.



# HOUSING - ANALYSIS

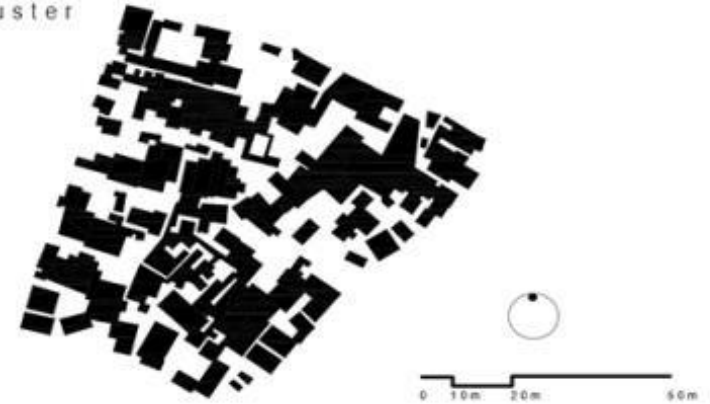
Pathreri Figure Ground



Northern Cluster



Southern Cluster



Northern Cluster

Unbuilt: 50.4%



Built: 49.6%

Southern Cluster

Unbuilt: 47.9%



Built: 52.1%

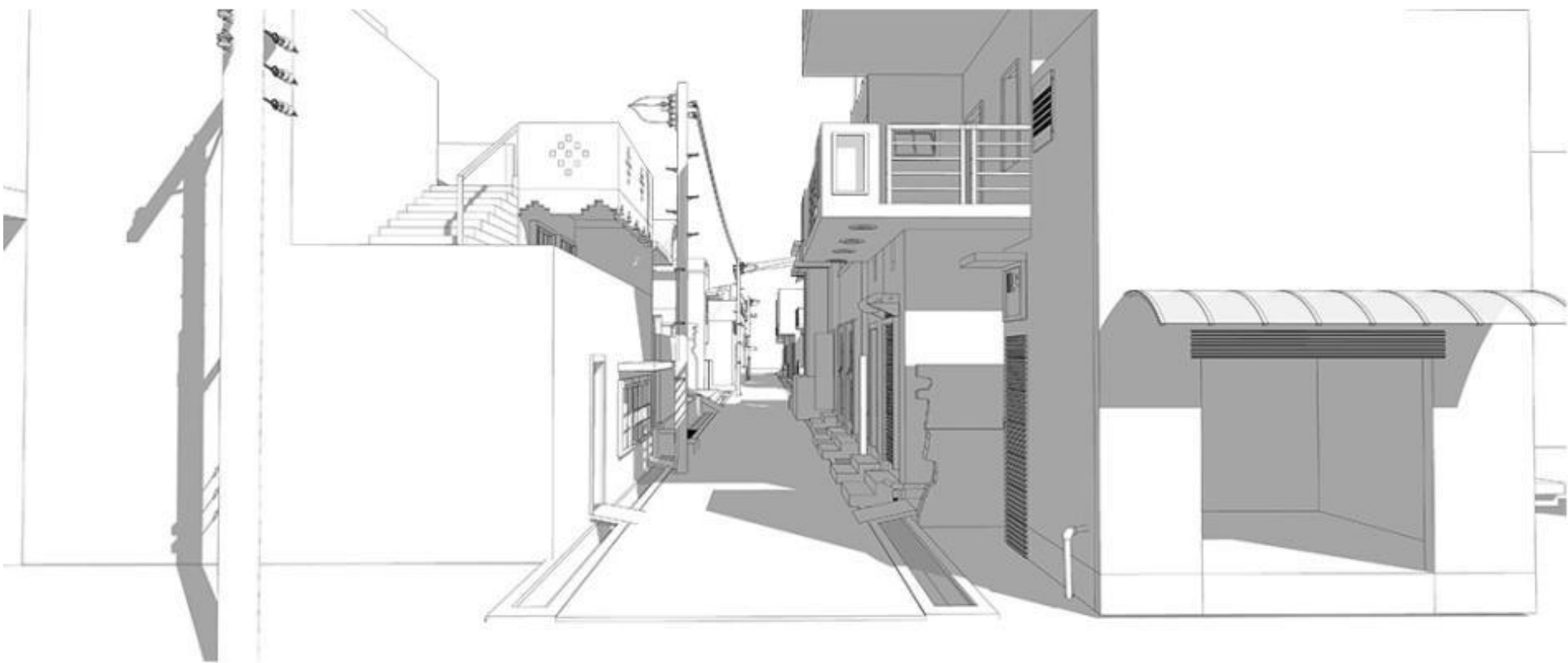
# PROPOSAL

**FIGURE GROUND  
AND  
SPATIAL TRANSFORMATION**





Before



# HOUSING PROPOSAL

- As per the survey, the residents have complained about the condition of the houses.
- It was also found that the road width within the village have decreased due to encroachments (like steps, balcony, building walls etc.) and absence of any byelaws.
- The following points may be taken care of to create a livable environment within the residential clusters:
  1. Each residential unit must have 15-20% of the plot as open to sky, as this would be conducive to the village lifestyle.
  2. As per the building fabric of the village the houses should not be higher than 2 floors, unless there is a special requirement.
  3. Encroachments in the form of steps or ramps, rising from the street, have to be restricted within 4.5 inches from the outer edge of the drain. As shown in the figure below.



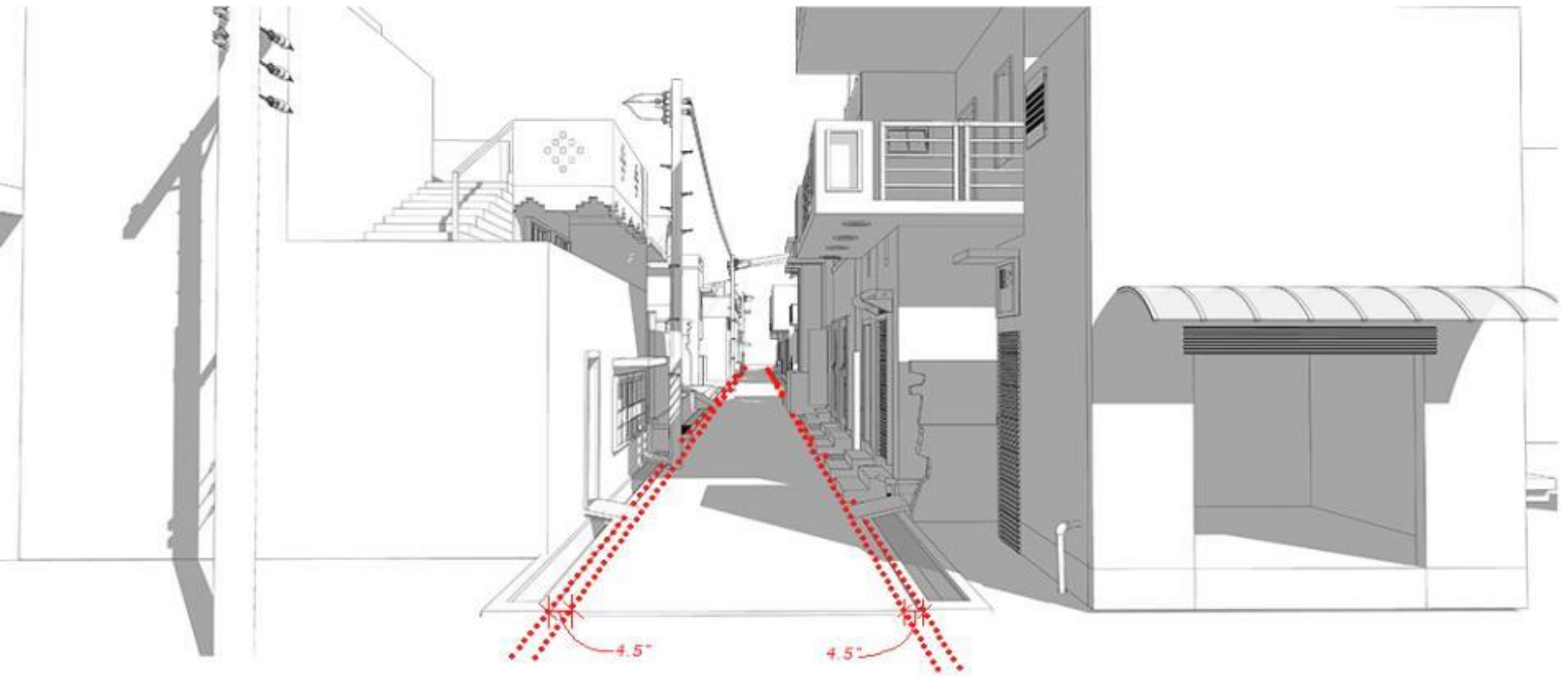
## HOUSING PROPOSAL

4. All open drains need to be covered, with provision for inspection hatches at regular intervals.
  5. No balcony should be projected outside the plot line.
  6. Solar Street lights should be installed in all the lanes of the village.
  7. Use of roofing material like thatch, grass, bamboo, tin etc should be restricted to balconies, animal shelters, verandahs etc.
- The representative of the panchayat need to keep a check that the above mentioned parameters are strictly implemented in all future construction activities, within the GP.





# Proposed Changes



# Proposed Changes



Before





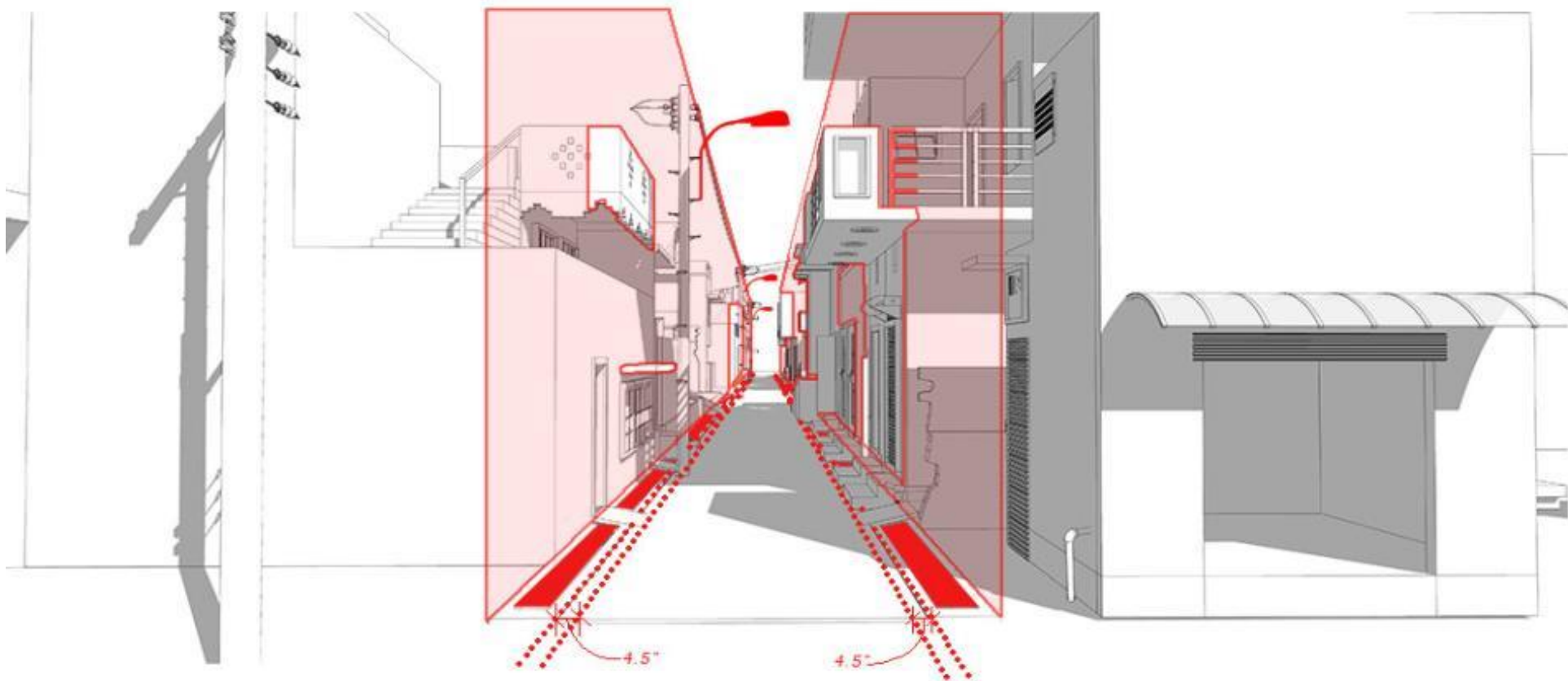
# Proposed Changes



# Proposed Changes



# Proposed Changes



4.5°

4.5°





BEFORE



AFTER



BEFORE



AFTER



**VIDEO**



## LITERACY - PROPOSAL

- As per the Census data the literacy rate has improved by 14.2% between 2001 and 2011. However, there has been a corresponding increase of 15 % in population growth during the same period.
- The data from the household survey, done for this project in 2020 shows a higher literacy rate (78%) amongst the sample size. There is a trend in an increase in the literacy level.
- However, the percentage of graduates is just 6% in spite of adequate opportunities for higher education in and around the village. This reflects that either the educated youth are migrating out of the GP or the younger generation is not motivated towards education beyond school level due to lack of job opportunities.
- This trend is more noticeable amongst the young female population with just 4% studying beyond class 12, as per the household survey.
- The way forward **might not necessarily be through conventional higher education but rather through skill development**





## EMPLOYMENT - PROPOSAL

- As per the Census 2001 and 2011 statistics, the literacy level has improved compared to the rate of increase in population but we do not find considerable employment amongst the literate youth, as most of the working population are engaged in agriculture, which is also reflected in the household survey.
- Some residents even commute to the surrounding areas to work in private organisations, shops and offices as well as in government institutions.
- Cultivators and Agricultural labourers – The census data shows a marginal decrease in number of cultivators and a 58% increase in the number of agricultural labourers between 2001 and 2011.
- The trend shows that cultivators have sold their land holdings and moved from the village and small land holder have sold their land holdings and are working as agricultural labourers.
- Apart from agro based income the village does not have any scope for alternative economic activities. The feedback from the respondents of the household survey reflects that employment opportunities for women are negligible. Some suggestion of vocational courses for beauty/skin treatments have come forth.



# EMPLOYMENT - PROPOSAL

## Vocational Training Centre (Village Cluster)

### Agro based vocational training programmes

- Since the economy of the village is primarily agrarian based, and the literacy rate shows an upward trend amongst the youth, it is proposed that after completing their schooling they should be engaged in vocational training activities so that they do not need to migrate outside the village to earn their livelihood and can continue with the family occupation.
- A collaboration with the Chaudhary Charan Singh Haryana Agricultural University, Hisar, is proposed to set up this vocational training centre at the village cluster level to inform, educate and train the villagers about agriculture based activities, different processes, research and development , innovations, technology etc.



# EMPLOYMENT - **PROPOSAL**

## Vocational Training Centre (Village Cluster)

These could include courses on:

- Increasing agricultural yield
- New farming practices
- New technology and implements for agricultural activities
- Information on use of agricultural waste – conversion into boards etc.
- Emerging practices in agriculture
- Domestic processing of agricultural produce – for example pickles, muraba, jams, preserves, jellies etc.
- Online marketing of produce on a local/state/national level
- Livestock rearing – pisciculture, poultry farming
- Financial tools for agriculture



## EMPLOYMENT - PROPOSAL

### Vocational Training Centre (Village Cluster)

- These courses should be certified by the University and those who successfully complete a course or training should be awarded a qualification certificate.
- This would equip the villagers to be progressive with regard to practicing agriculture and make it more conducive to earning a livelihood.
- These skills may be channelled through the following means of agro based employment :
  - Reuse of agriculture waste, for example rice husk boards, fuel from sugarcane waste etc.
  - Fruit tree orchards – which can feed into the household industries of manufacturing jams, preserves etc.
  - Bio gas plant – using the waste from the village for generation of fuel and fertilizer
  - Organic farming of fruits and vegetables
  - Tree plantation





# EMPLOYMENT - **PROPOSAL**

## Other Vocational Training Programmes

- Certified Training Programmes, which are affiliated to concerned colleges and institutes should also be done for skills like:
  - Plumbing
  - Electrical
  - Computer programming
  - Computer skills- typing, printing, office related software's etc.
  - Stitching/Knitting/Crochet
  - Beautician/Aesthetician Courses



# EMPLOYMENT - PROPOSAL

## Other Vocational Training Programmes

- Infrastructure for setting up vocational training – The building of the Government Senior Secondary School may be used, after school hours, to house the Vocational Training Institute.
- A community library (may be online) would allow the residents to have access to information.
- A Computer centre in the village would allow residents to access the internet, even if they do not own a personal computer. This would allow for online marketing of skills and produces, as well as increase in digital literacy which is important in today's day and age. The household survey shows that digital literacy in the village is just 18%.
- High speed internet needs to be present in the village. Free Wifi service should be provided in common areas/gathering spaces.



## EMPLOYMENT - PROPOSAL

### Organic Farming (as an economic generator)

- As this village is primarily an agrarian village and does not have any unique art and craft traditions, nor are there any surrounding industries or resource deposits to generate employment, the way to generate employment and make the village self sufficient would **rely on agro-based employment, activities and training.**
- One such proposal would be to involve the villagers, particularly women, in small scale organic cultivation of vegetables.
- To start with 8.5 acres of the Shaamlat land may be taken and plots of 40 sqm size may be allotted to interested individuals to grow vegetables. They may rely on the manure generated by the vermiculture pits and the biogas plant and grow organic vegetables.
- Organic produce needs to be certified by a certifying authority. The soil in which the produce is grown needs to be free from the use of chemicals for at least three years.



## EMPLOYMENT - PROPOSAL

### Organic Farming (as an economic generator)

- The individuals would need to be educated and trained with regard to the parameters and process of organic farming of vegetables.
- An online portal or website may also be set up to market the produce so that a readily available market ensures that the produce is sold.
- Delivery within a 50 km radius would include markets like Chandigarh, Panchkula, Ambala, Shahzadpur, Nahan etc. Within a 100 km radius would include Karnal, Kurukshetra, Patiala etc.
- Delivery and packaging of the produce would also help to generate income, particularly if the packaging material is made from agricultural waste/paper waste.
- Greenhouses may also be used to grow produce that is not in season, this would help expand the available market.





# EMPLOYMENT - PROPOSAL

## Organic Farming (as an economic generator)

- Another way of growing produce is through **hydroponics**, a system in which water is the main medium which will carry the essential or tailored nutrients to the crops. Also since soil is not being used almost 80% of the total pest attacks possible can be eliminated. It provides the right amount and right type of nutrients and saves space. Soil related problems are also eliminated. It has minimal weeding and harvest is made easy.(Rajeswari Aravind, 2018)
- Produce with a longer shelf life should preferably be grown such as onions, Cauliflower, Chillis, Cucumber etc.

- The Chaudhary Charan Singh Haryana Agricultural University, Hisar, can be involved in developing and implementation of this proposal.

- This scheme may be run as a cooperative under the administration and supervision of the Panchayat

---

Crop	Area (ha)	Productivity (q/ha)
Potato	3153	265.88
Tomato	2380	121.50
Onion	4652	169.62
Cucurbits		
i) Bottle Gourd	1766	127.62
ii) Cucumber	950	110.97
iii) Muskmelon	442	0.95
iv) Water Melon	51	05.68
Mango	940.8	1.78

---

*Source: Agriculture and horticulture department, Ambala*



## SOLID WASTE COLLECTION - **PROPOSAL**

- A uniform system needs to be devised through the village. Segregation at source and system for collection of solid waste needs to be implemented.
- Segregation need to be done according to the following categories:
  - Organic waste – that can be converted into manure
  - Reusable waste
  - Recyclable Waste such as:
    - › paper, cardboard - recycled into handmade paper, stationery products
    - › recyclable plastic bags
    - › metal, glass, bottles etc – which can be collected by scrap dealers
  - Dry Waste – incineration, pulverizing etc.
- Reusable or recyclable materials can be converted into sheets or used in construction activities. A norm may be set that these waste materials must be used in place of at least 15% of the construction materials for construction of new structure.
- This could also be a part of the vocational training activities. For example, in Auroville, tetra packs are being processed, compressed and converted into sheets that are used in roofing.



## SEWAGE/RAINWATER - **PROPOSAL**

- A major problem that has been recorded in the village is the issue of sewage treatment and rainwater disposal.
- During the monsoon, certain areas of the village get water logged.
- It is **recommended** that the rainwater and sewage discharge be segregated at source so that the rainwater can be channelled into recharge pits to recharge the water table and the sewage discharge may be channelled into sewage treatment plants/septic tanks.
- For this, the concerned departments dealing with sanitation of the village need to be brought in to propose a suitable system to solve this issue. For future expansion, underground sewer lines need to be laid and surface runoff needs to be channelled into recharge pits for rainwater harvesting.



## INFRASTRUCTURE- **PROPOSAL**

- **Water** – The current needs of the residential population are being met by the existing resources, however the ground water level is depleting. Therefore, recharge of the ground water via rainwater harvesting is essential.
- **Sanitation** – Most of the village households have access to toilets. The remaining households, who are still dependent on open defecation, need to be encouraged to use the grants under Swachh Bharat Abhiyan to construct toilets in their homes.
- **Road Network** - All encroachments need to be removed from road sides so that the effective width of the road is not reduced. For future expansion within the village, the road must have a minimum width of 7 metres and must be equipped with solar street lights wherever possible.
- **Transport facilities** – Within the village settlement, the residents do not feel the need for a system of public transport.
- **Community Spaces** – The community spaces are primarily the chaupals in the village which are used by a specific community. There is a lack of consolidated open spaces barring the Ambedkar Park which is now being used for dumping garbage. It is recommended to leave some open spaces in the areas where the settlement is expanding for community engagement and recreational purposes.





## INFRASTRUCTURE- **PROPOSAL**

- **Commercial Infrastructure** - The market developing along the Highways can be formalised and a shopping cluster can be developed. These can house specialised shops related to the household small scale industries and other opportunities related to the vocational training courses being imparted to the residents of the GP.
- **Environment** – A complete scheme of rainwater harvesting for the village needs to be laid to recharge the ground water. The 4 acre village pond can serve as a rainwater catchment basin and needs to be revived and conserved from a cultural and religious point of view.

The ground water quality reports have found traces of arsenic, which needs to be taken care of through suitable scientific measures.

The shaamlat land and any other areas, proposed for organic farming should not be using any chemicals for the growth of agriculture produce.



**THANK YOU**

