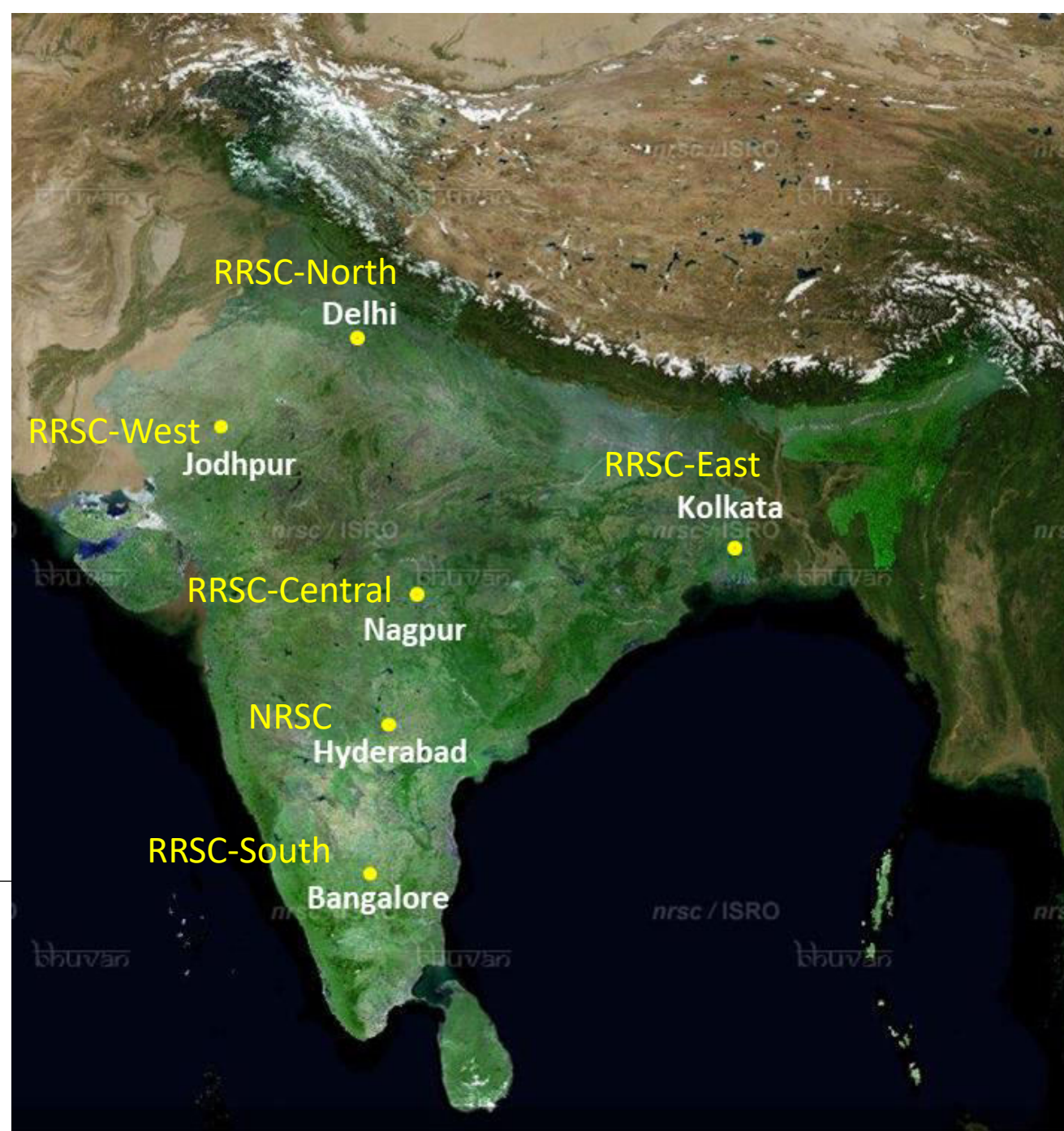




Pilot project Gram Panchayat Spatial Development Planning – Ministry of Panchayati Raj



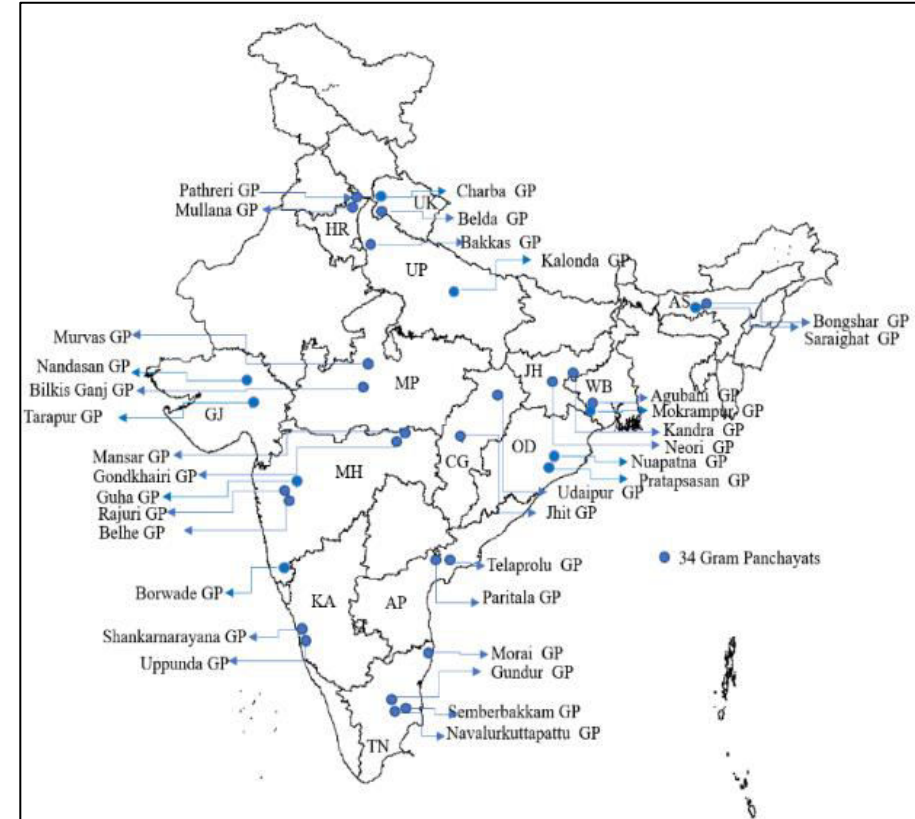
Khushboo Mirza
Scientist/Engineer 'SF'
Regional Remote Sensing Centre - North
National Remote Sensing Centre
Indian Space Research Organisation
Dept of Space, Government of India



Gram Panchayat Spatial Development Planning (GPSDP)

Background:

- Ministry of Panchayat Raj (MoPR) identified 34 Gram Panchayat spread across 12 states which needed GPSDP in pilot phase
- NRSC, Hyderabad identified as technology partner for this venture
- Premier institutes of Planning and Technology undertook the spatial planning exercise for selected GPs in their state
- NRSC provided spatial data as well as technical know how in the utilisation of spatial data for Natural Resources Planning & overall preparation of Development Plans



34 Gram Panchayats identified for GPSDP

Analysis of Natural Resources for Gram Panchayat using very high resolution satellite (VHRS) data at Gram Panchayat (GP) level

- Infrastructure layers, Land Use Land Cover, Slope, Drainage network, Water bodies, Contours, Soil etc

Long term **analysis of Rainfall data**

Long term assessment of **Surface Water Potential**

Generation of **Land and Water Resource Development Plans**

- Very high-resolution satellite data (Cartosat 2S & Komsat 3A)
- Analysed at finer resolutions to update the spatial layers for generating value-added Land resource and Water resource development plans

Primary maps grouped into **hydro-geomorphological, topographical, land use/land cover, hydrology and socio-economic parameters**, used to produce useful maps to serve planning decisions

Cross platform **Mobile Application** for carrying out **household** survey in gram panchayats

Household Survey data linked with Natural Resource data to aid the planning decisions

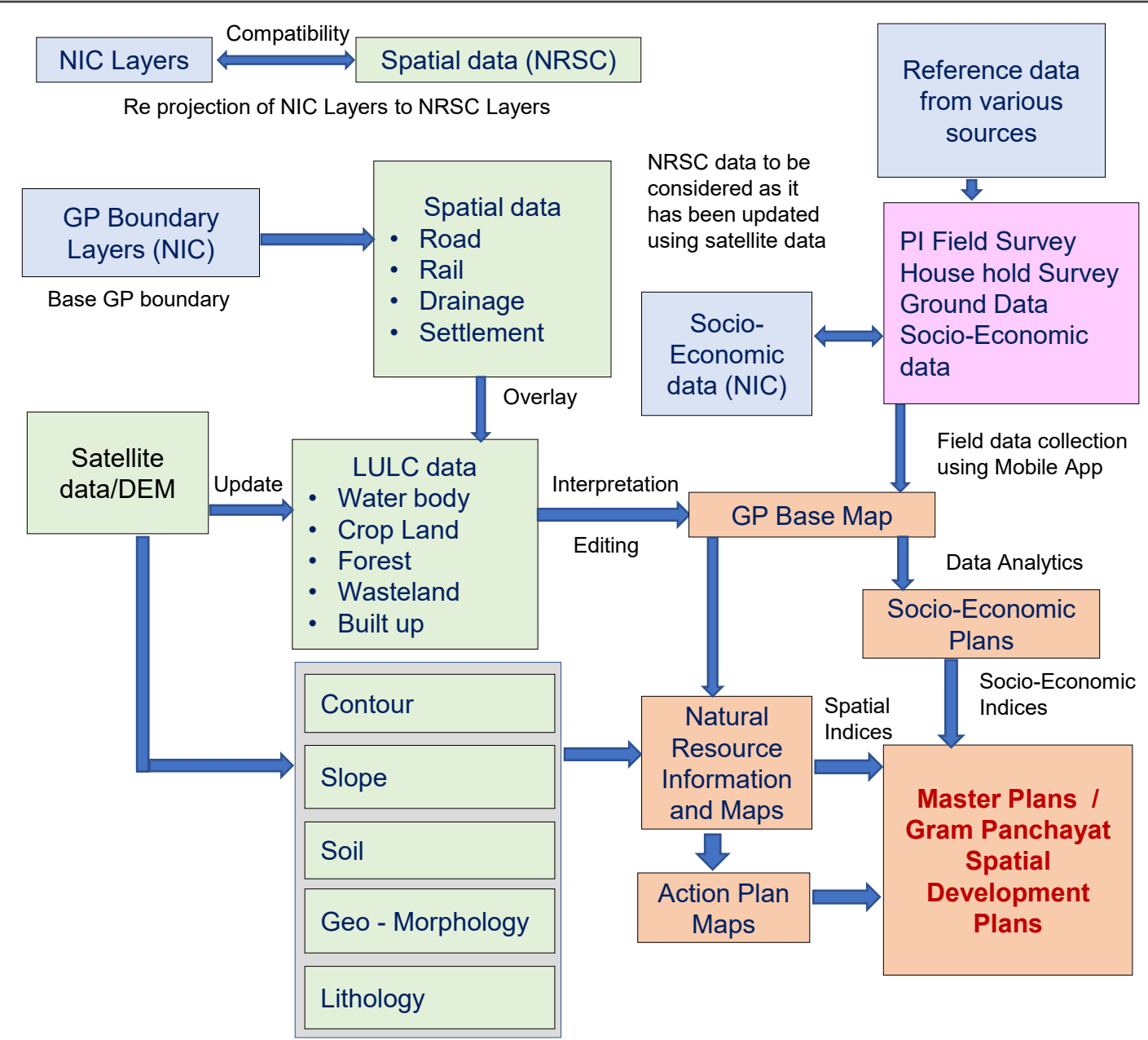
Spatial layers shared by NRSC for each Gram Panchayat

GIS vector layers shared by NRSC with PIs

S.no	List of layers	Major Attributes
1	Clip_drainage_XX	Layer, category, drcode, status, pi_code
2	Clip_Road_XX	Layer,type,tr_rcode,category,status,pi_code, stcode
3	Clip_Rail_XX	Layer,type,tr_rlcode,category,status,pi_code, stcode
4	Clip_Settlement_XX	dscr1, dscr2, dscr3,pi_code,setcode,stcode,pi_code
5	Clip_slope_XX	Class, fcode, range, gridcode, stcode, slcode
6	New_Clip_LULC_XX	lc_code, dscr1, dscr2, dscr3, pi_code, stcode
7	Clip_XX_contour	contour
8	Clip_XX_Geomorphology	Discr_l1, discr_l2, discr_l3, gucode, dxf_text
9	Clip_XX_lithology	Lith-code,rock_gr,lith_unit,rock_type,stratigrap
10	Clip_XX_soils	Mapsym,soil-code, ass1_code, ass2_code, order, sb_order, gr_group, sb_group, family_tex, family_min, family_tem, series
11	District_lulc	Lulc code

Raster Data sets

S.No.	List of layers	Major Attributes
1	Clip-XX_satellite	Natural Color Composite
2	Clip_DEM_XX	count

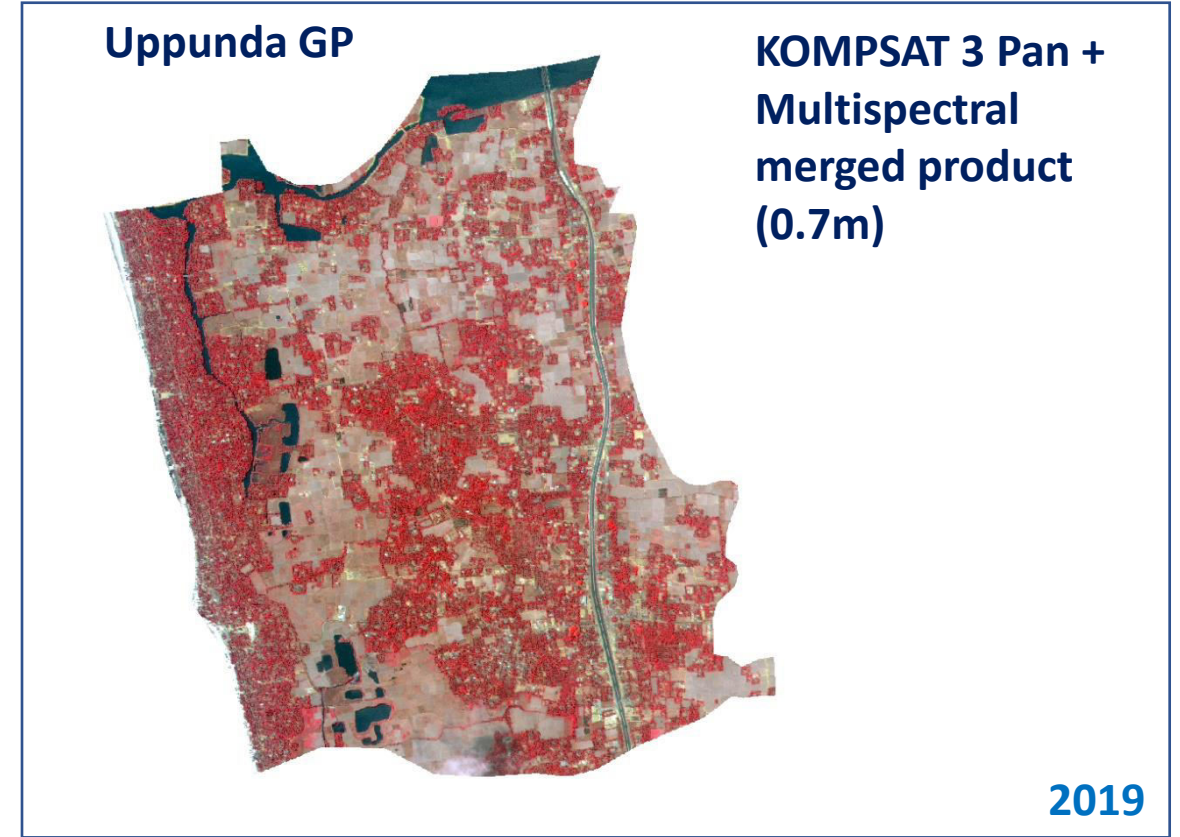
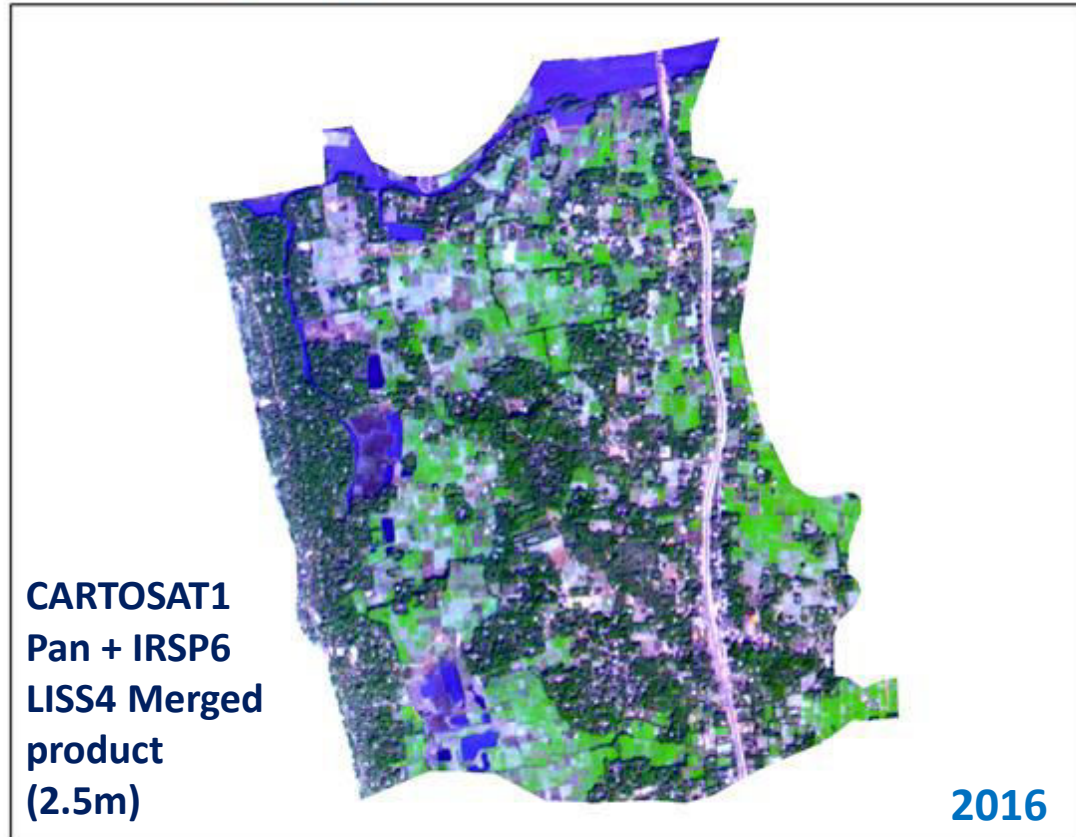


Framework for utilization of spatial data for GPSDP

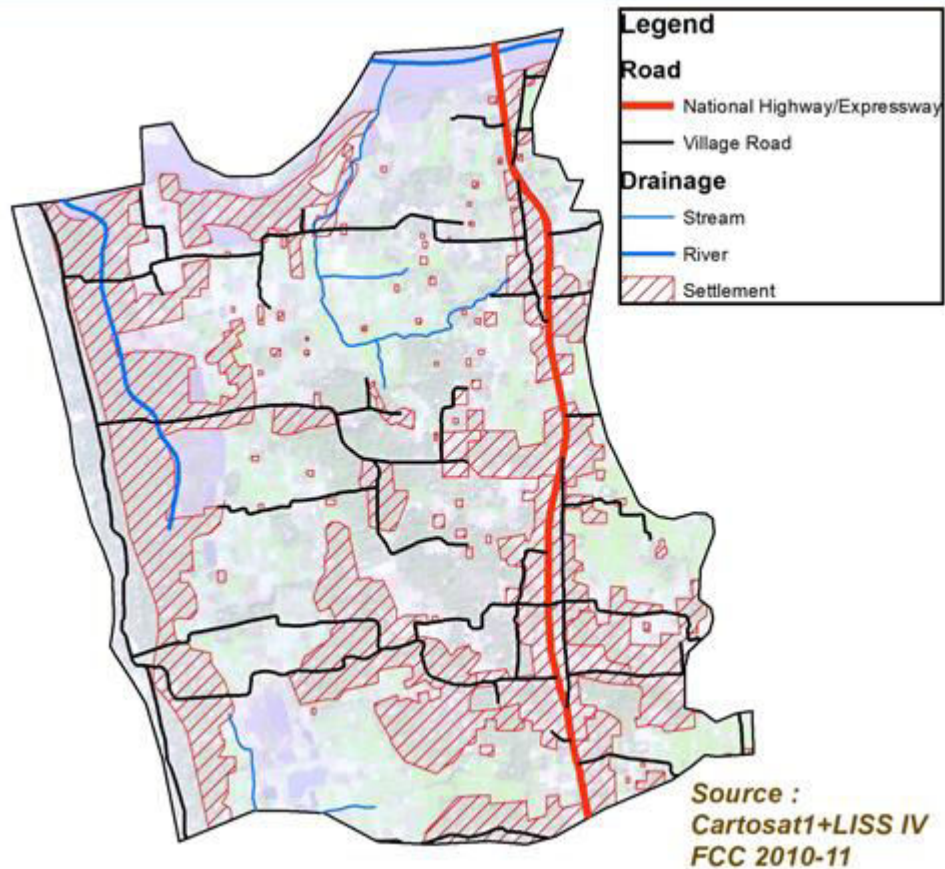
Satellite data shared with Partner Institutions

GP: Uppunda
State: Karnataka

State: Karnataka
District: Udupi
Taluk: Kundapura
Gram Panchayat: Uppunda



Infrastructure, Drainage & Settlement



Infrastructure Details

Category	Frequency	Road_Type	Length(KM)
National Highway	1	Metalled Road	3.03
Village Road	74	Metalled Road	25.16
Total			28.19

Drainage Details

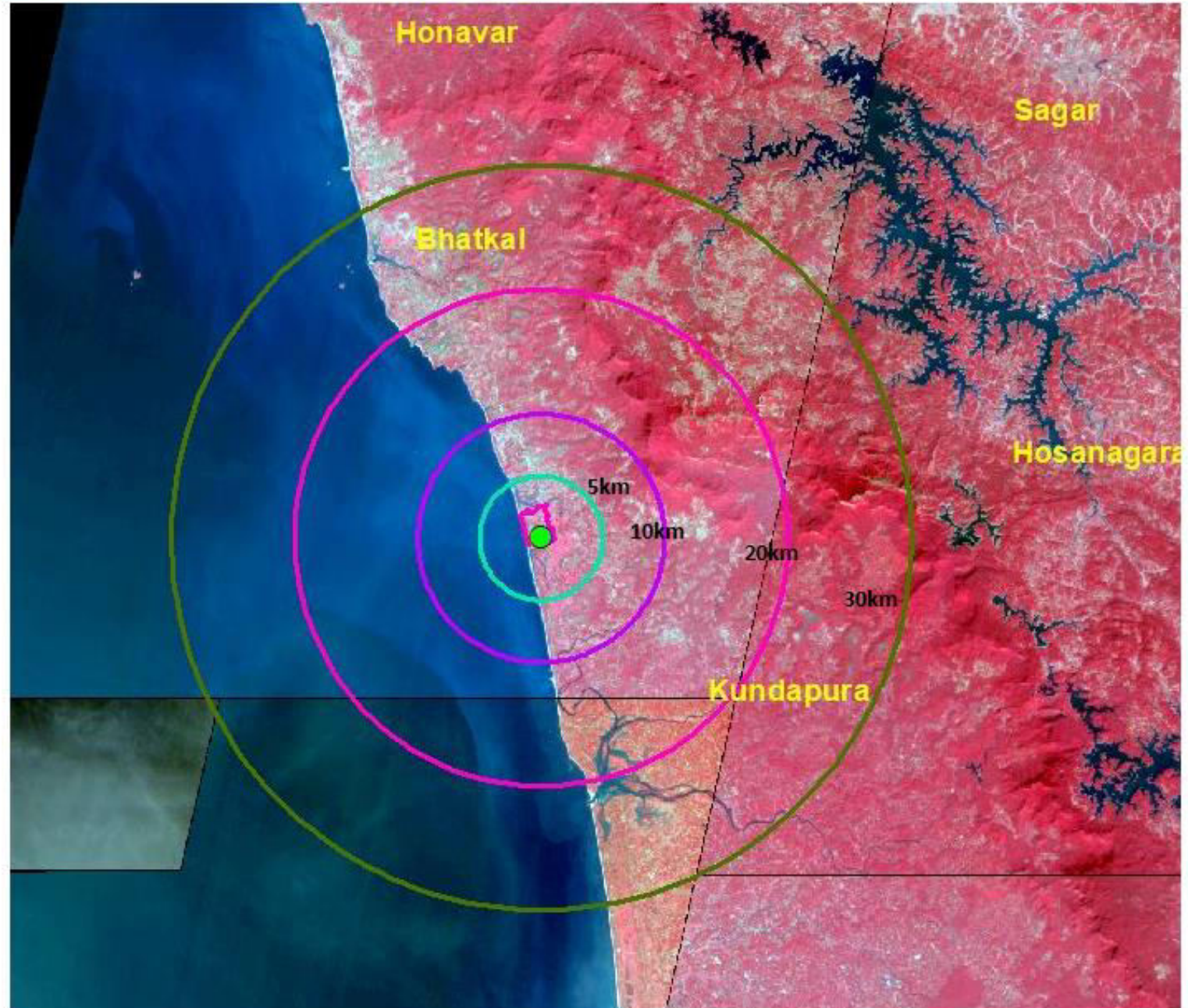
Category	Frequency	Type	Length(KM)
Drain	26	DRDR	7.84
River	3	DRRV	3.40
Total			11.24

Settlement Details

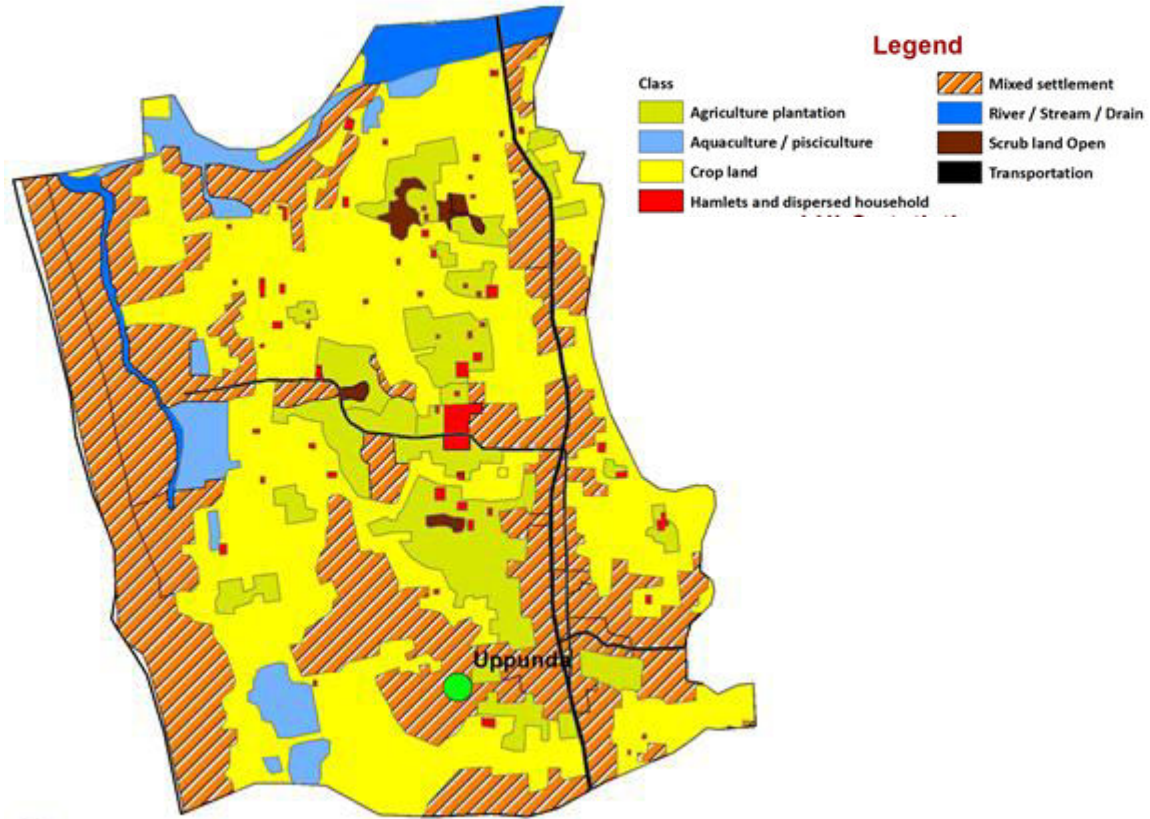
Class	Area (ha)
Village Settlement	11.08
Mixed Village Settlement	124.82
Hamlet & Dispersed	
Household	0.66
Total	136.57

*Transportation layers gives the spatial accessibility within the GP.
Total road length is an indicator of development*

Distance buffer from Uppunda Village and nearest big towns

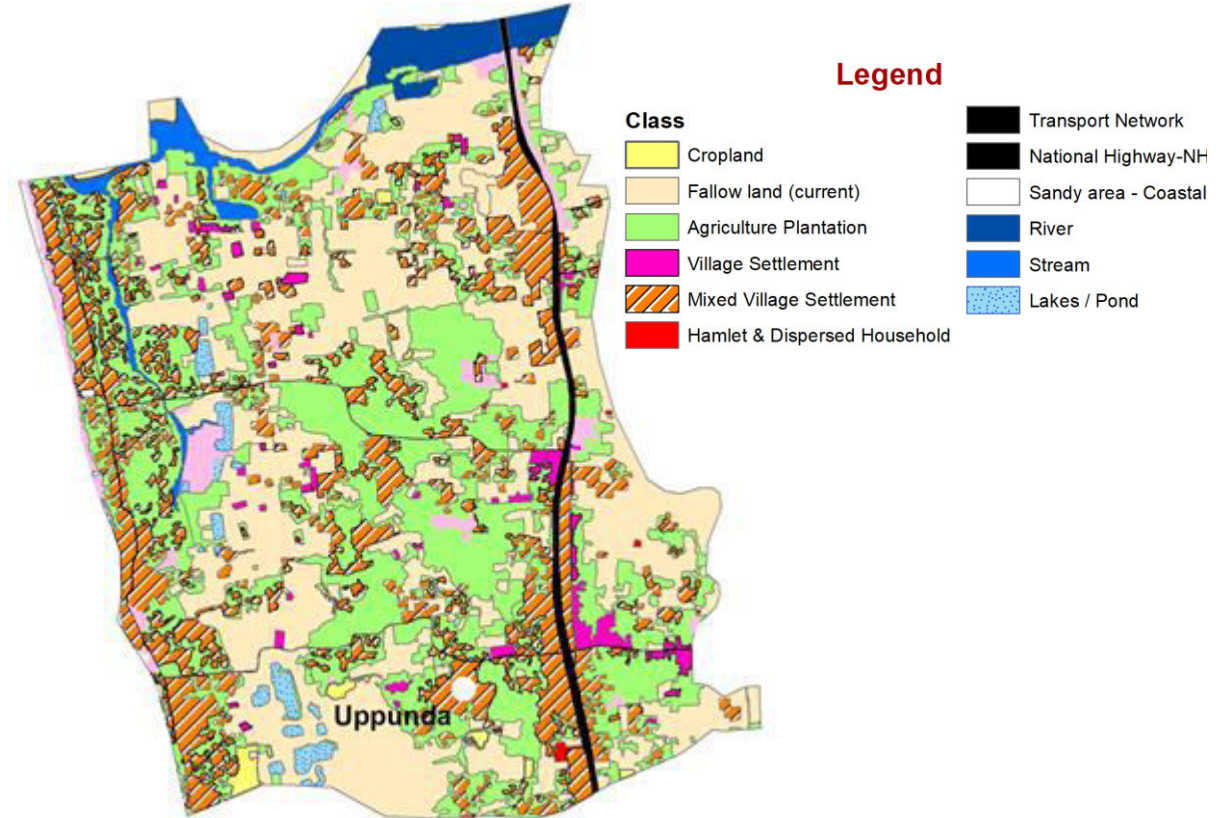


Land use / Land cover (2010 - 11)



Source :
Cartosat1+LISSIV satellite image
FCC 2010 - 11

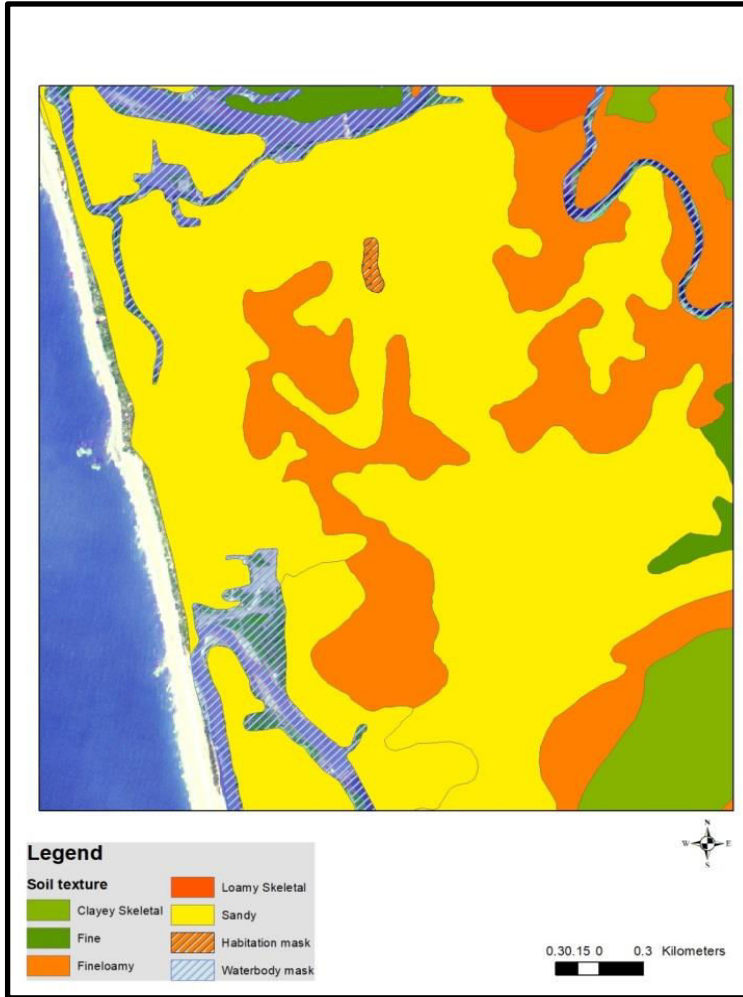
Land use / Land cover (2019)



Source :
KOMPSAT PAN + MX (0.7m)

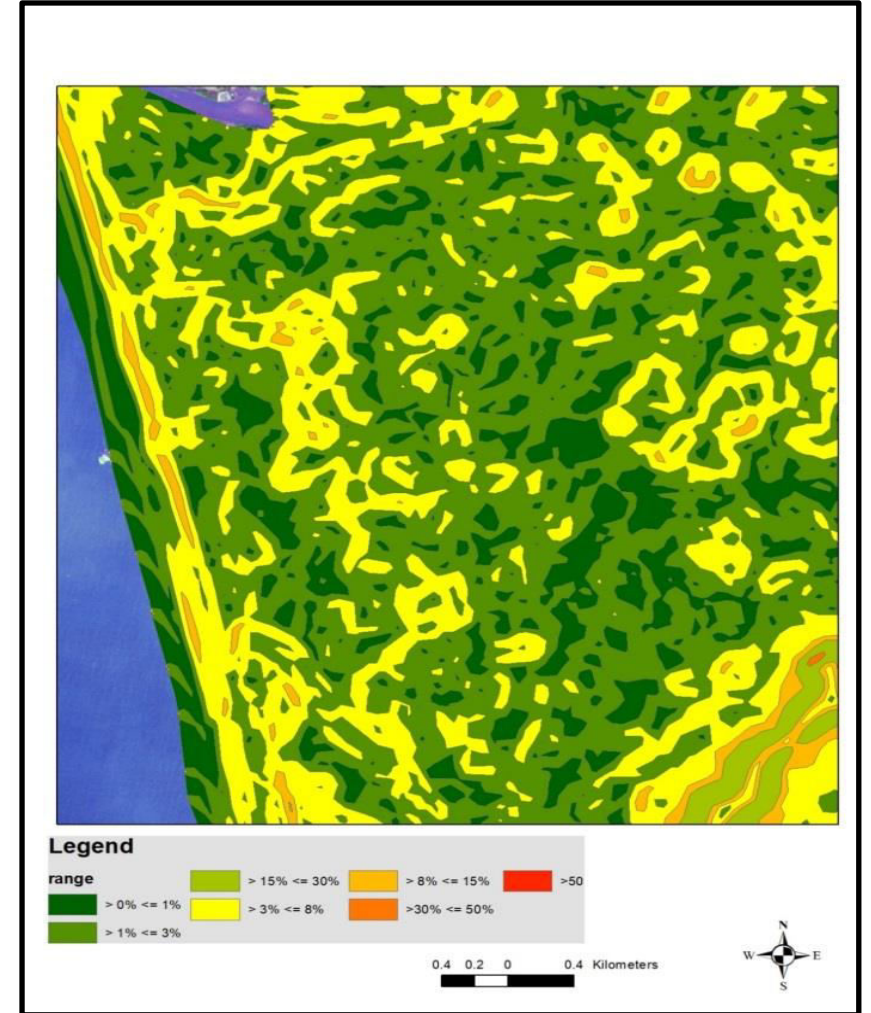
Landuse /Landcover gives the inventory of Natural Resources within the GP

Soil layer of NRSC covering Uppunda Gram Panchayat, Kundapura Taluk, Udipi Dist., Karnataka



Soil parameters and slope are important for planning of soil & water conservation measures and also agricultural planning

Slope layer of NRSC covering Uppunda GP, Kundapura Taluk, Udipi Dist., Karnataka

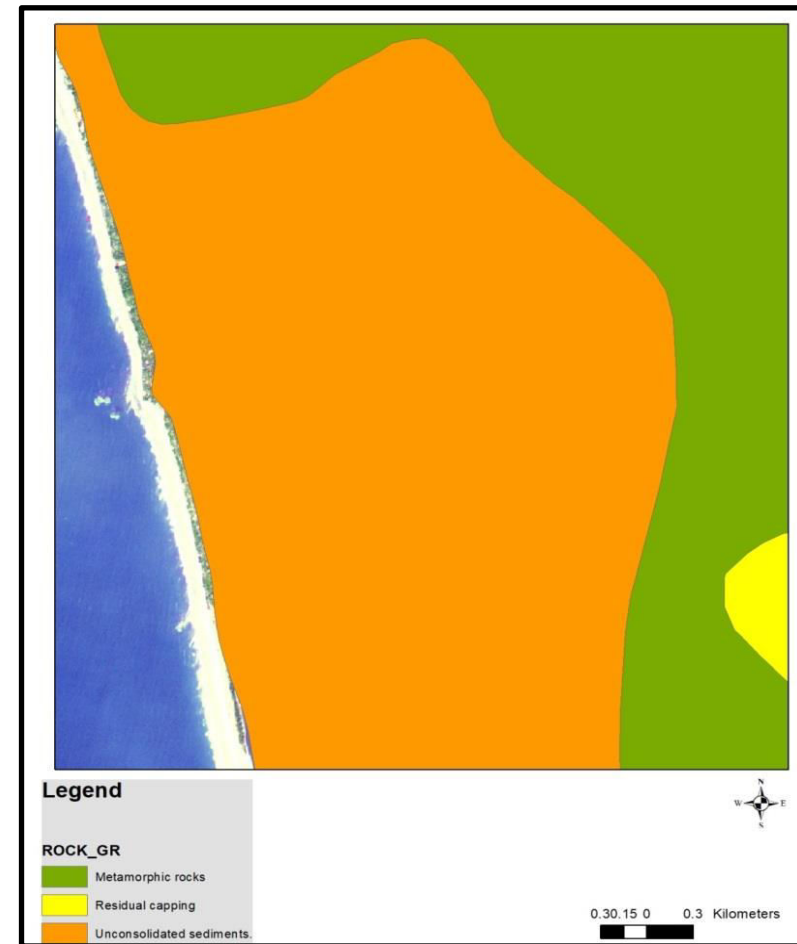
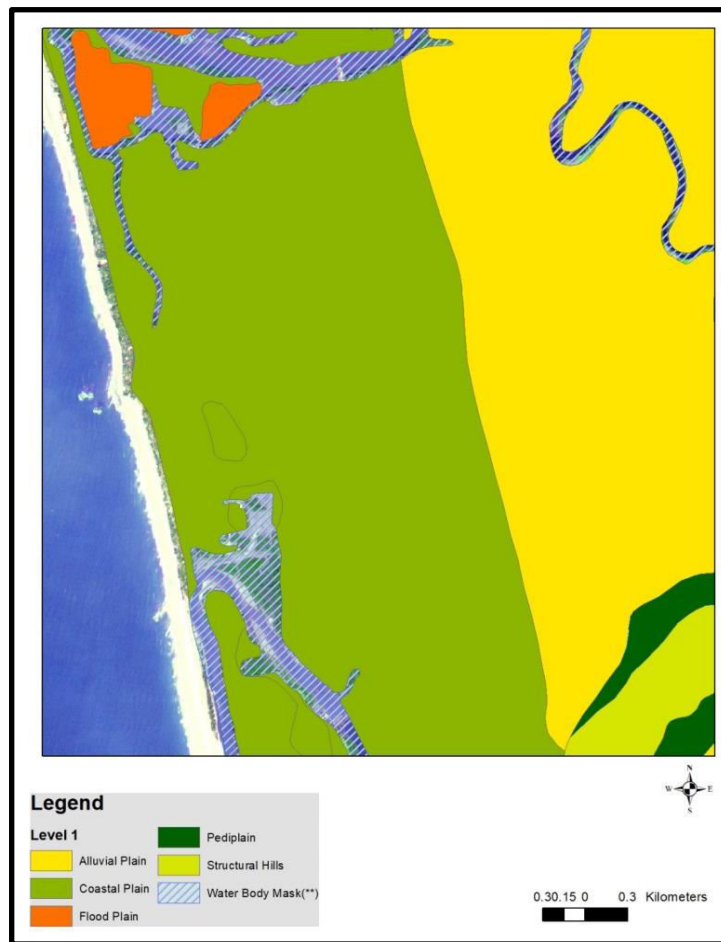


SB_ORDER	GR_GROUP	SB_GROUP	FAMILY_TEX
WATER BODY MAS	WATER BODY MASK	WATER BODY MASK	WATER BODY MASK
Orthents	Ustorthents	Typic Ustorthents	Fineloamy
Ustults	Palehumults	Typic Palehumults	Fine
Fluvents	UstiFluvents	Aquic UstiFluvents	Loamy over Sandy
Ustepts	Haplustepts	Typic Haplustepts	Fine

class	fcode	range
Very gently sloping	SLVGS	> 1% <= 3%
Very gently sloping	SLVGS	> 1% <= 3%
Very gently sloping	SLVGS	> 1% <= 3%
Very gently sloping	SLVGS	> 1% <= 3%

Geomorphology & Lithology layer of NRSC covering Uppunda Gram Panchyat, Kundapura Taluk, Udupi Dist.

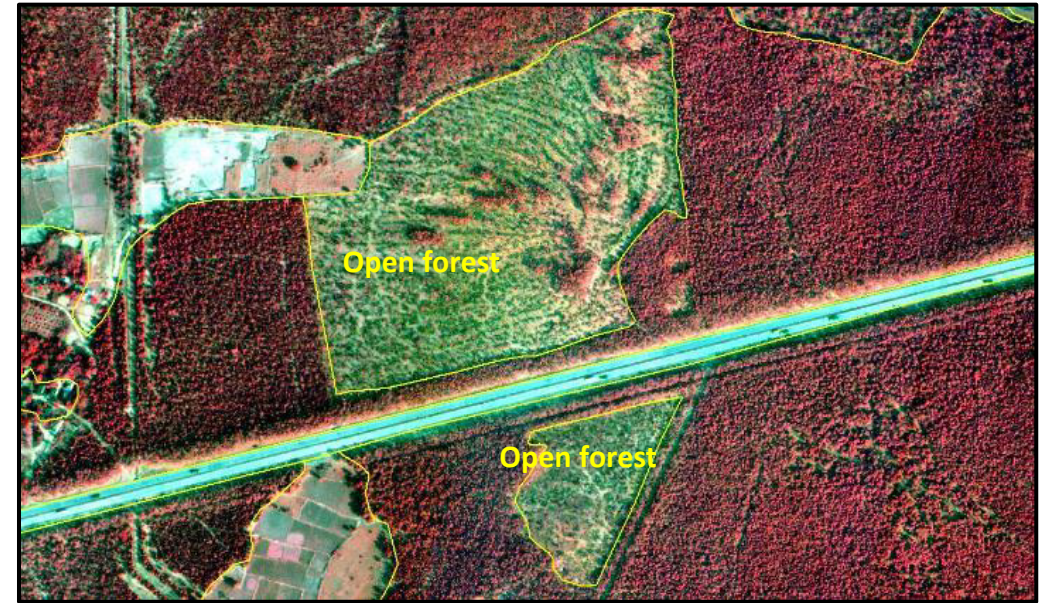
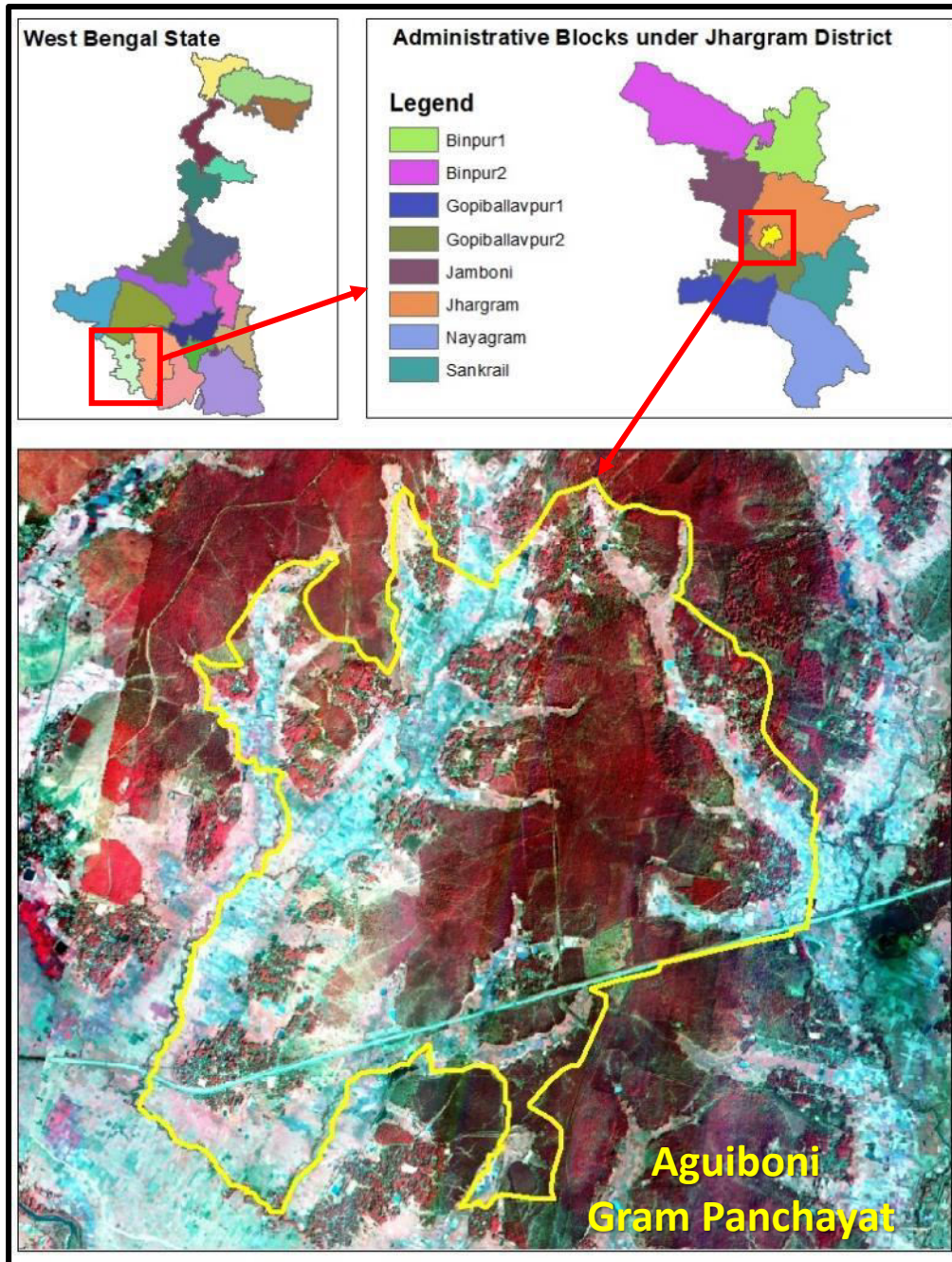
Type of Geomorphology & Lithology are important parameters for identifying ground water prospects



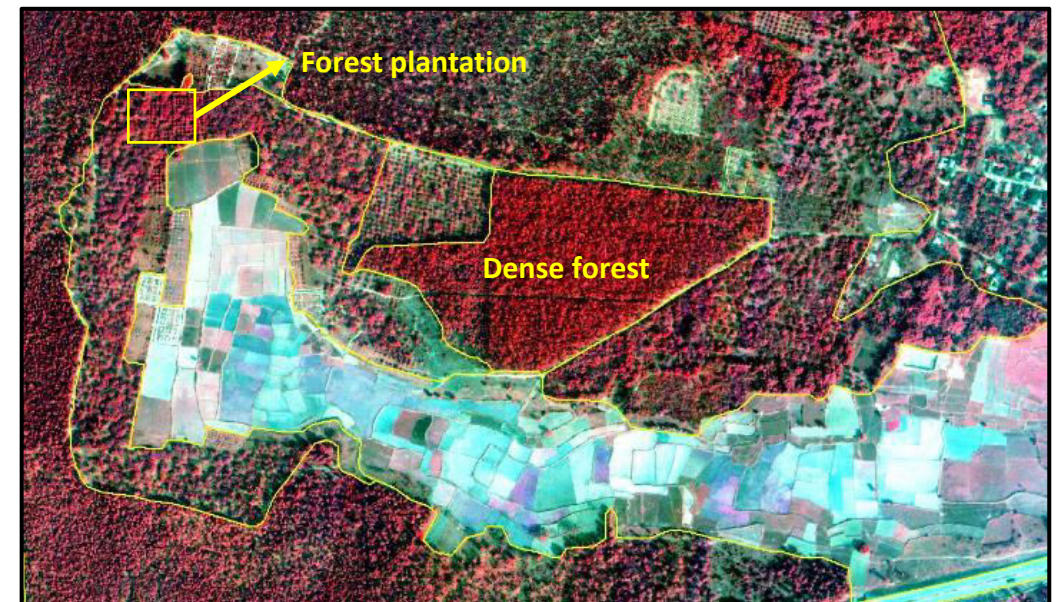
DISCR_L1	DISCR_L2	DISCR_L3
Water Body Mask(**)	Water Body Mask(**)	Water Body Mask(**)
Denudational Hills	Denudational Hills	Denudational Hills
Coastal Plain	Coastal Plain	Coastal Plain
Pediplain	Pediplain Weathered/ buried	Valley Fill/ filled-in valley
Pediplain	Pediplain Weathered/ buried	Valley Fill/ filled-in valley

ROCK_GR	ROCK_TYPE	STRATIGRAP
Metamorphic rocks	-	ARCHAEAN
Metamorphic rocks	-	ARCHAEAN
Residual capping	RESIDUAL CAPPINGS	PALAEOCENE TO RECENT
Residual capping	RESIDUAL CAPPINGS	PALAEOCENE TO RECENT
Volcanics / Meta volcanics	BABABUDAN	ARCHAEAN TO LOWER PROTEROZOIC
Metamorphic rocks	BABABUDAN	ARCHAEAN TO LOWER PROTEROZOIC
Residual capping	RESIDUAL CAPPINGS	PALAEOCENE TO RECENT

GP: Aguiboni, District: Jhargam, State: West Bengal

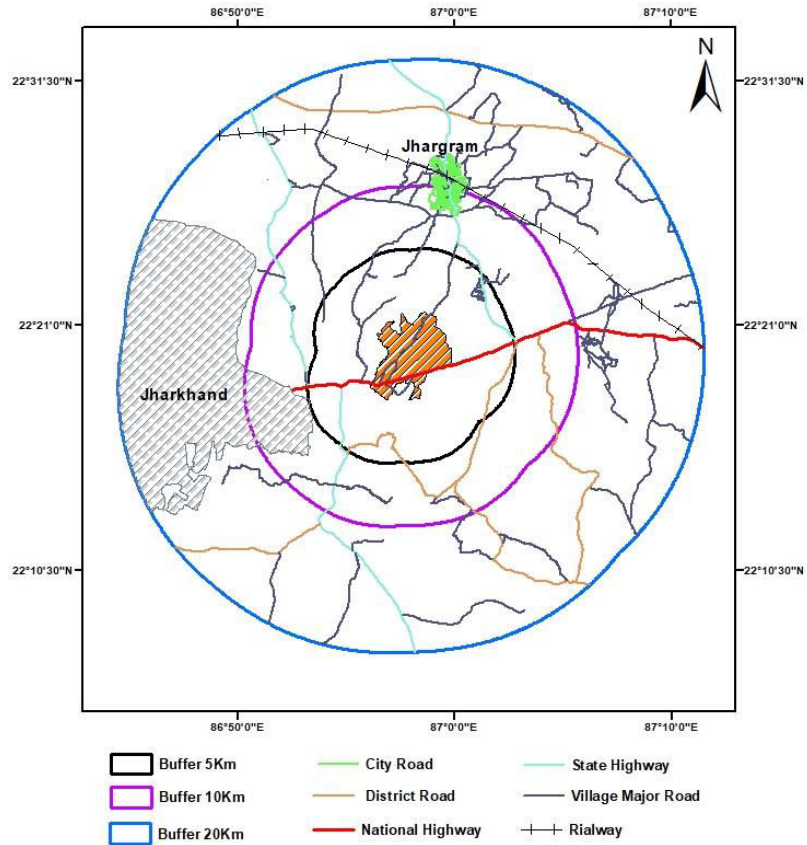


Cartosat VHR data February 2020



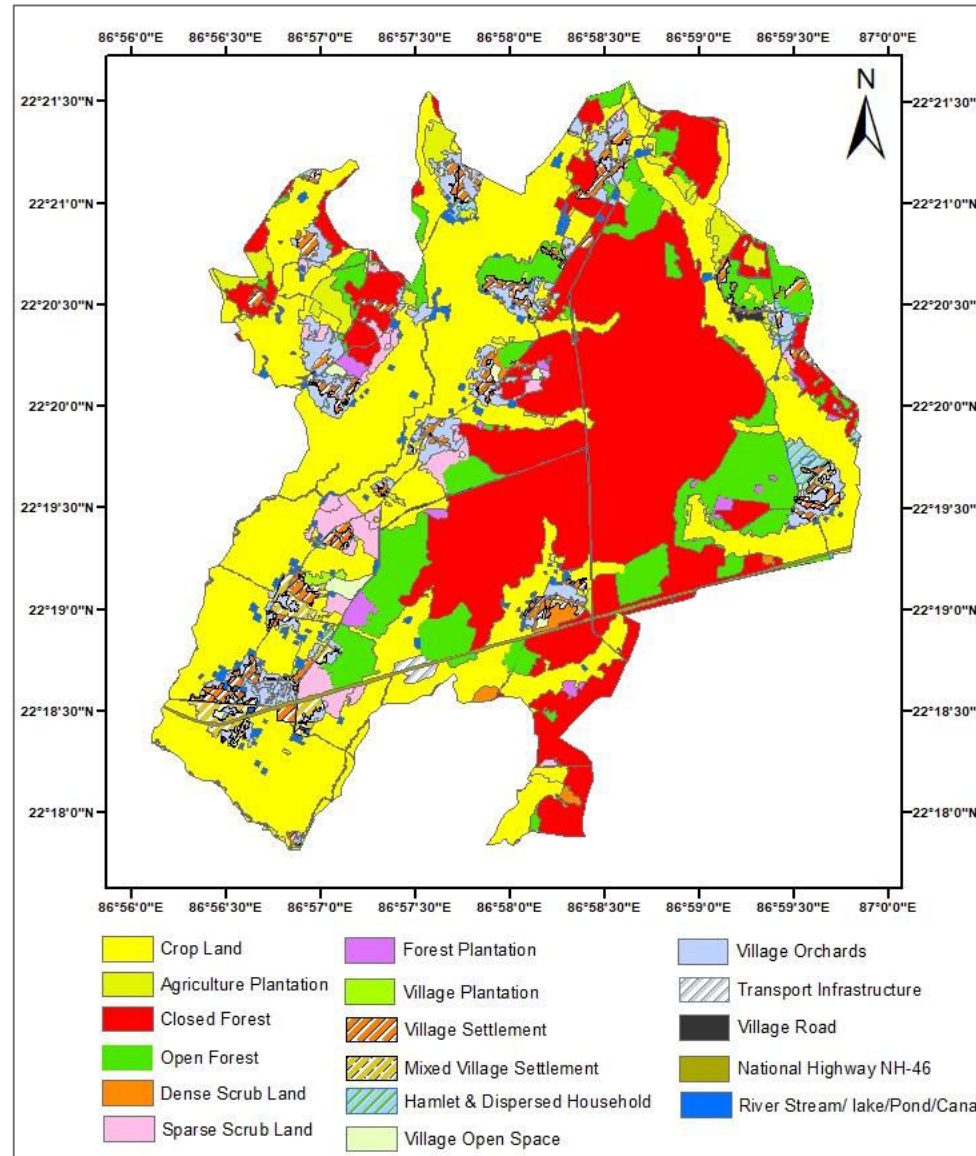
Cartosat VHR data February 2020

GP: Aguiboni, District: Jhargam, State: West Bengal



Major town Jhargram District Headquarter at 10 km from GP

Infrastructure & major town Proximity of Aguiboni GP

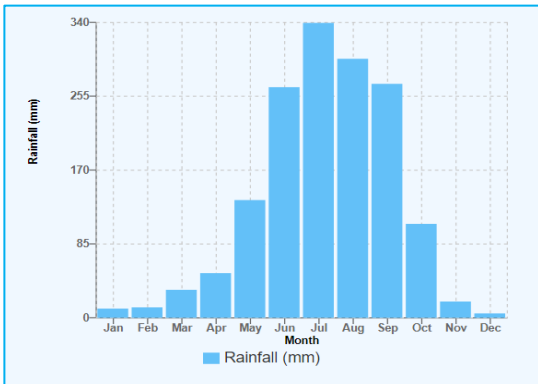


Land use/ Land Cover map

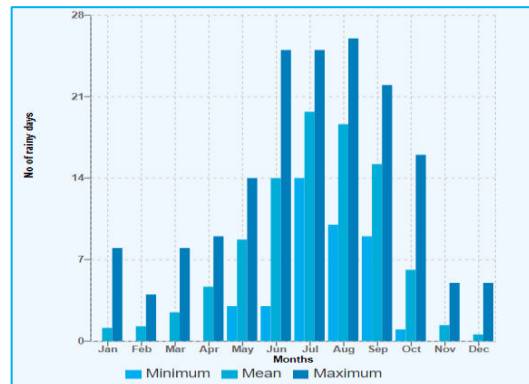
LULC Statistics	
Land use / Land cover Class	Area (ha)
Agriculture Crop land	977.88
Agriculture Plantation	65.63
Closed Forest	817.04
Open Forest	275.85
Forest Plantation	19.39
Village Settlement	85.38
Mixed Village Settlement	29.10
Hamlet & Dispersed Household	19.46
Village Plantation	3.81
Village Orchards	113.91
Village Open Space	14.42
Dense Scrub Land	11.94
Sparse Scrub Land	60.79
Canal	4.64
River Stream	6.34
Lake/Pond	36.93
Village Roads (Polygon)	19.43
National Highway NH-46 (Polygon)	16.36
Transport Infrastructure	5.70

Surface Water / Runoff Potential for Gram Panchayats

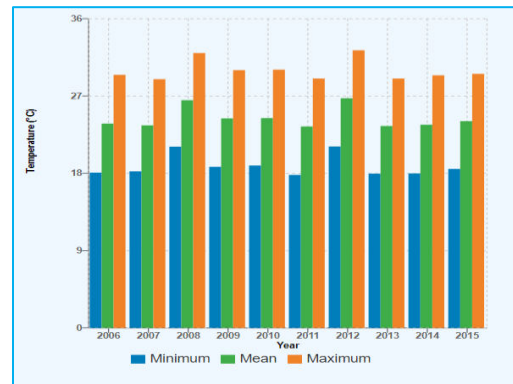
- ❖ Long Term Assessment of surface water potential for 34 GPs.
- ❖ **Methodology:** The USDA Natural Resources Conservation Service (NRCS) Curve Number (CN)
- ❖ **Inputs:** Land Use Land Cover, Hydrologic Soil Groups, Rainfall are integrated to generate the surface runoff potential of a region.
- ❖ **Approach:** Development of Semi-Automated Runoff Potential Tool.
- ❖ **Utility:** Quantitative assessment of runoff serves as basic information for adopting suitable soil and water conservation measures.



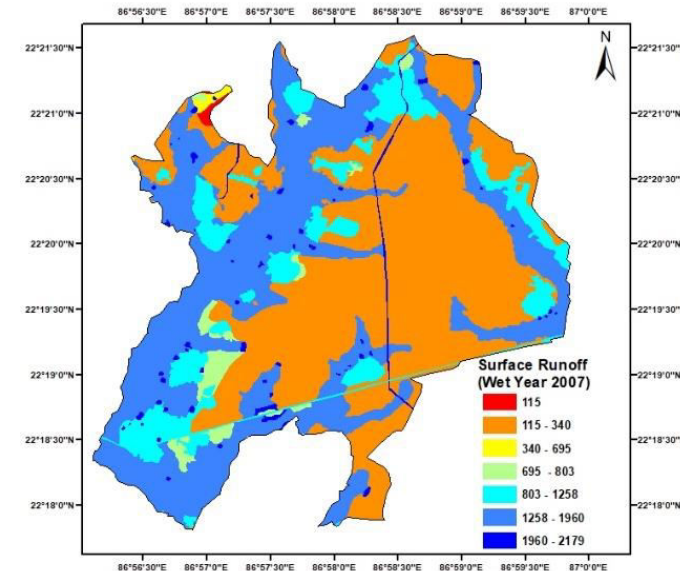
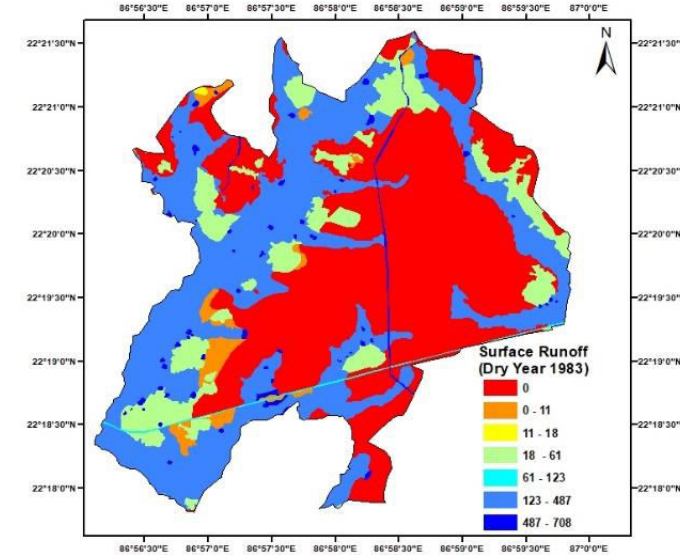
Average monthly Rainfall (1986-2015)



No of Rainy Days(1986-2015)

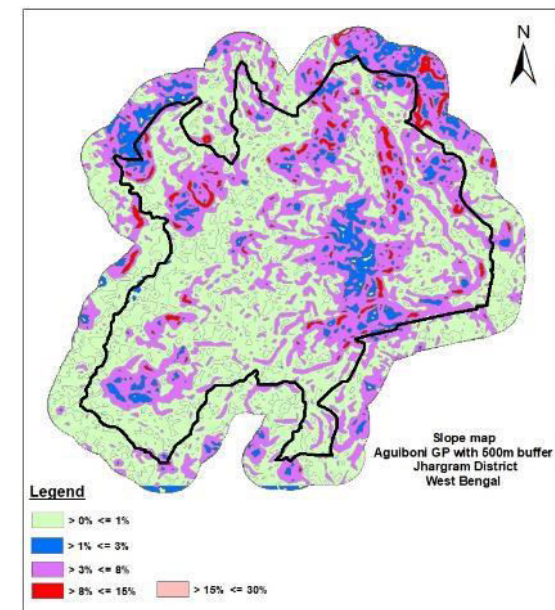
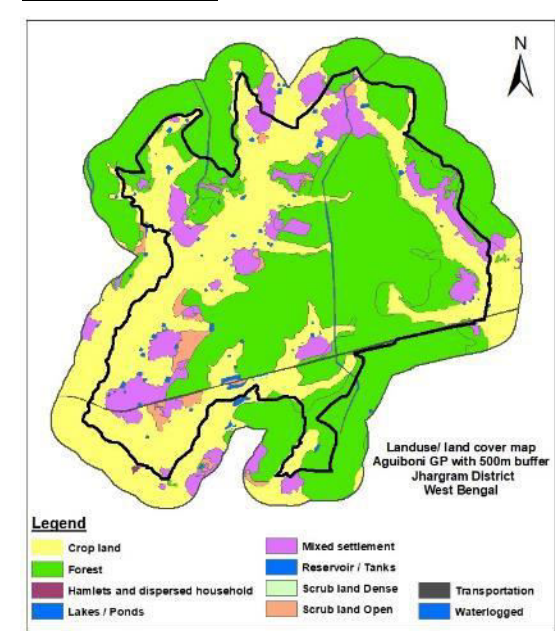


Annual Temperature (2006-2015)



Surface runoff assessment under different meteorological conditions

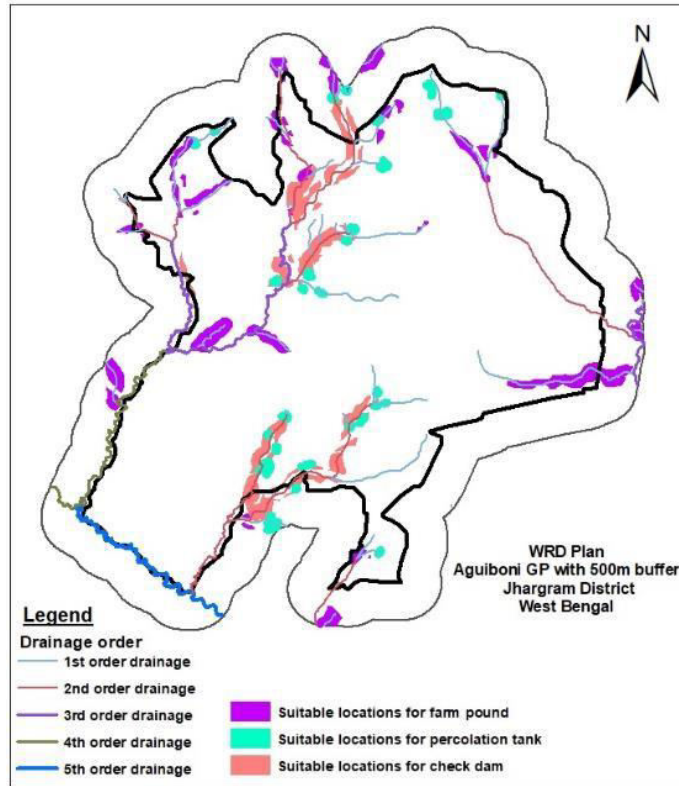
LUCL Map



Slope Map

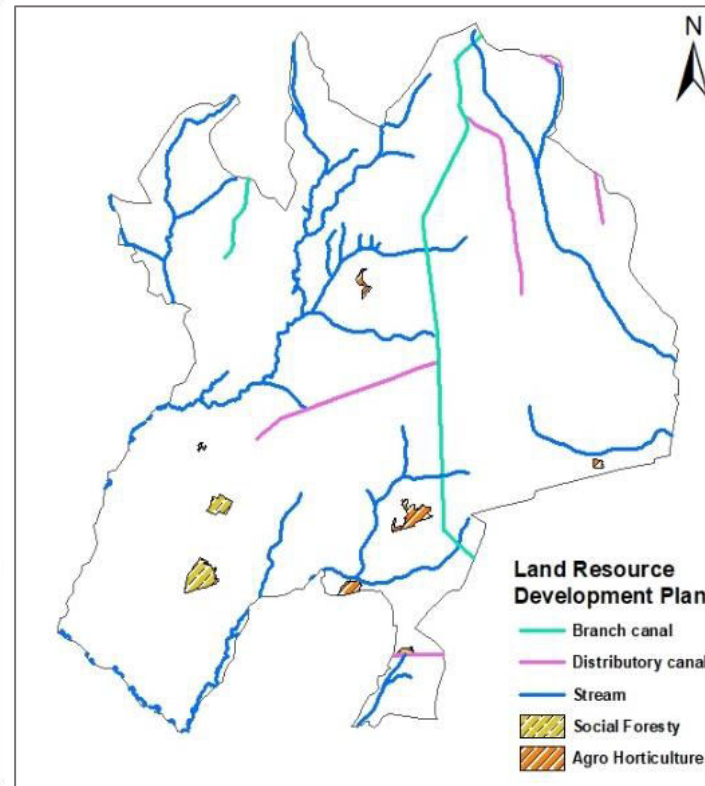
Land & Water Resource Development Plan

GP: Aguiboni,
District: Jhargam, State: West Bengal



Water Resource Development Plan (WRDP)

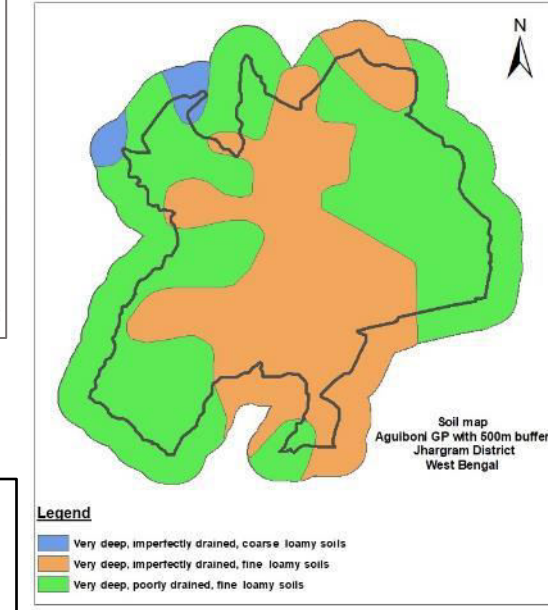
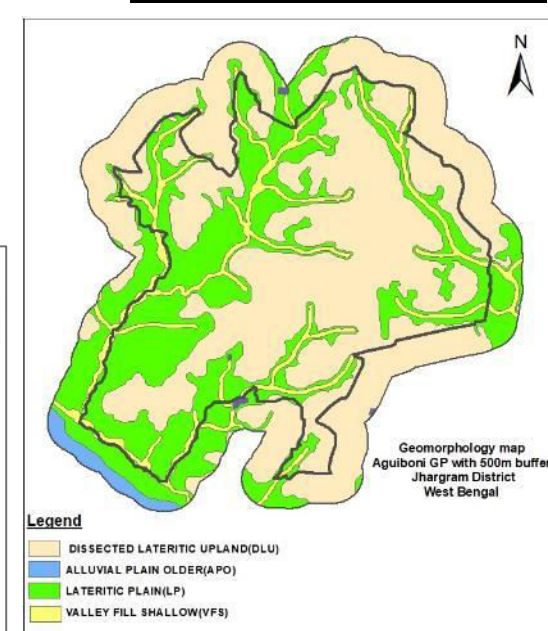
Drainage network, land use/land cover, slope, soil and geomorphology layers have been used to generate WRD plan



Land Resource Development Plan (LRDP)

land use/cover, Land capability classes soil, slope groundwater potential and existing infrastructure layers have been used to generate LRD plan

Geomorphology Map



Soil Map

GPSDP Mobile App

Survey Data Collection and Visualisation

Gram Panchayat Spatial Development Planning Household Survey

Household Survey Mobile app and Spatial Analysis of survey data

Cross-Platform Mobile Application for House Hold Survey for 34 GPs across country

- Cross platform mobile application (iOS & android) for carrying out household survey in gram panchayat.
- Tools in Bhuvan Panchayat Geoportal for visualization and analysis of HH Survey data.
- Capacity building to partner institutions and state govt. officials.

GPSPD House hold Survey through Mobile App

Min of Panchayati Raj
Household Survey

Enter Login Details

Username
Password

Log In

Powered by
bhuvan
Indian Geo-Platform of ISRO

House Hold Survey

Select Gram Panchayat

Start New Survey

Continue Previous

Selected Gram Panchayat:
Partola

Start New HH Survey

Landmark

Wamburg shop

Resident Since

2000

House

Own House

House Rent

House Rent in Rs.

BPL Card

No

Ration Card

No

Getting House Location

Lon: 77.229558
Lat: 28.555876,
Acc: 700 m

Capture Photo

Captured Photo Coordinates:
T: Lon: 77.229558, Lat: 28.555876, Acc: 700 m
You are at Lon: 77.22956, Lat: 28.55588, Acc: 700 m

Cancel Send Later Next



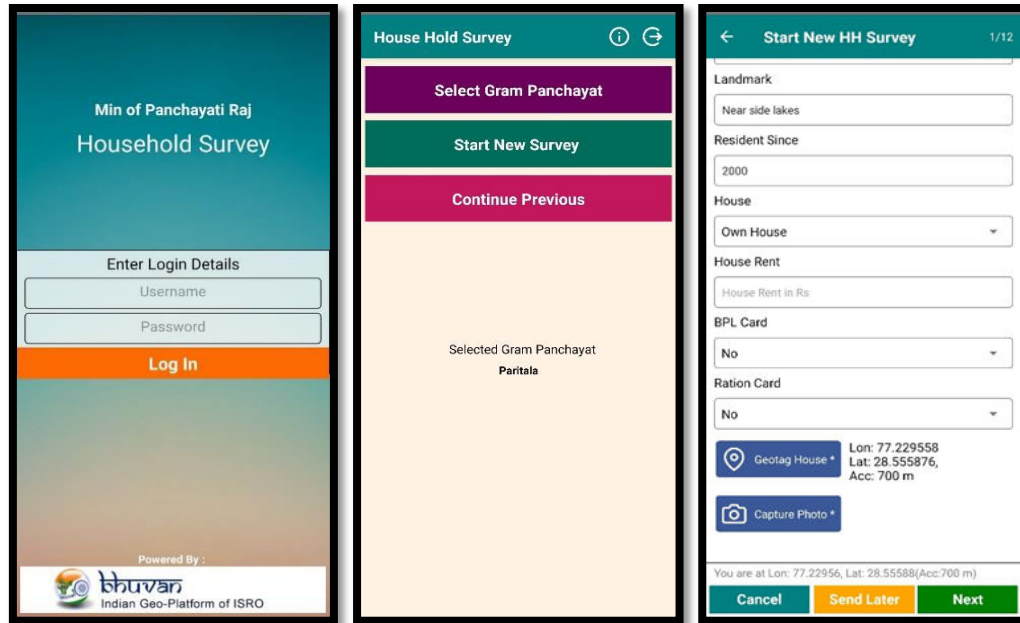
175
Attributes

12 Categories for Data Collection through Mobile App

1. Household
2. Family
3. Land Holding
4. Built Up
5. Services
6. Toilet
7. Monthly Expenditure
8. Health
9. Livestock
10. Other Assets
11. Energy Source
12. Other
(Suggestions, Feedback etc)

Mobile App for Geospatial Survey of Household

Cross Platform Mobile App
(Android & iOS)



12 Forms for Data Collection

1. Household
2. Family
3. Land Holding
4. Built Up
5. Services
6. Toilet
7. Monthly Expenditure
8. Health
9. Livestock
10. Other Assets
11. Energy Source
12. Other (Suggestions, Feedback etc)

175
Attributes

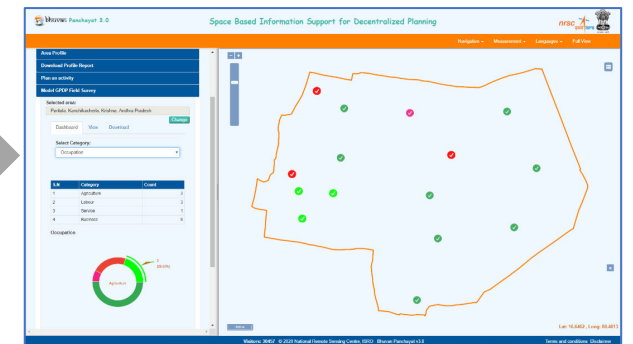
Survey Data from
Mobile App

Bhuvan Panchayat Portal

Visualisation & Analysis

Partner Institutions through
email

Planning



Dashboard on Bhuvan Panchayat

GPSDP Mobile App Walkthrough



QR Code for Downloading the mobile App

[url : https://bhuvan-panchayat3.nrsc.gov.in/mobileapp_hh/gpsdp_survey.apk](https://bhuvan-panchayat3.nrsc.gov.in/mobileapp_hh/gpsdp_survey.apk)

Secure Login

Min of Panchayati Raj
Household Survey


Enter Login Details

Username

Password

Log In

Powered By :

 **bhuvan**
Indian Geo-Platform of ISRO

Gram Panchayat Selection

Select a Gram Panchayat for Survey

Select State:

Select District:

Select Block Panchayat:

Select Gram Panchayat:

Select Gram Panchayat

Cancel

Gram Panchayat Selection

Select a Gram Panchayat for Survey

Select State:

- Select
- Andhra Pradesh
- Assam
- Chhattisgarh
- Gujarat
- Haryana
- Jharkhand
- Karnataka
- Madhya Pradesh
- Maharashtra
- Tamil Nadu
- Uttarakhand
- Uttar Pradesh
- West Bengal

Gram Panchayat Selection

Select a Gram Panchayat for Survey

Select State:

Select District:

Select Block Panchayat:

Select Gram Panchayat:

Select Gram Panchayat

Cancel

Gram Panchayat Selection

The image shows a mobile application interface for a 'House Hold Survey'. At the top, there is a teal header with the text 'House Hold Survey' and two icons: an information icon (i) and a back arrow icon. Below the header are three stacked buttons: a purple button labeled 'Select Gram Panchayat', a dark green button labeled 'Start New Survey', and a pink button labeled 'Continue Previous'. The main content area has a light beige background and features a red-bordered box containing the text 'Selected Gram Panchayat' followed by 'Paritala' in bold.

House Hold Survey

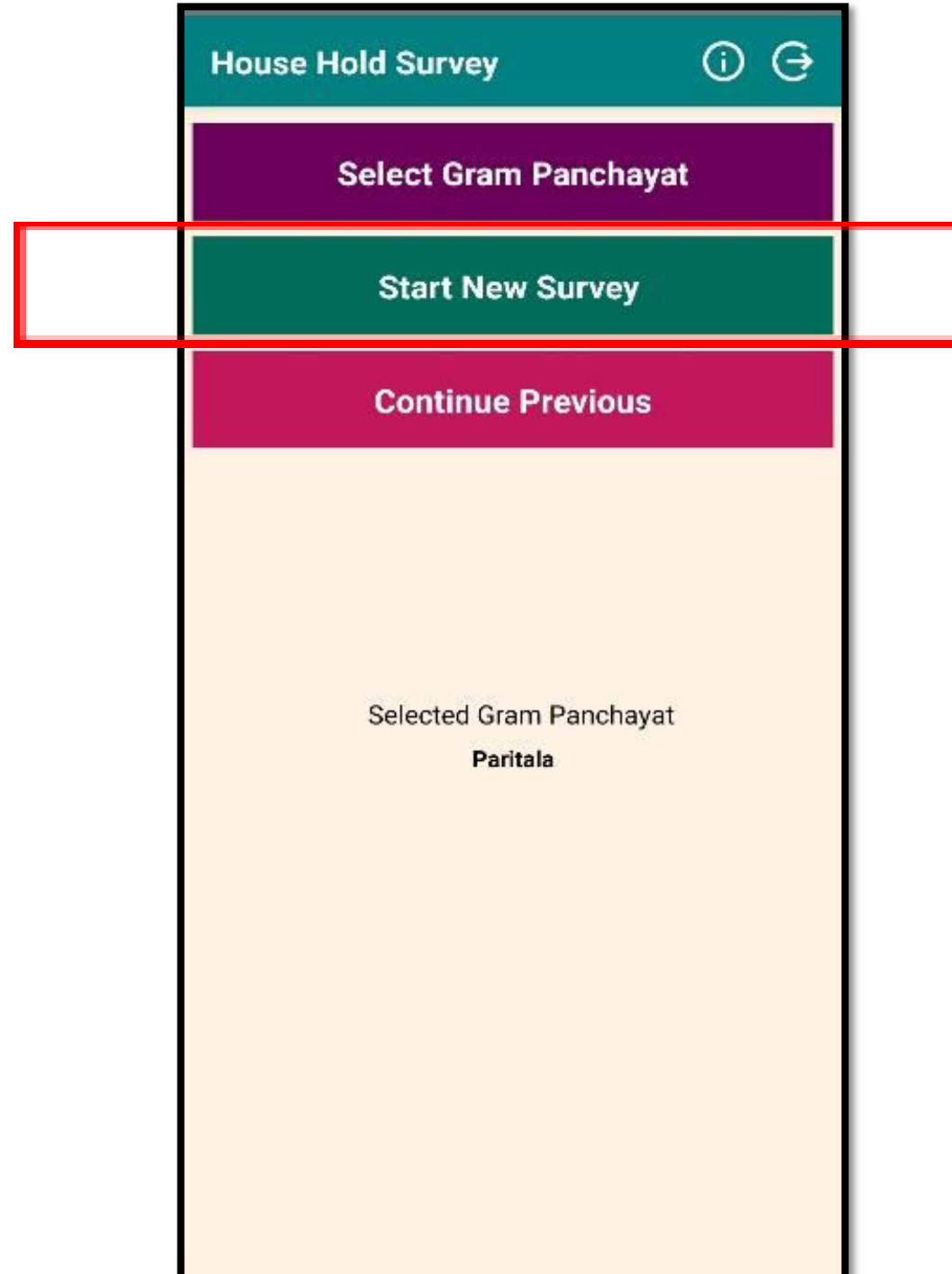
Select Gram Panchayat

Start New Survey

Continue Previous

Selected Gram Panchayat
Paritala

Start New Survey



New Survey

← Start New HH Survey 1/12

Name of the Respondent *

Respondent Name

Religion

Select

Caste

Caste

Address

Address

Landmark

Landmark

Resident Since

Year in YYYY format

House

Select

House Rent

House Rent in Rs

BPL Card

You are at Lon: 77.22956, Lat: 28.55588(Acc:700 m)

Cancel Send Later Next

New Survey

← Start New HH Survey 1/12

Landmark

Hamburg shop

Resident Since

2000

House

Own House

House Rent

House Rent in Rs

BPL Card

No

Ration Card

No

Geotag House *

Capture Photo *

You are at Lon: 77.22956, Lat: 28.55588(Acc:700 m)

Cancel Send Later Next

Geotag House

Start New HH Survey 1/12

Landmark

Near side lakes

Resident Since

2000

House

Own House

House Rent

House Rent in Rs

BPL Card

No

Ration Card

No

Geotag House *
Lon: 77.229558
Lat: 28.555876,
Acc: 700 m

Capture Photo *

You are at Lon: 77.22956, Lat: 28.55588(Acc:700 m)

Cancel Send Later Next

Capture Photo

Start New HH Survey 1/12

Landmark

Hamburg shop

Resident Since

2000

House

Own House

House Rent

House Rent in Rs

BPL Card

No

Ration Card

No

Geotag House * Lon: 77.229558
Lat: 28.555876,
Acc: 700 m

Capture Photo *

You are at Lon: 77.22956, Lat: 28.55588(Acc:700 m)

Cancel Send Later Next

Capture Photo (Max 2)

Start New HH Survey 1/12

Landmark:
Hamburg shop

Resident Since:
2000

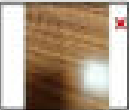
House:
Own House

House Rent:
House Rent in Rs.

BPL Card:
No

Ration Card:
No

Geotag House * Lon: 77.229558
Lat: 28.555876,
Acc: 700 m

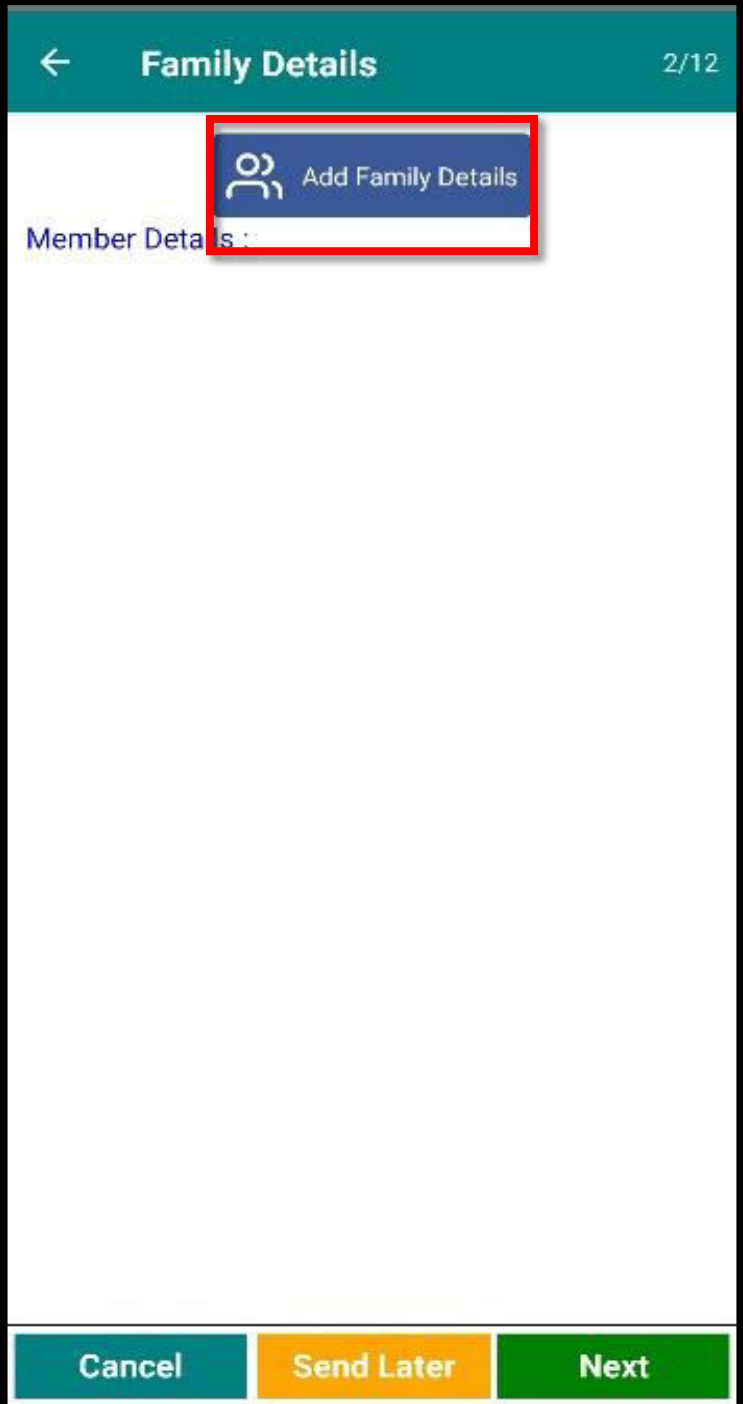
Capture Photo * 

Captured Photo Coordinates:
1. Lon: 77.229558, Lat: 28.555876, Acc: 700 m

You are at Lon: 77.22956, Lat: 28.555876, Acc: 700 m

Cancel Send Later Next

Add Family Details



Family Member Details

Add Family Member Details

Name *

Jack

Relationship to respondent

Self

Age *

Age

Sex

Select ▼

Mobile

Mobile

Marital Status

Select ▼

Educational Qualification

Select ▼

Digital Literacy

Select ▼

Migrated in last 2 years

Select ▼

Occupation Change in last 2 years

Family Member Details

Sex	Male
Mobile	9191991919
Marital Status	Married
Educational Qualification	Graduate
Digital Literacy	Yes
Migrated in last 2 years	No
Occupation Change in last 2 years	No
Present Occupation	Student
Remarks	Studying
<input type="button" value="CANCEL"/> <input type="button" value="RESET"/> <input type="button" value="ADD MEMBER"/>	

Family Member Details

Sex

Male

Mobile

9999999999

Marital Status

Married

Educational Qualification

Post Graduate

Confirm

Do you want to save the Family Member details?

CANCEL YES

Occupation Change in last 2 years

No

Present Occupation

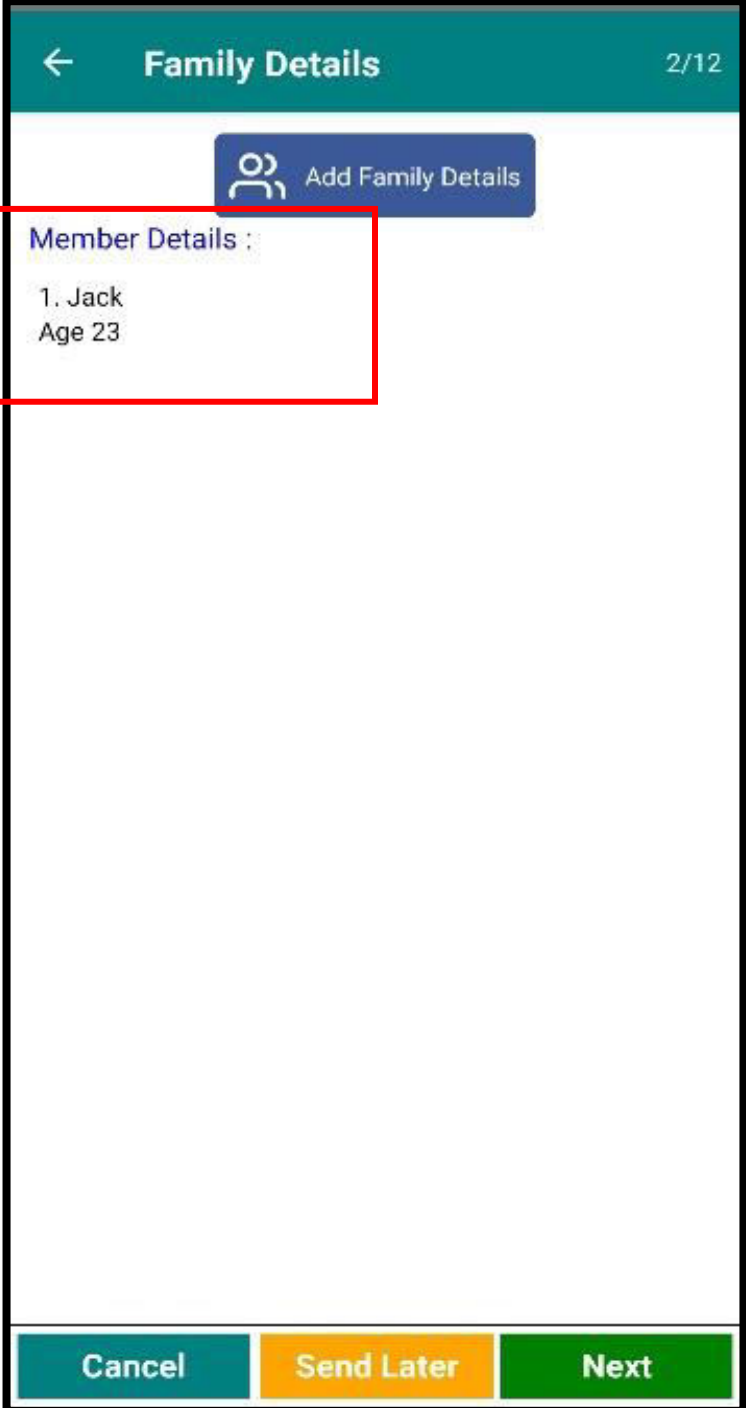
Student

Remarks

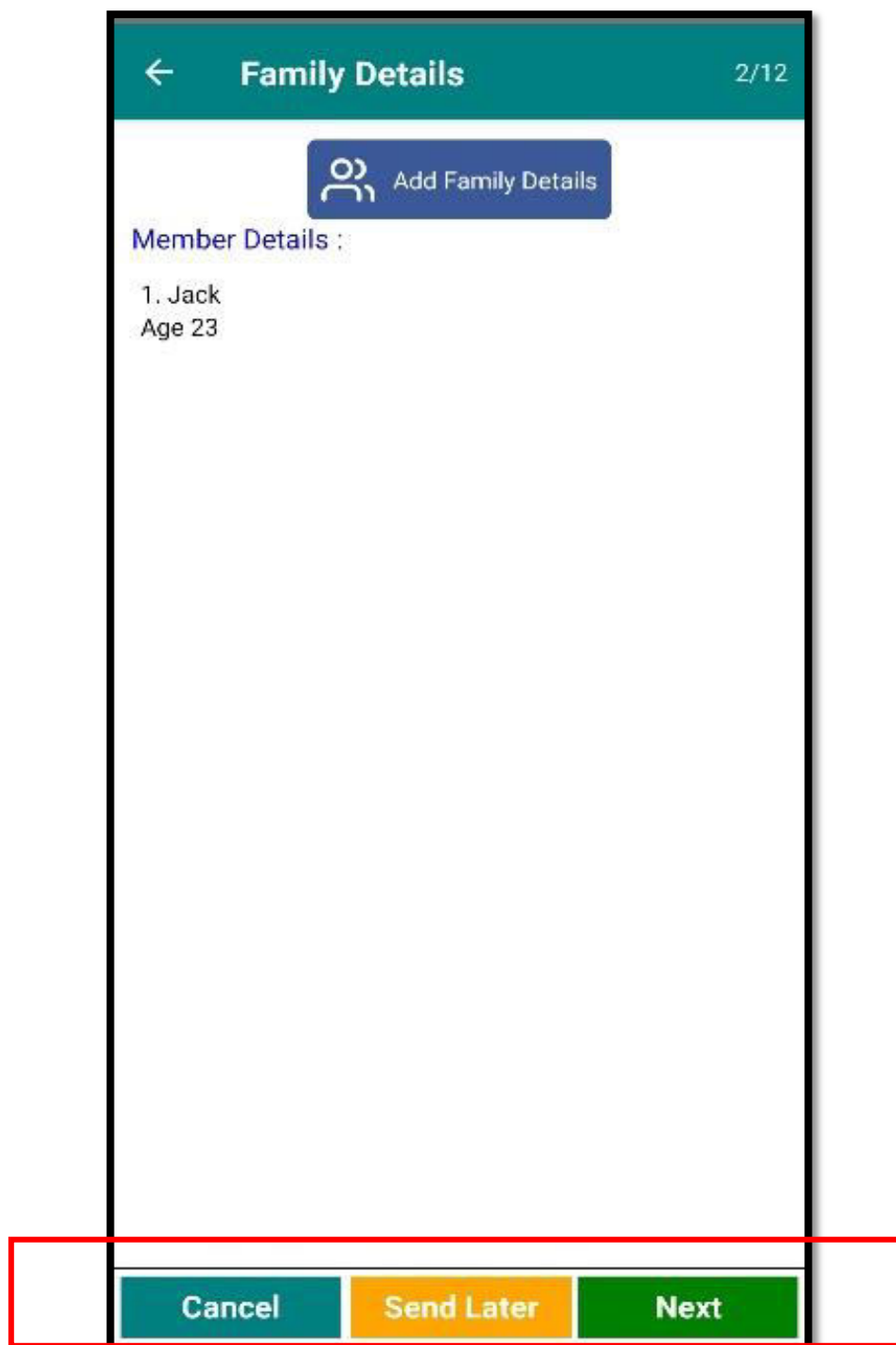
Studying

CANCEL RESET ADD MEMBER

Family Details



Family Details



Land Holding Details

The image shows a mobile application interface for 'Land Holding Details'. At the top, there is a teal header bar with a back arrow, the title 'Land Holding Details', and a page indicator '3/12'. Below the header, the text 'Land Holding' is displayed. A dropdown menu is positioned below this text, with the word 'Select' and a downward-pointing arrow. This dropdown menu is enclosed in a red rectangular box. At the bottom of the screen, there is a navigation bar with three buttons: 'Cancel' (teal), 'Send Later' (orange), and 'Next' (green).

Land Holding Details

← Land Holding Details 3/12

Land Holding

Yes

Khasra no

28488328

Land Area (acre)

23

Land Since (no of yrs)

12

Cultivable

No

Fallow

Yes

Cancel Send Later Next

Housing Built Up Details

← Housing Builtup Details 4/12

Type of structure

Kachcha

Material (Roof)

Thatch

Material (Wall)

Bamboo

Building Height

G+1

Built under Scheme

Yes

Age of Structure

Less than 10 yrs

House Condition

Livable

Cancel Send Later Next

Services Details

← Services Details 5/12

Water supply

Hand Pump

Water Supply Duration (hrs)

23

Solid waste collection

Not Available

Electricity Supply

Yes

Electricity Supply Duration (hrs)

23

Electricity Use

Irrigation

Transportation

4 wheeler

Cancel Send Later Next

Toilet Details

← Toilet Details 6/12

Toilet Available

Yes

Toilet Type

Private

Toilet In Use?

Yes

Construction Under

Own Construction

If Under Scheme - Amount Received

Amount Received (Rs)

Cancel Send Later Next

Monthly Expenditure

← Monthly Expenditure 7/12

Monthly Expenditure

2000

Rank in order of Expenses (1 highest)

Food

2

Education/Training

1

Transportation

3

Health

4

Rent

5

Leisure

6

Paying loan installment

No

Cancel Send Later Next

Health Details

← Health Details 8/12

Vaccination if Any

Yes

Any Prominent Disease

No

Disease Details

Diabetes

No. of visit to hospital in a month

2

Most prominent nearby Medical Facility

Herbal treatment

Fees paid for single visit

2000

Mode of Travel

Private

Cancel Send Later Next

Livestock Details

← Livestock Details 9/12

Cow / Buffalo

Yes

Number

2

Any Disease

None

Commercial Use

Yes

Ox

No

Goat

No

Chickens

No

Horses

No

Donkeys

Cancel Send Later Next

Other Assets Details

← Other Assets Details 10/12

Radio

No

Telephone

Yes

Solar

No

T.V.

Yes

Computer

Yes

Stove

Yes

Cancel Send Later Next

Energy Source

← Energy Source 11/12

LPG

Yes

Kerosene

No

Fire Wood/Coal

No

Biogas

No

Cow Dung

Yes

Others

Others

Energy Source from Scheme

No

Cancel Send Later Next

Other Details (Suggestions, issues etc)

← Other Details 12/12

Vocational Training Centre

Vocational Training Centre

Issues

Issues

Expectations

Expectations

Suggestions

Suggestions

Any Remarks

Any Remarks

Surveyor Name *

Surveyor Name

Cancel Send Later Submit

Surveyor Details

← Other Details 12/12

Issues

None

Expectations

Better customer service

Suggestions

Employ customer executive

Any Remarks

None

Surveyor Name *

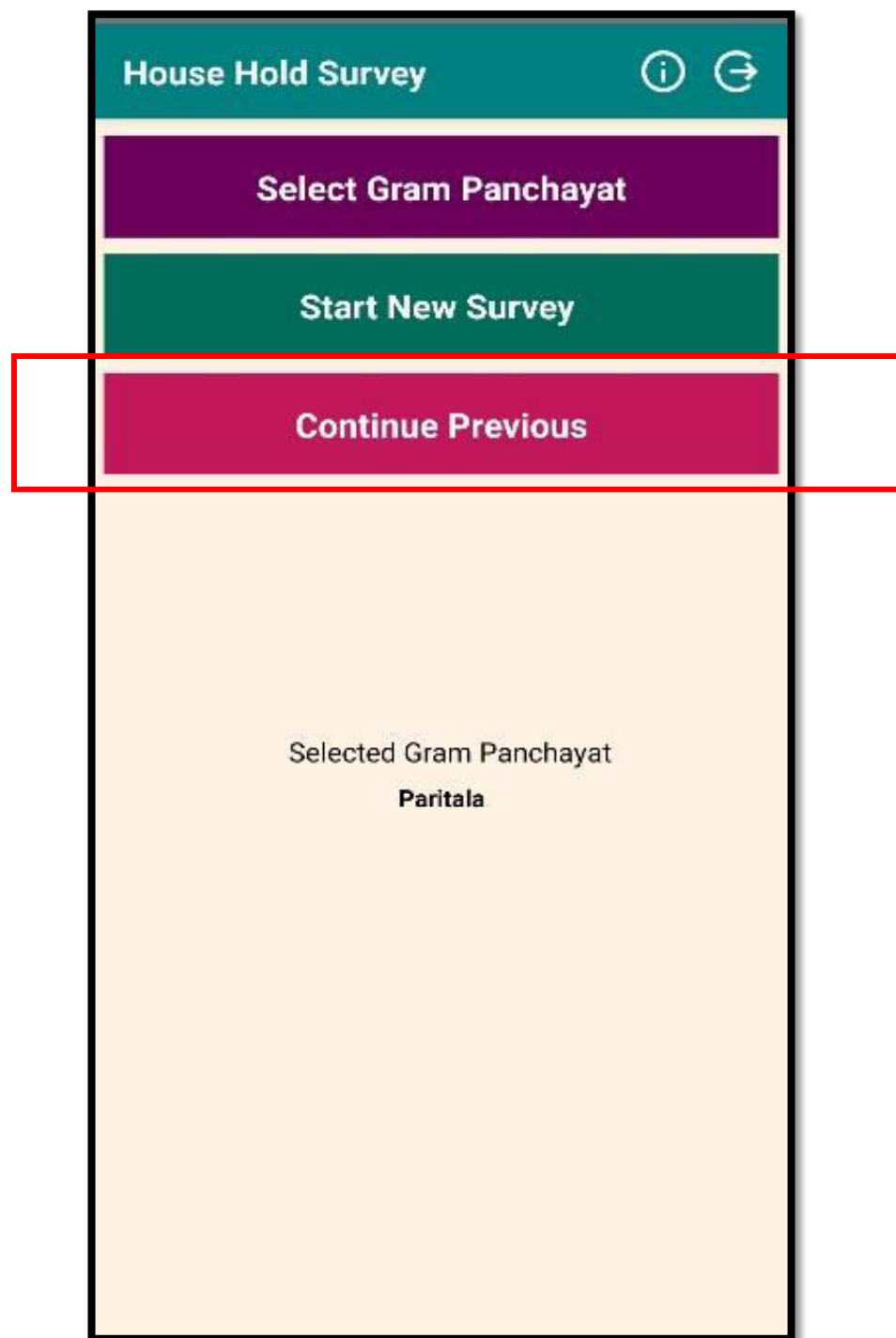
David jones

Surveyor Mobile *

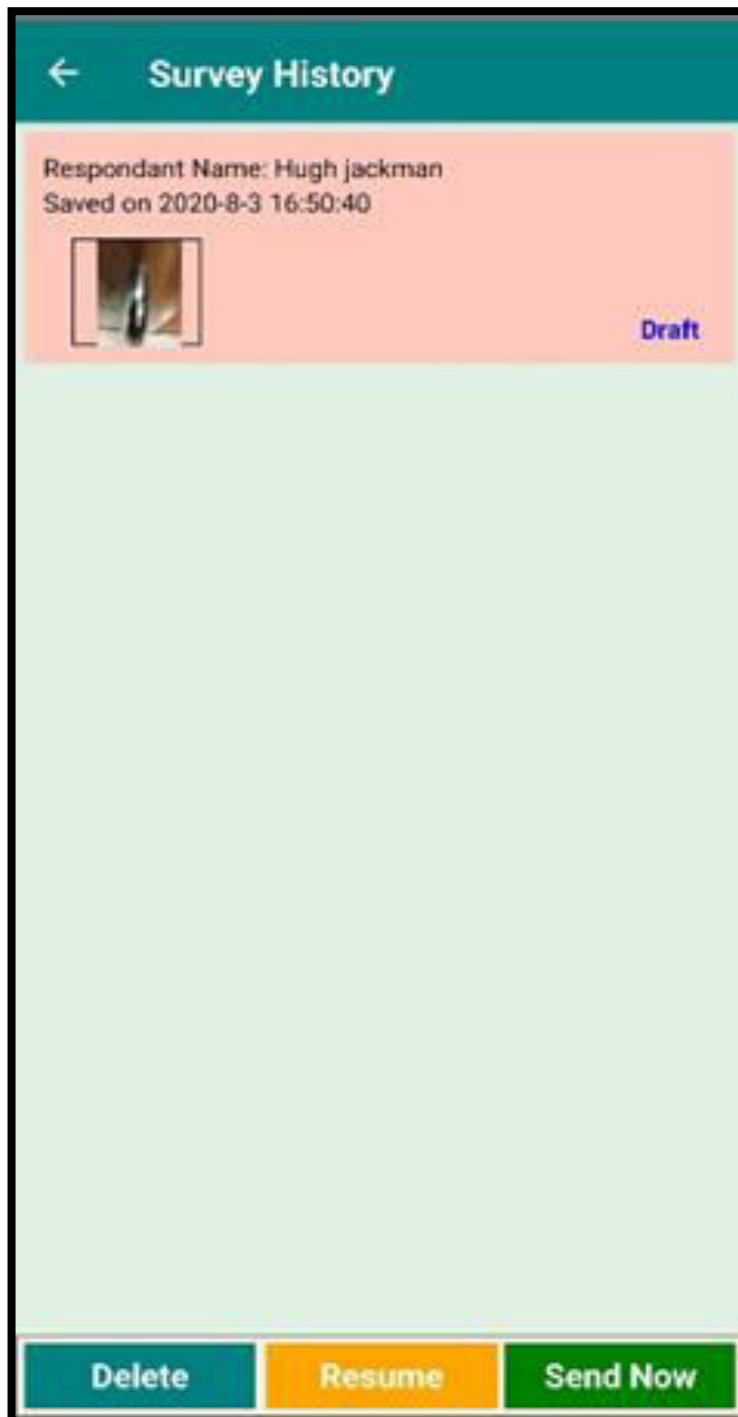
9988888999

Cancel Send Later Submit

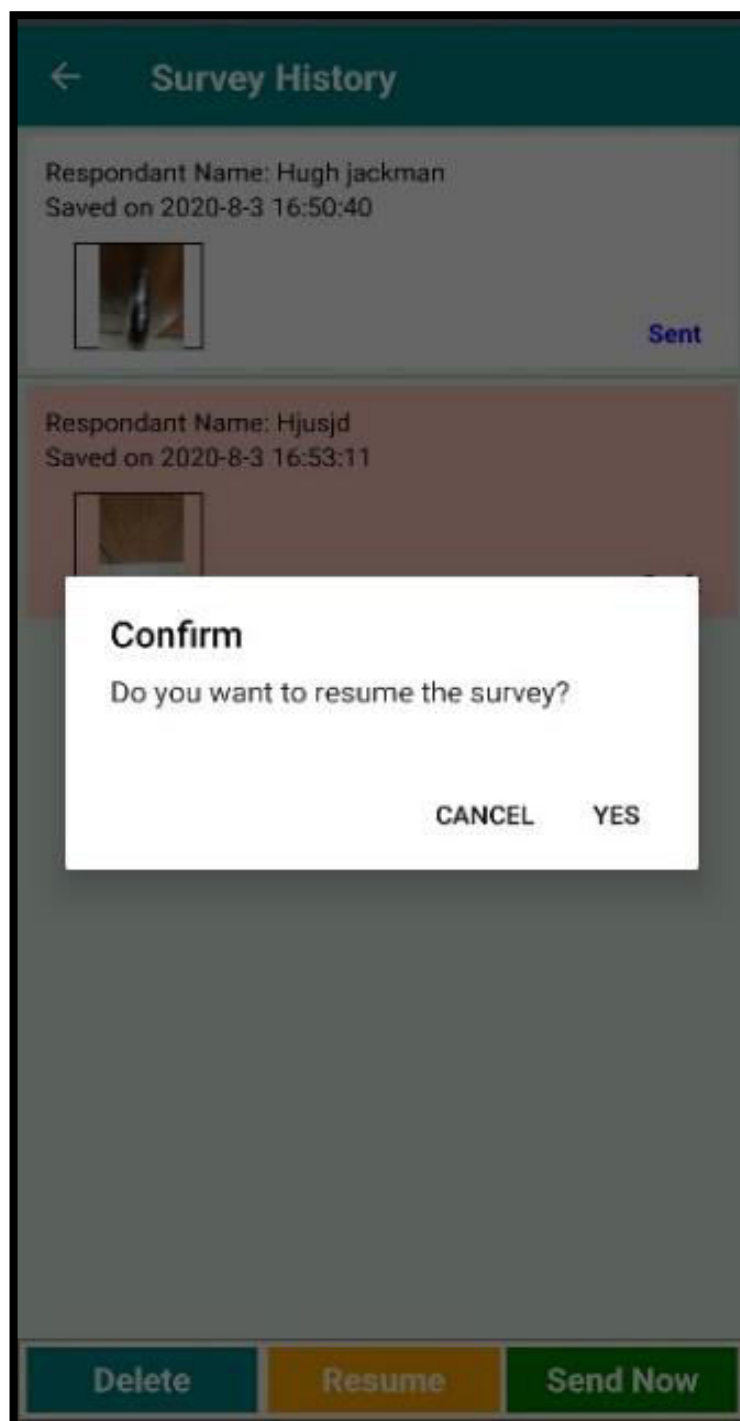
**Facility to send
saved data in
absence of
network
connectivity**



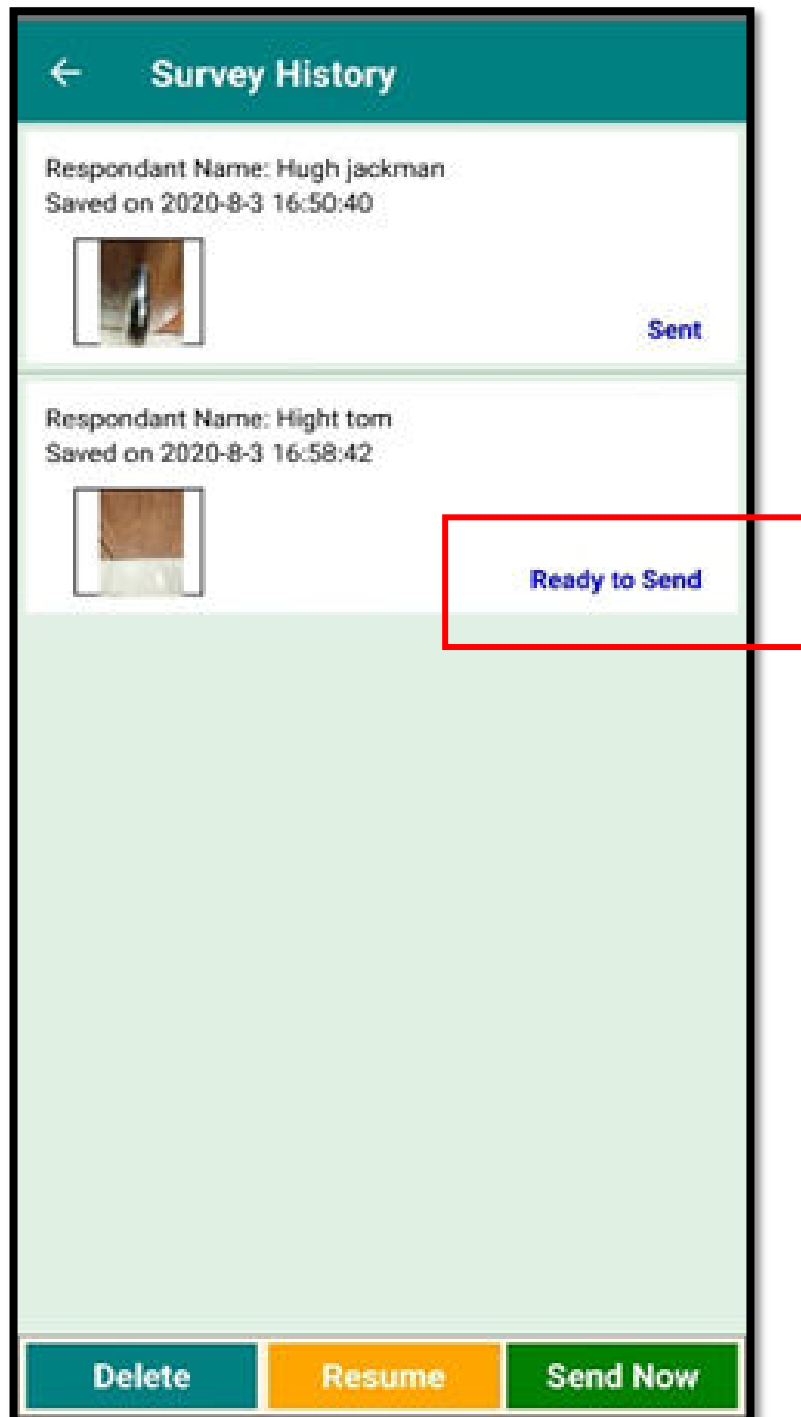
Survey History



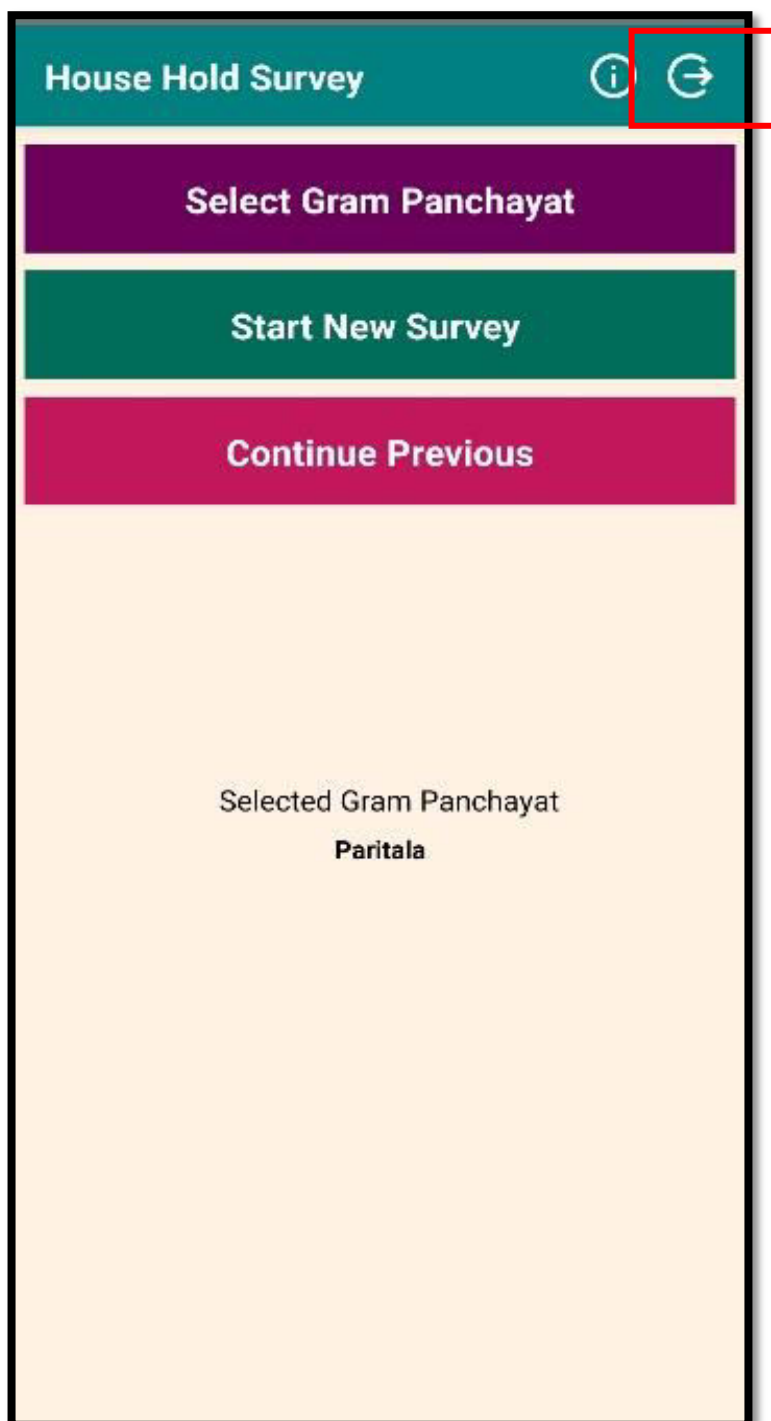
Survey History (Resume Survey / Send)



Survey History (Resume Survey / Send)



Logout



**House Hold Survey Data
Visualization on
Bhuvan Panchayat Portal**

Bhuvan Panchayat

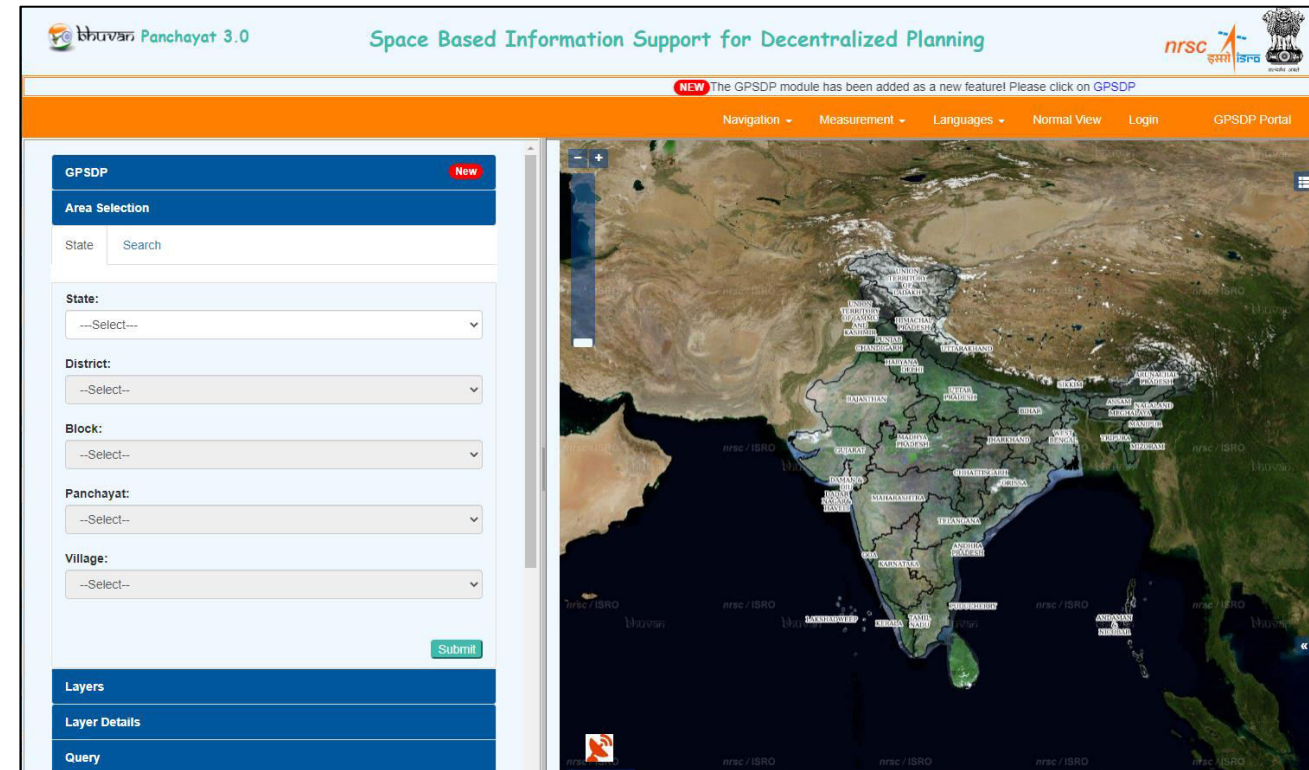
Web GIS portal developed to Deploy a Reliable Geo-Portal for Gram Panchayat Developmental Planning across the Country. Targeted audience for this portal is Public, PRIs and Stakeholders belonging to the gram panchayats

Features:

- Advanced GUI features for Better User Experience
- Advance Report Generation Module
- Powerful Query builder
- Feature profiling based on Gram Panchayat (GP), Population and Region.
- Data as services: Provision to integrate other agencies data as webservice, integrated NIC panchayat webservices.
- Value added products download
- Resource optimization using object-oriented programming concepts.
- Enhanced activity planning with additional features including integration of Land Resource Development Planning (LRDP) & Water Resource Development Planning (WRDP).
- Quantitative asset management.
- Incorporation of Workflow / Requirements of MoPR.
- Spatial Analytics Module for developmental Planning.
- Time Series Data Visualisation.
- **Generation of LRD/WRD Plans**

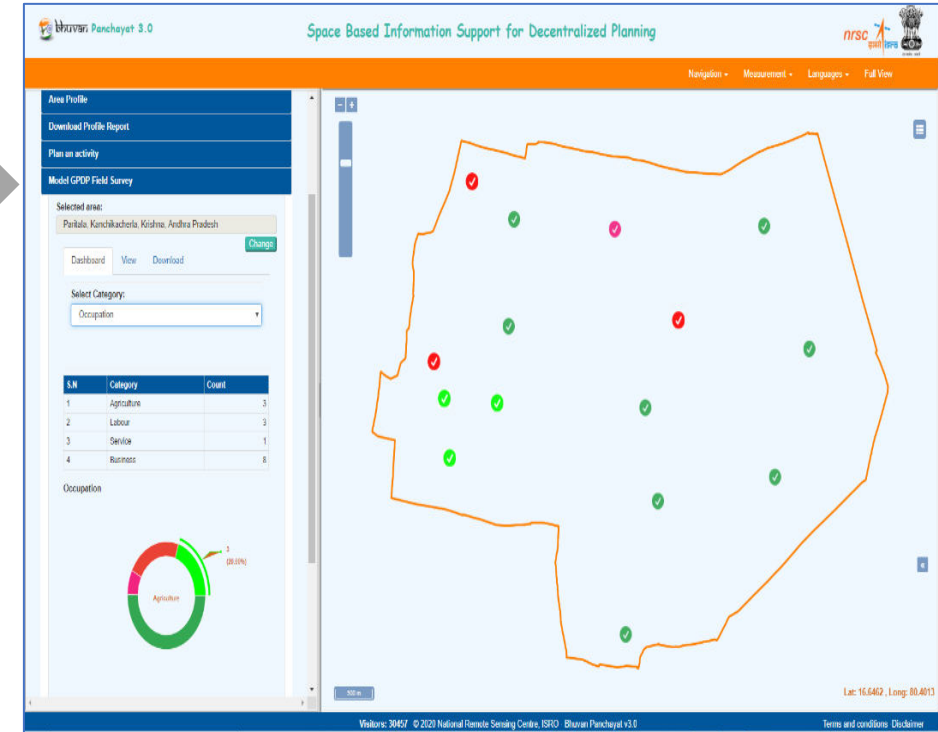
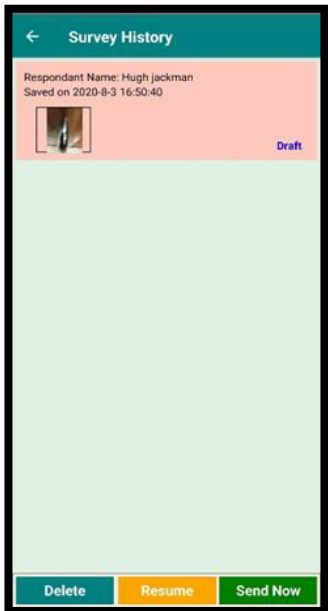
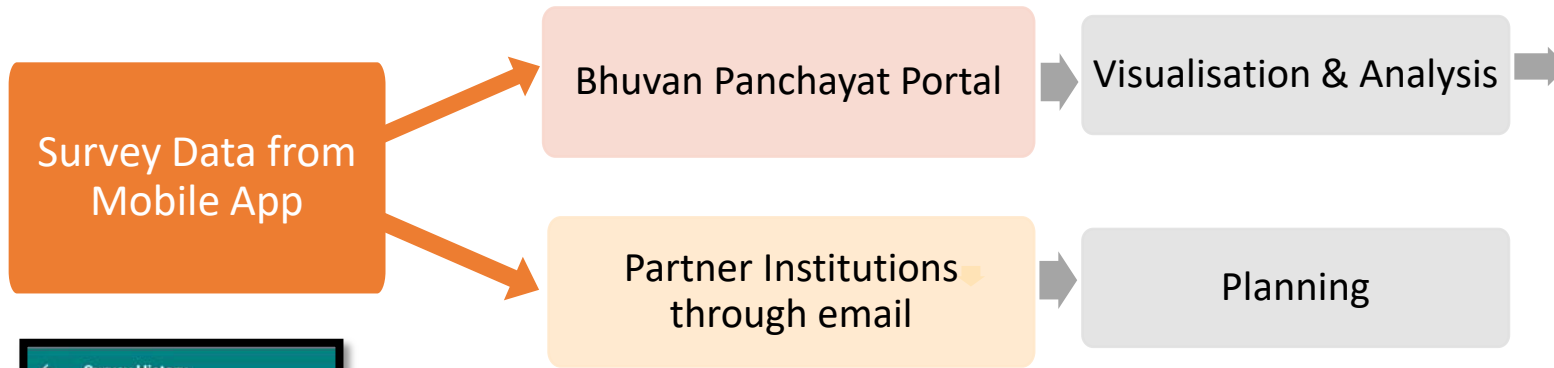
SISDP Update Components

- Updation of GeoSpatial Database
- GeoSpatial Product & Services for planning
- **Bhuvan Panchayat Portal 3.0**



url: <https://bhuvan-panchayat3.nrsc.gov.in>

Household Survey Data Flow



Dashboard on Bhuvan Panchayat

[url: https://bhuvan-panchayat3.nrsc.gov.in](https://bhuvan-panchayat3.nrsc.gov.in)

File 1: HH_Survey_Master.csv

GP code	House Hold code	Respondent Name	Religion	Caste	Address	Landmark	State Name	Dist Name	Blk Name	Village Name	Resident Since	Staying in Own House	Staying in Rent House	BPL Card Status	Ration Card	Family Me	Khasra No	Area of La Owne
203282	1596466504	Kenam	Hinduism	Hindu	Shadnagar	Shadnagar	Andhra Pradesh	Krishna	Kanchikacherla	Paritala	2017	Rent	5000	f	f	1		
203282	1596472663	Test monday	Buddhism	Buddhism	Hyderabad		Andhra Pradesh	Krishna	Kanchikacherla	Paritala	2016	Own		t	t	2	Kh20	23

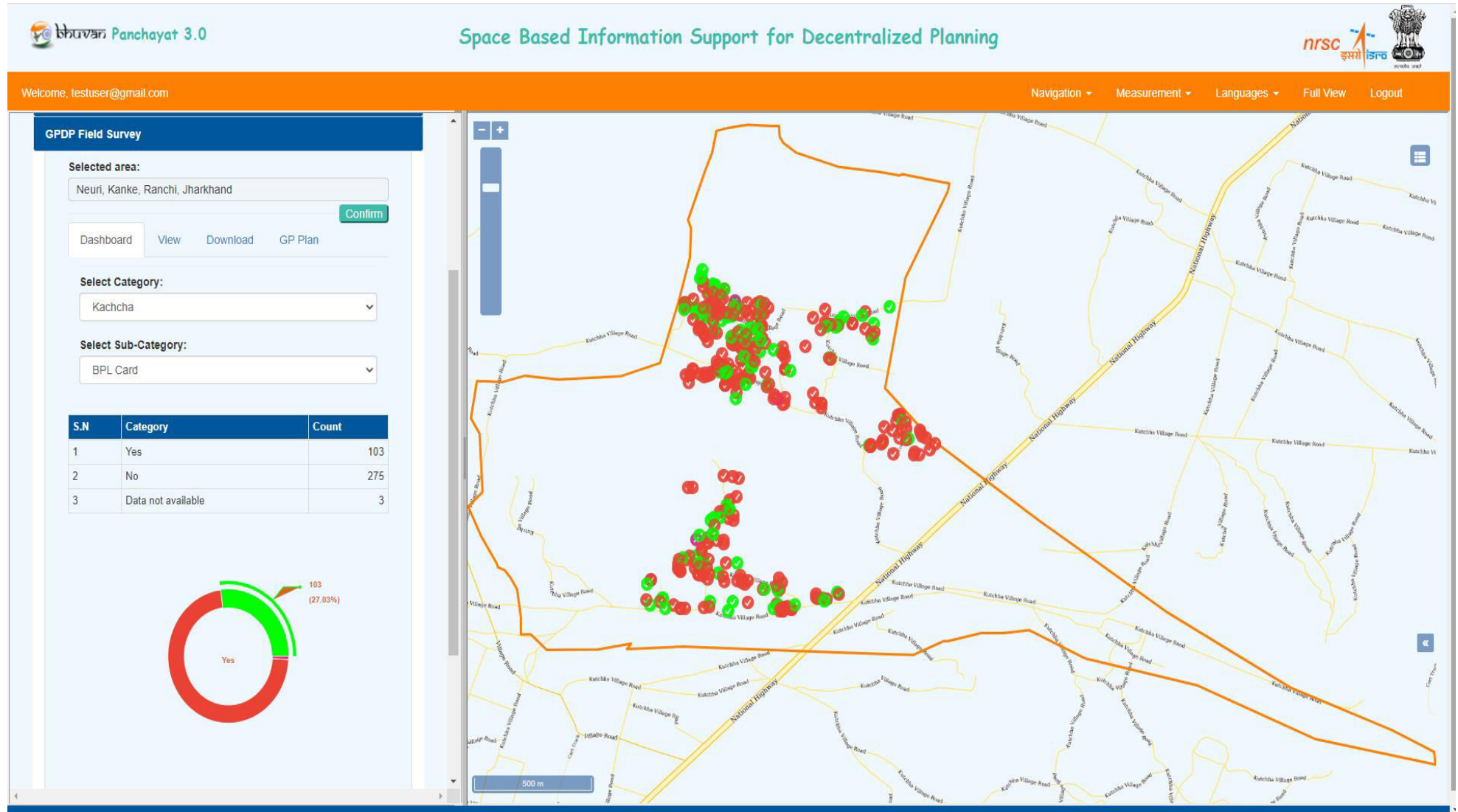
House Hold Code - 1596466504

File 2: HH_Survey_Family_Member.csv

DB Id	House Hold Code	Family Member Name	Age	Sex	Relationship	Marital Status	Qualification	Digital Literacy	Occupation	Occupation Location	Mode of Transport Used	Occupation Change in last 2 years	Previous Occupation Detail	Occupation Change i
80	1596453830	Hight tom	34		Self									
84	1596466504	Kenam	24	Female	Self	Unmarried	Graduate	t	Service	Shadnagar		f	NA	
85	1596472663	Test monday	34	Male	Self	Married	PostGraduate	t	Service	Hyderabad		t	Service	
86	1596472663	Test mon	30	Female	Wife	Married	PostGraduate	t	HouseWife			f	NA	

House Hold Code - 1596466504

GPDP Field Survey Dashboard - Data Analysis using Charts & Maps



Queries :-

- Ownership
- Card Status
- Edu. Qualification
- Occupation
- Lavatory/Toilet
- ...

Querying HH Survey data & visualisation of result through charts & Dynamic Maps

GPDP Field Survey Dashboard - Data View

Space Based Information Support for Decentralized Planning

Navigation • Measurement • Languages • Full View

Area Selection
Layers
Layer Details
Query
Mark On Map
Area Profile
Download Profile Report
Plan an activity
Model GPDP Field Survey

Selected area:
Paritala, Kanchikacherla, Krishna, Andhra Pradesh

Dashboard View Download

S.N	Attribute	Value
1	Toilet Availability	No
2	Family Member	1
3	House Owned	Rent
4	Mode of transport	Car
5	House Type	Pucca
6	House Wall	na
7	House Roof	na
8	Water Supply	na

Asset Mapping and Visualization
Register
Login

Figure 47. Tabular View of the data submitted

S.N	Attribute	Value
1	Toilet Availability	Yes
2	Family Member	1
3	House Owned	Own
4	Mode of transport	NULL
5	House Type	Pucca
6	House Wall	
7	House Roof	Thatch
8	Water Supply	Handpump

Photo



500 m

Lat: 16.6488 , Long: 80.3964

Visitors: 30457 © 2020 National Remote Sensing Centre, ISRO · Bhuvan Panchayat v3.0

Terms and conditions · Disclaimer

House Hold Survey Form for Visualisation & Download

Bhuvan Panchayat 3.0 house hold survey report with house hold code 1597645989

ANNEXURE VI HOUSE HOLD SURVEY

Name of the respondent: Melamad alam Caste: General Religion: Islam Time period of residence: Since 2018

Ownership of house: Own Rent: N.A. BPL card holder: No Ration card holder: No

Family Details

Member	Age	Sex	Marital Status	Qualification	Occupation	Location	Mode of transport	Digital Literacy	Change in occupation	Since When
Melamad alam	45	Male	Married	Illiterate	Labour	Raschi	N.A.	No	No	N.A.
Nusrat	13	Female	Unmarried	N.A.	Student	N.A.	N.A.	N.A.	N.A.	N.A.
Noor jahan	15	Female	N.A.	N.A.	Student	N.A.	N.A.	N.A.	N.A.	N.A.
Iqbal hayat	20	Male	N.A.	N.A.	Student	N.A.	N.A.	N.A.	N.A.	N.A.
Sajida begum	36	Female	N.A.	N.A.	Housewife	N.A.	N.A.	N.A.	N.A.	N.A.

Occupation

IF AGRICULTURE		IF LABOUR		IF BUSINESS	
No. of Person Involved: 0		No. of Person Involved: 1		No. of Person Involved: 0	
Area(In Sq.km): N.A.	Soil type: N.A.	Type	Daily worker	Type	N.A.
Location: N.A.	Ownership: N.A.	Location	Raschi	Location	N.A.
Crop type	N.A.	Mode of travel	N.A.		
Frequency	N.A.	Marginal/Full year	No		
Source of irrigation	N.A.	Wage (in INR)	200	IF SERVICE	
If yes, scheme private	N.A.			No. of Person Involved: 0	
Seeds Availability (From where)	N.A.			Type	N.A.
Is there any change in cropping pattern	N.A.			Location	N.A.
Store Location	N.A.			Mode of travel	N.A.
Where do you sell	N.A.			Salary (in INR)	N.A.
Produce p.a.	N.A.				

Land Holding

Khasra no. N.A. Area (in Acre): N.A. Time period of land holding (in years): N.A. Cultivable: N.A. Fallow: N.A.

Bhuvan Panchayat 3.0 house hold survey report with house hold code 1597645989

Housing (Built up Detail)

Type of structure (Kaccha/Pucca/Semi-pucca)	Pucca
Material (Roof)	Concrete
Material (Wall)	Concrete
Building Height	More than three floors
Scheme (Y/N)	N.A.
Age of Structure (in years)	<10
Condition	Liveable

Services

Services	Availability	Frequency/duration/ coverage
Water supply	BoreWell	N.A.
Solid waste collection	NotAvailable	NotAvailable
Electricity	Yes	15, Household
Transportation	Tempo	N.A.

Toilet present: YES

Private

If Private: 1) Is toilet under use: YES

2) Own

3) If under scheme, Amount received (in INR): N.A.

Monthly expenditures (Scale:1-6)

Criteria	Food	Education / Training	Transportation	Health	Rent	Leisure
Ranking	1	2	3	4	N.A.	N.A.

Lump-sum Monthly Expenditure (in INR): 7000.00

If paying interest then how much (in INR): N.A.

Time period of interest (in years): N.A.

Health

Vaccination if any: NO

Any Prominent Disease: NO

No. of visit to hospital in a month: N.A.

Most prominent nearby Medical Facility: N.A.

Fee paid for 1 time visit (in INR): N.A.

Mode of travel: N.A.

Livestock	Number	Problem/disease	Commercial Use(Y/N)
Cow/ Buffalo	N.A.	N.A.	N.A.
Ox	N.A.	N.A.	N.A.
Goats	N.A.	N.A.	N.A.
Chickens	N.A.	N.A.	N.A.
Horses	N.A.	N.A.	N.A.
Donkeys	N.A.	N.A.	N.A.
Others	N.A.	N.A.	N.A.

Other Assets	Yes/No
Radio	No
Telephone	No
Solar	No
Stove type	N.A.
T.V	No
Computer	N.A.

Energy Source	Yes/No
LPG	Yes
Kerosene	No
Fire	Yes
Wood/Coal	Yes
Biogas	No
Cow Dung Cake	No
Others	N.A.
SCHEME	No

Vocational Training Centre: Neurt Panchayat

Issues: Road drainage problem.

Bhuvan Panchayat 3.0 house hold survey report with house hold code 1597645989

Expectations: Road drainage

Suggestions: N.A.

Photograph & Suggestion

Photo 1	Photo 2	Suggestion
		N.A.

Additional Information

Household code	Last updated on	Address	Landmark
1597645989	2020-06-17 12:08:25	Neurt stramagar	Neurt stramagar

Note N.A: Not available

Disclaimer

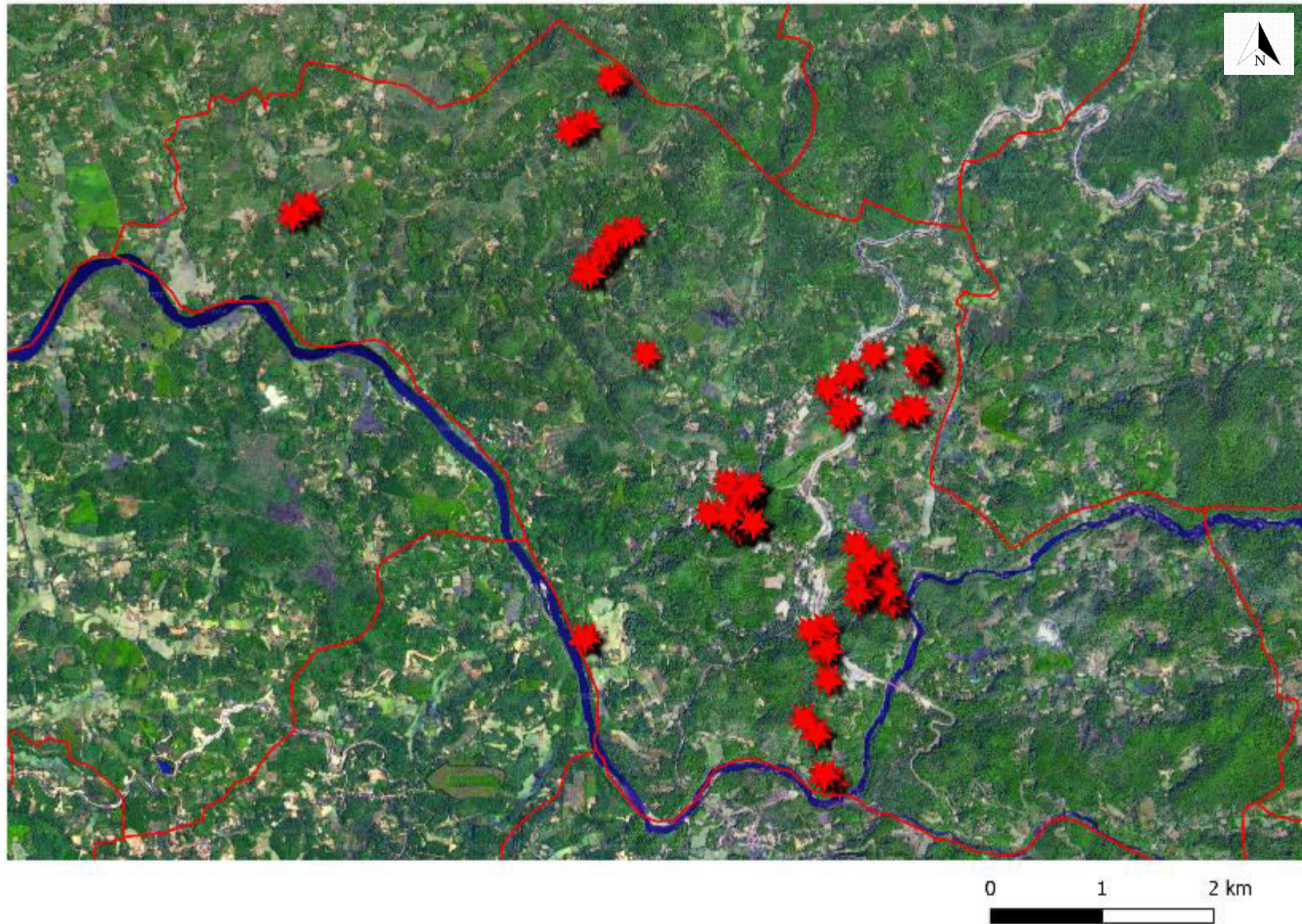
All the details mentioned in this report were taken from Household Survey

Spatial distribution of Houses in Uppunda, GP of Karnataka



0 1 2 km

Spatial distribution of Houses in Shankarnarayana, GP of Karnataka

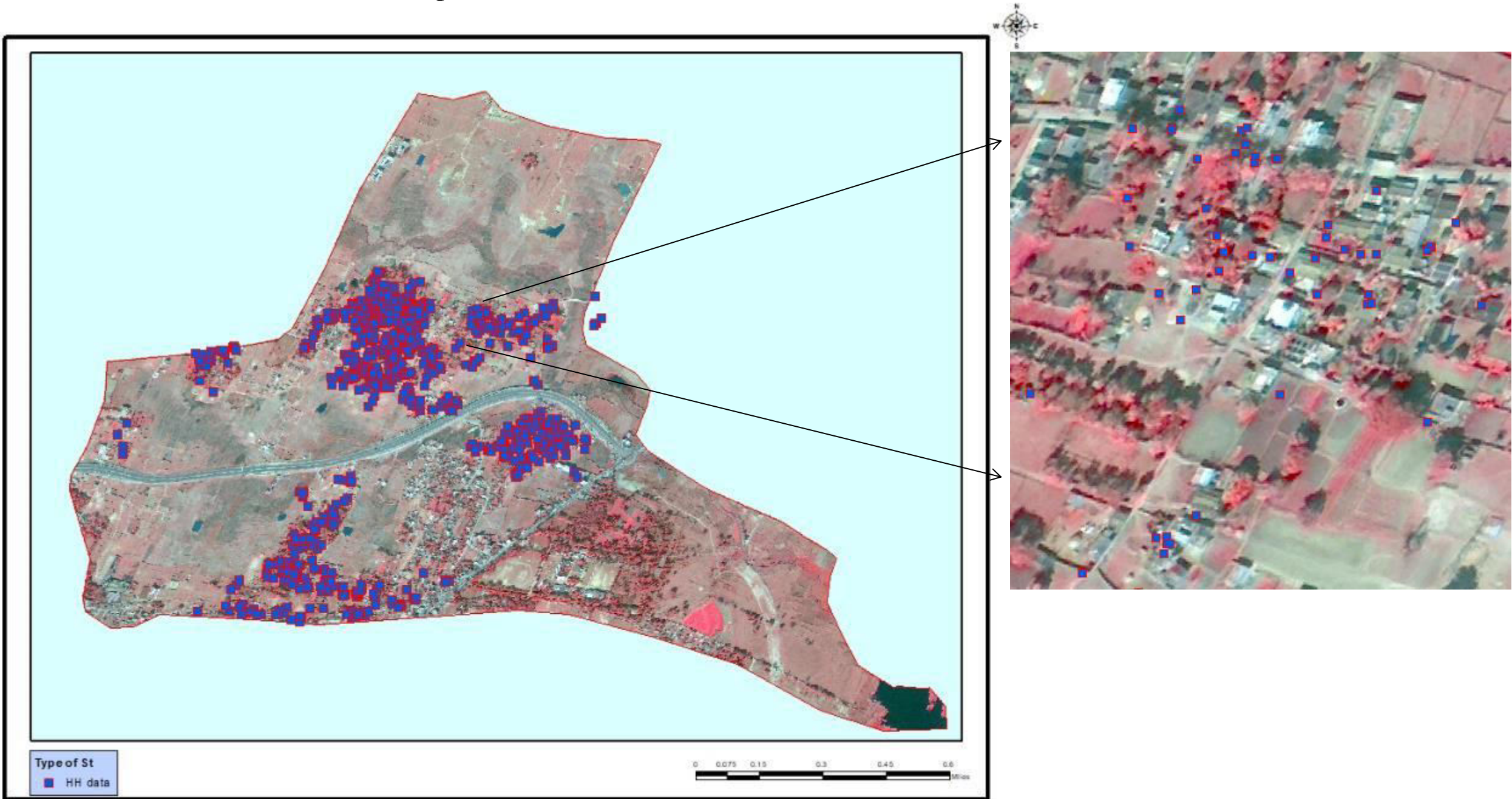


Spatial distribution of Houses in Gandkhairi, GP of Maharashtra

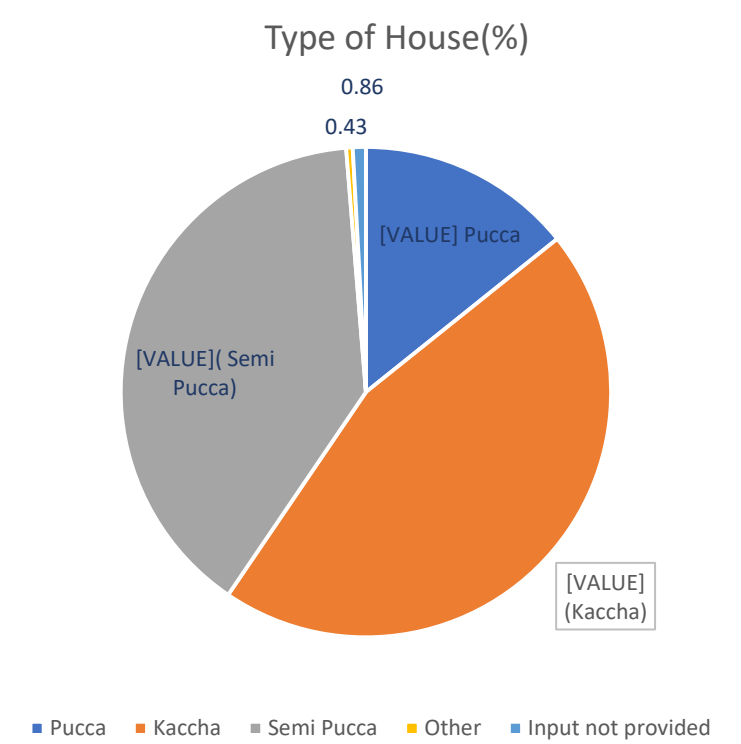
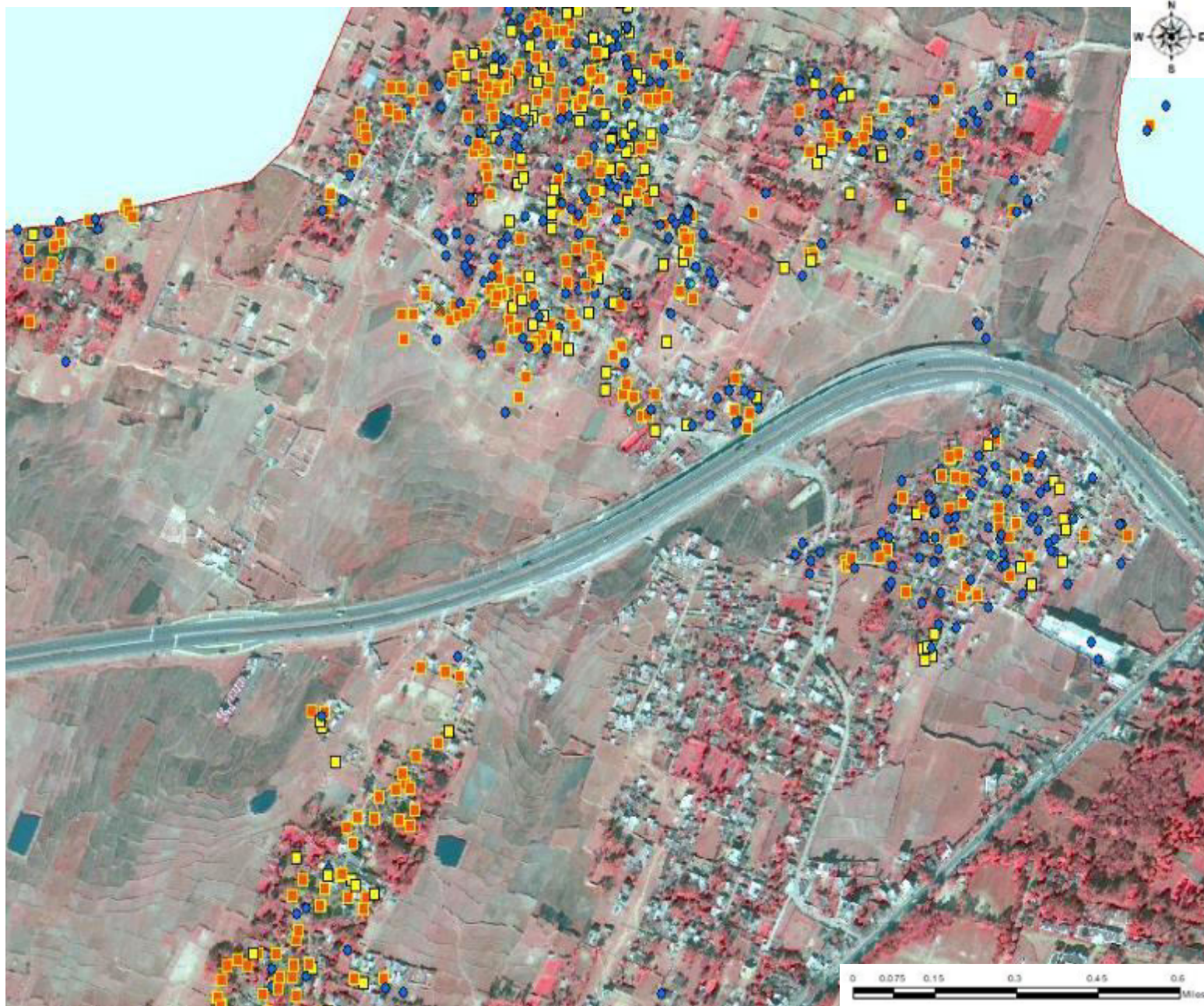


0 1 2 km

Spatial distribution of Houses in Neori, GP of Jharkhand

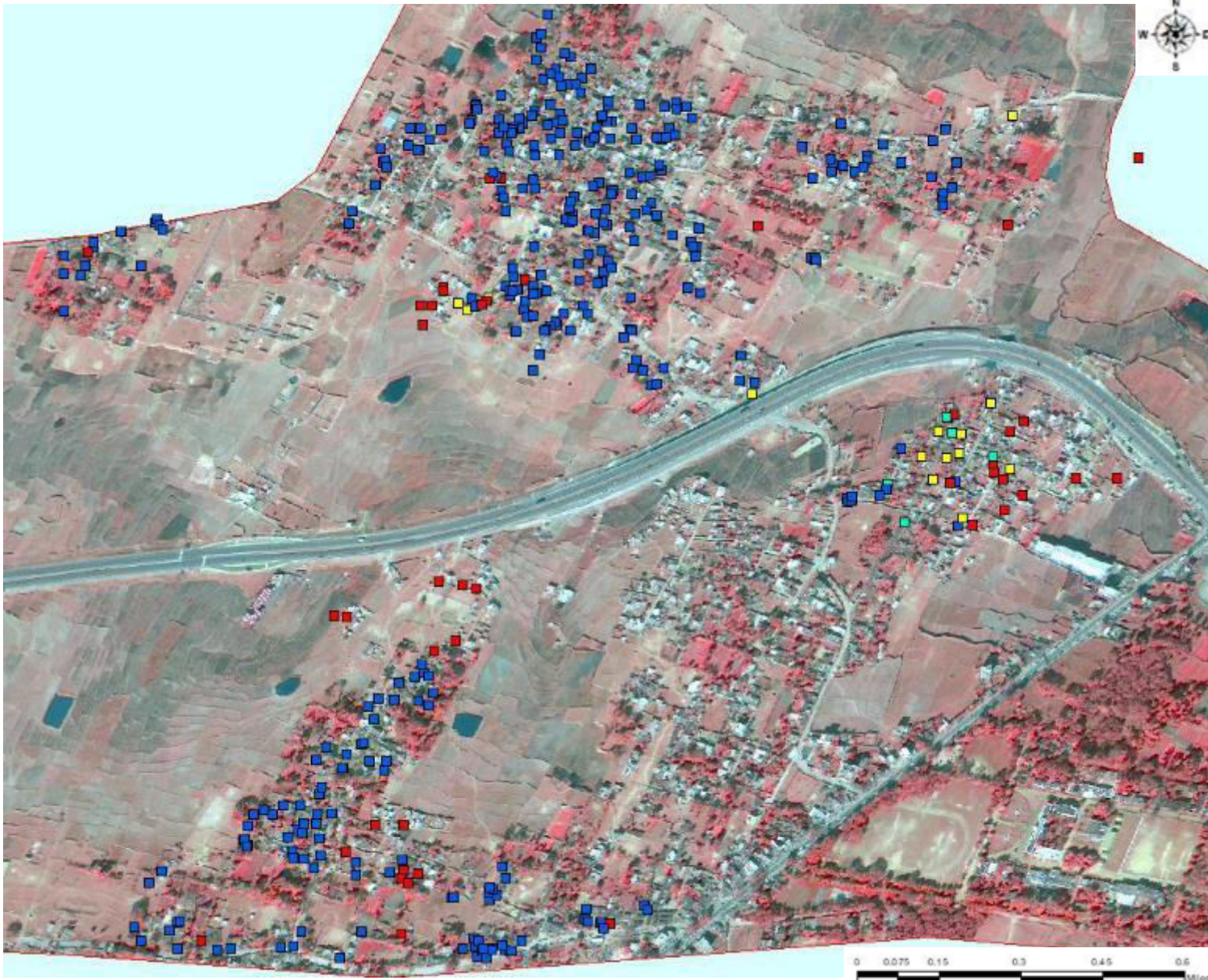


Spatial distribution of Houses in Neori, based on House Type

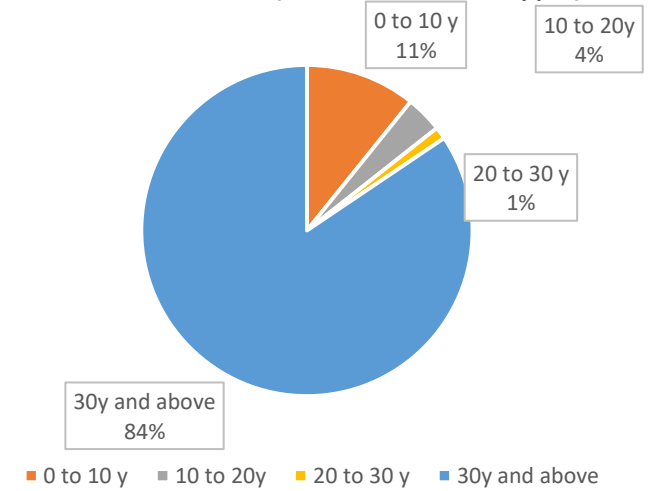


- Pucca
- Kachcha
- SemiPucca
- ✕ Other
- ◆ No input provided

Spatial distribution of Kaccha Houses based on Residence Since

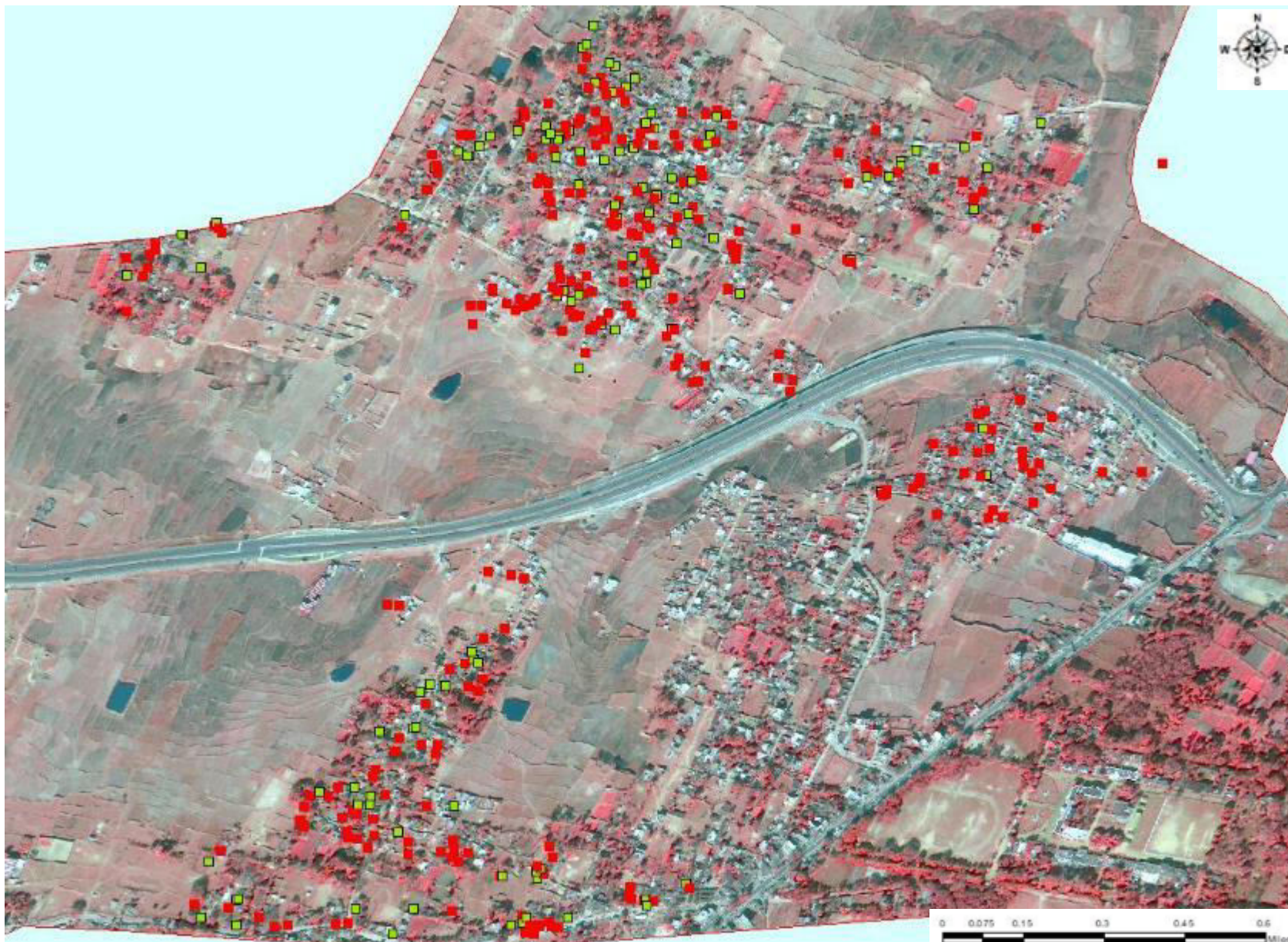


Residence Since(Kaccha House Type)

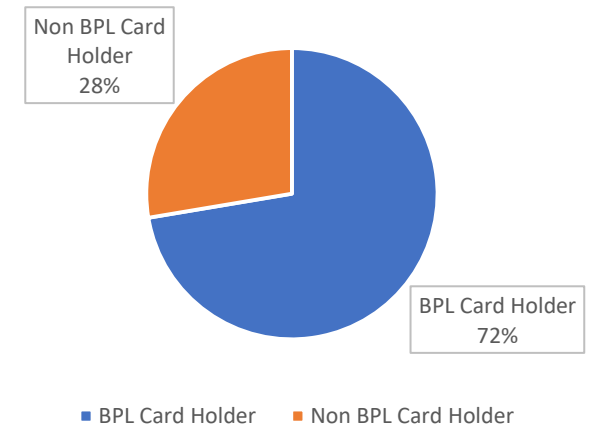


- Staying in Kaccha House (0 to 10 years)
- Staying in Kaccha House(10 to 20 years)
- Staying in Kaccha House(20-30 years)
- Staying in Kaccha House (30 years above)

Spatial distribution of Kaccha Houses based on availability of BPL Card

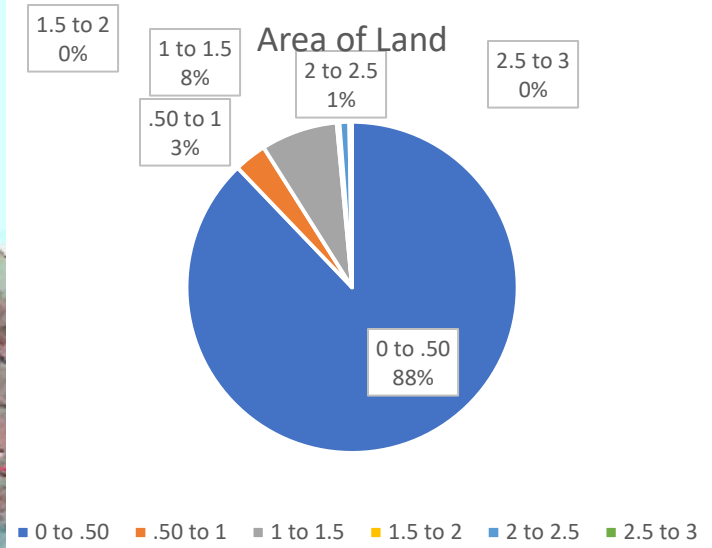
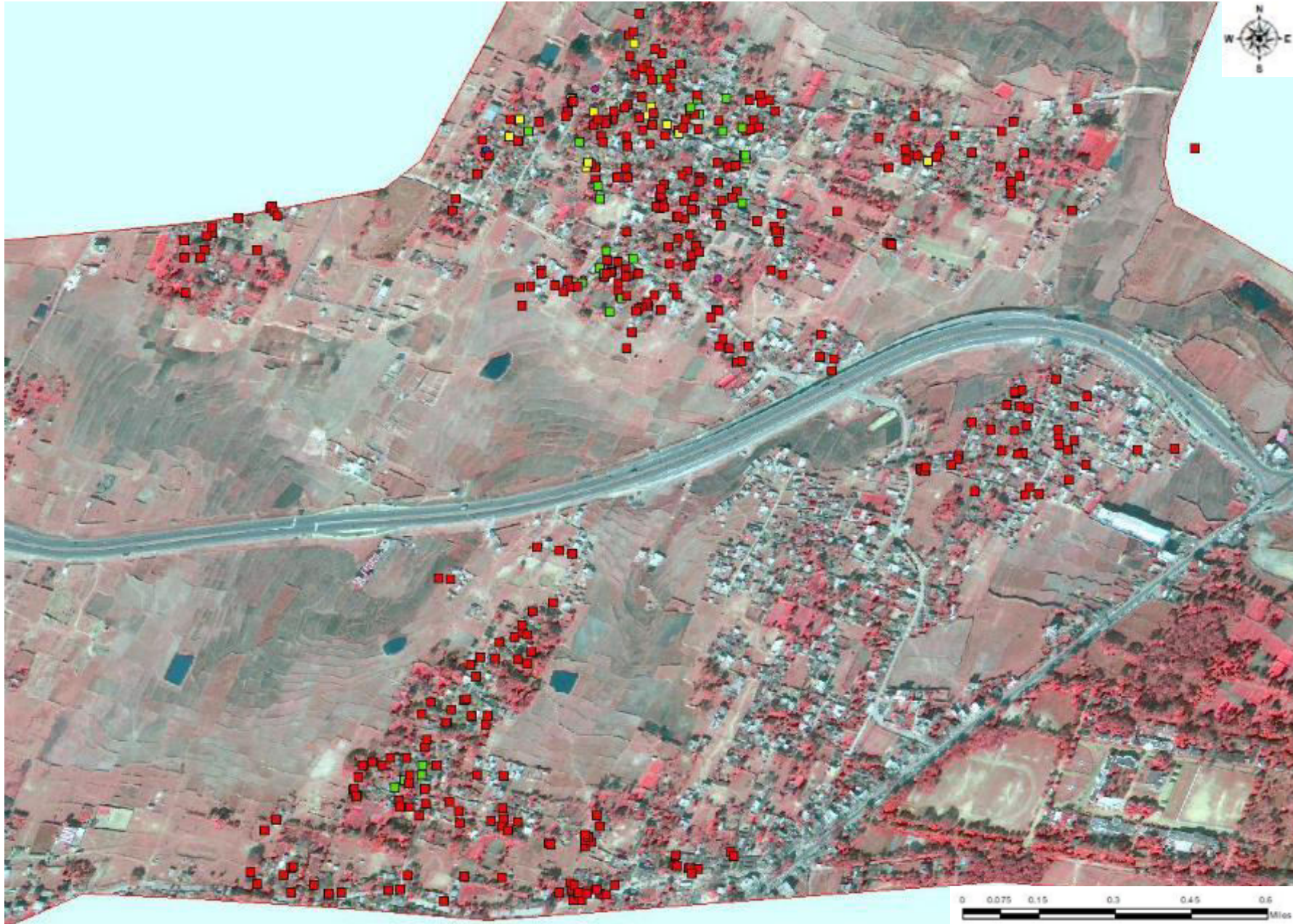


BPL Card distribution of people staying in Kaccha House



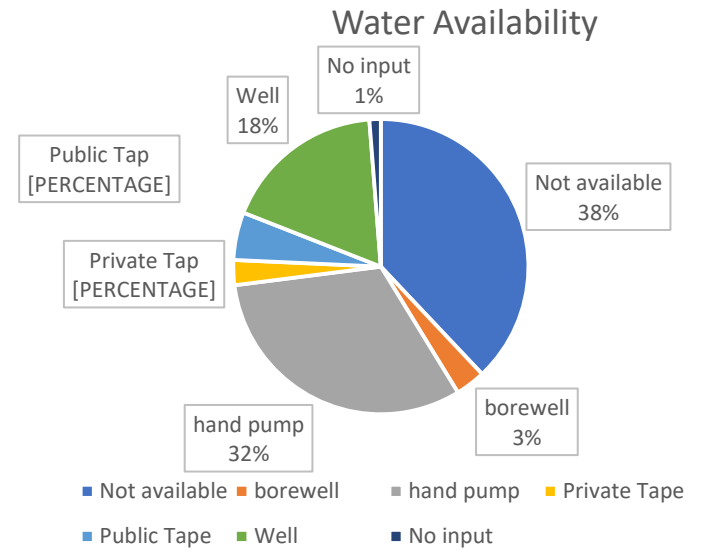
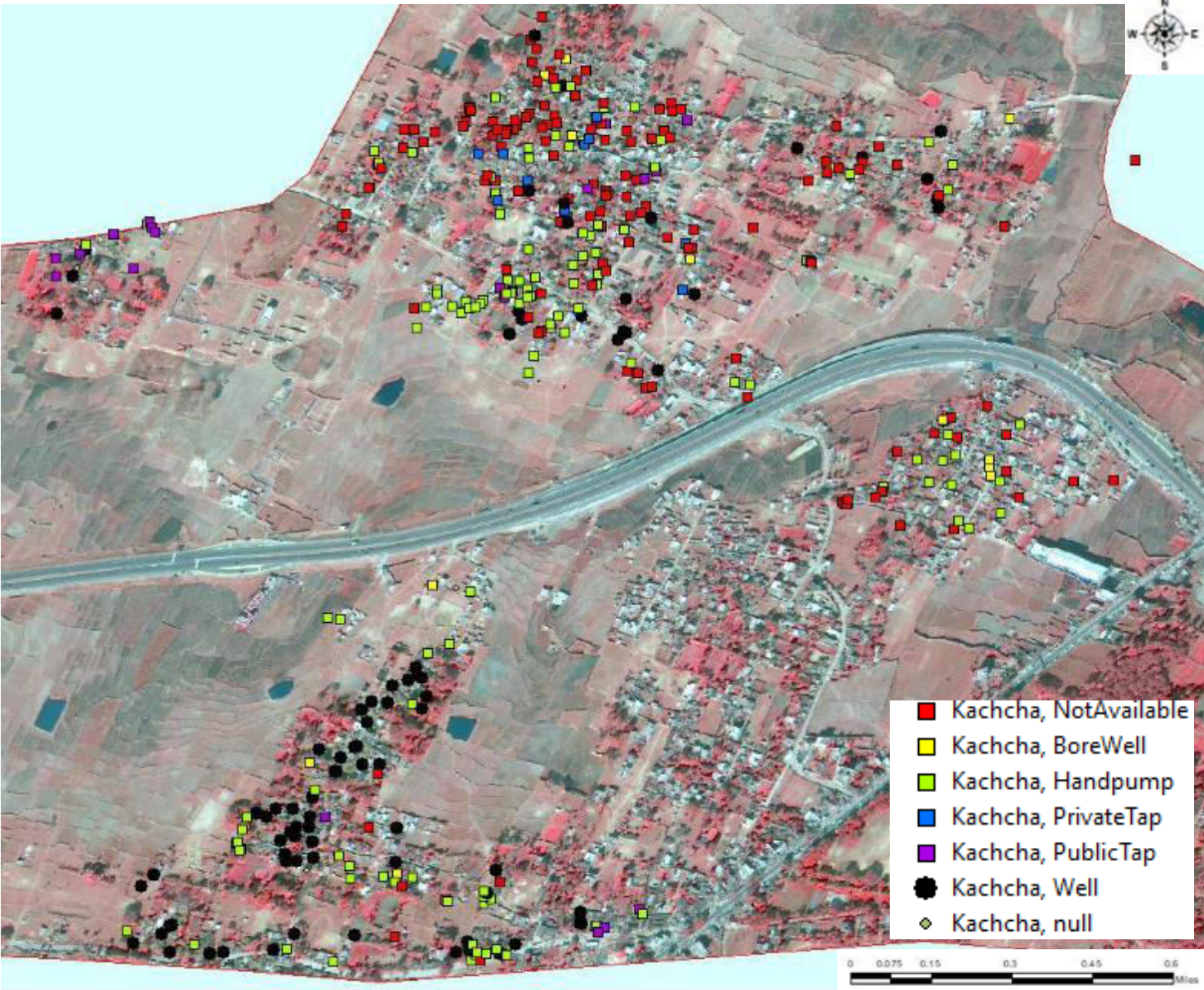
- Kaccha, Non BPL Card Holder
- Kaccha, BPL Card Holder

Spatial distribution of Kaccha Houses based area of land (hectare)

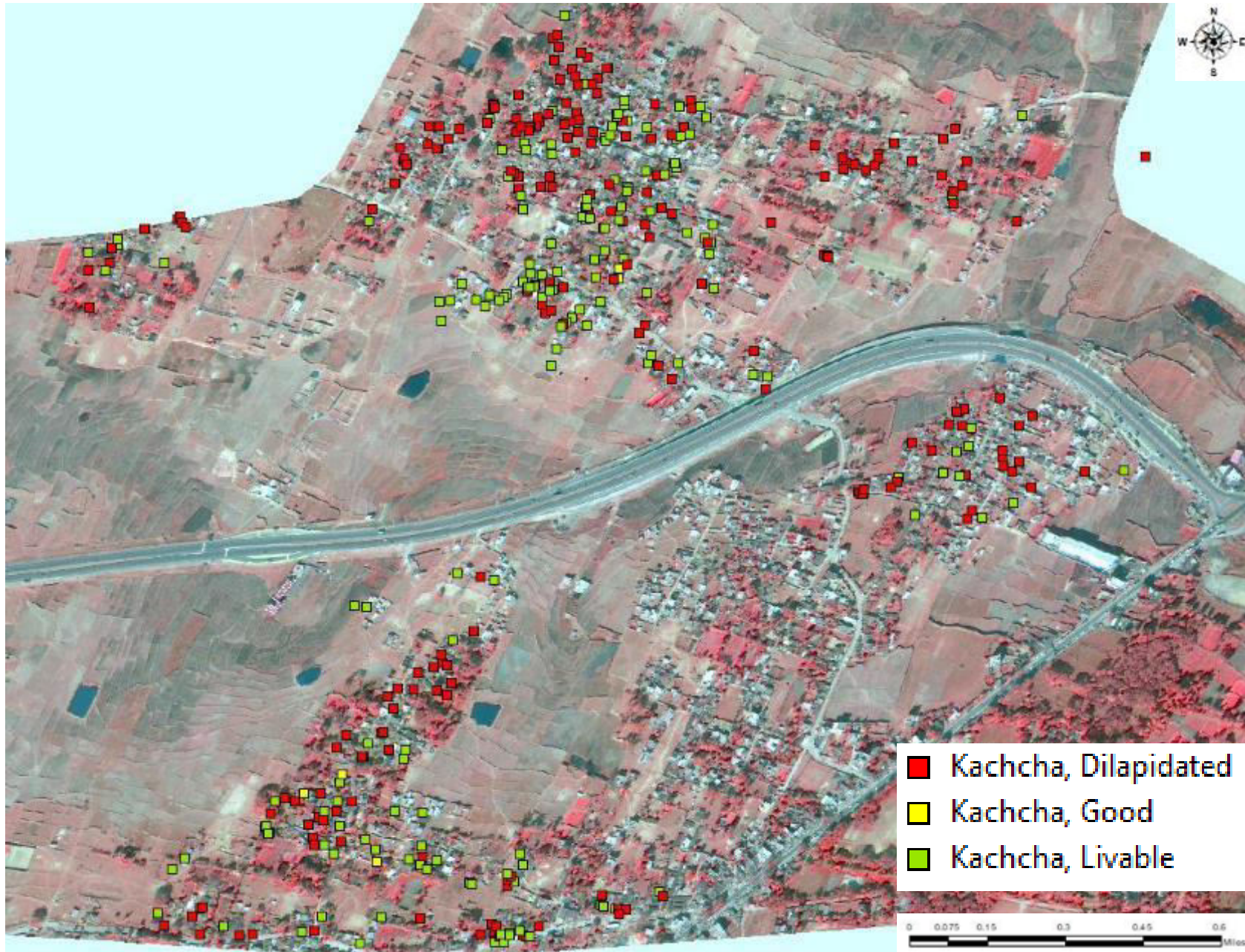


- Kachcha, 0 to 0.50
- Kachcha, 0.50 to 1
- Kachcha, 1 to 1.5
- Kachcha, 1.5 to 2
- Kachcha, 2 to 2.5
- Kachcha, 2.5 to 3

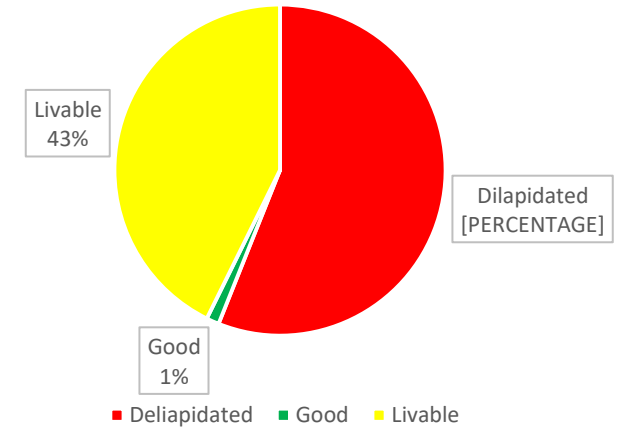
Spatial distribution of Kachcha Houses based on availability of water



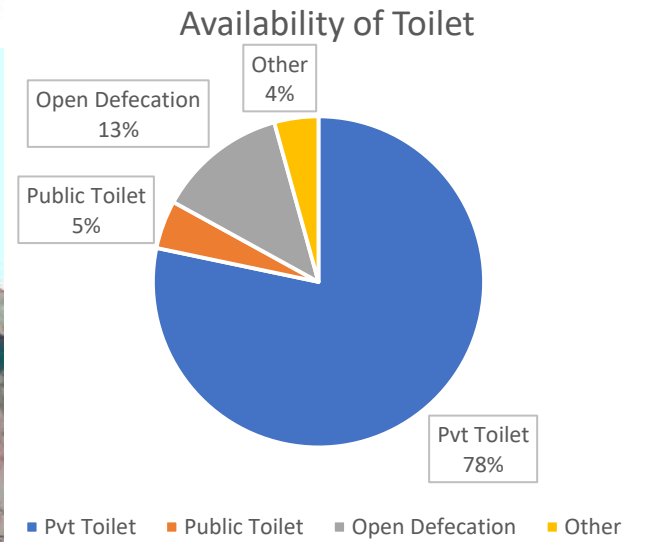
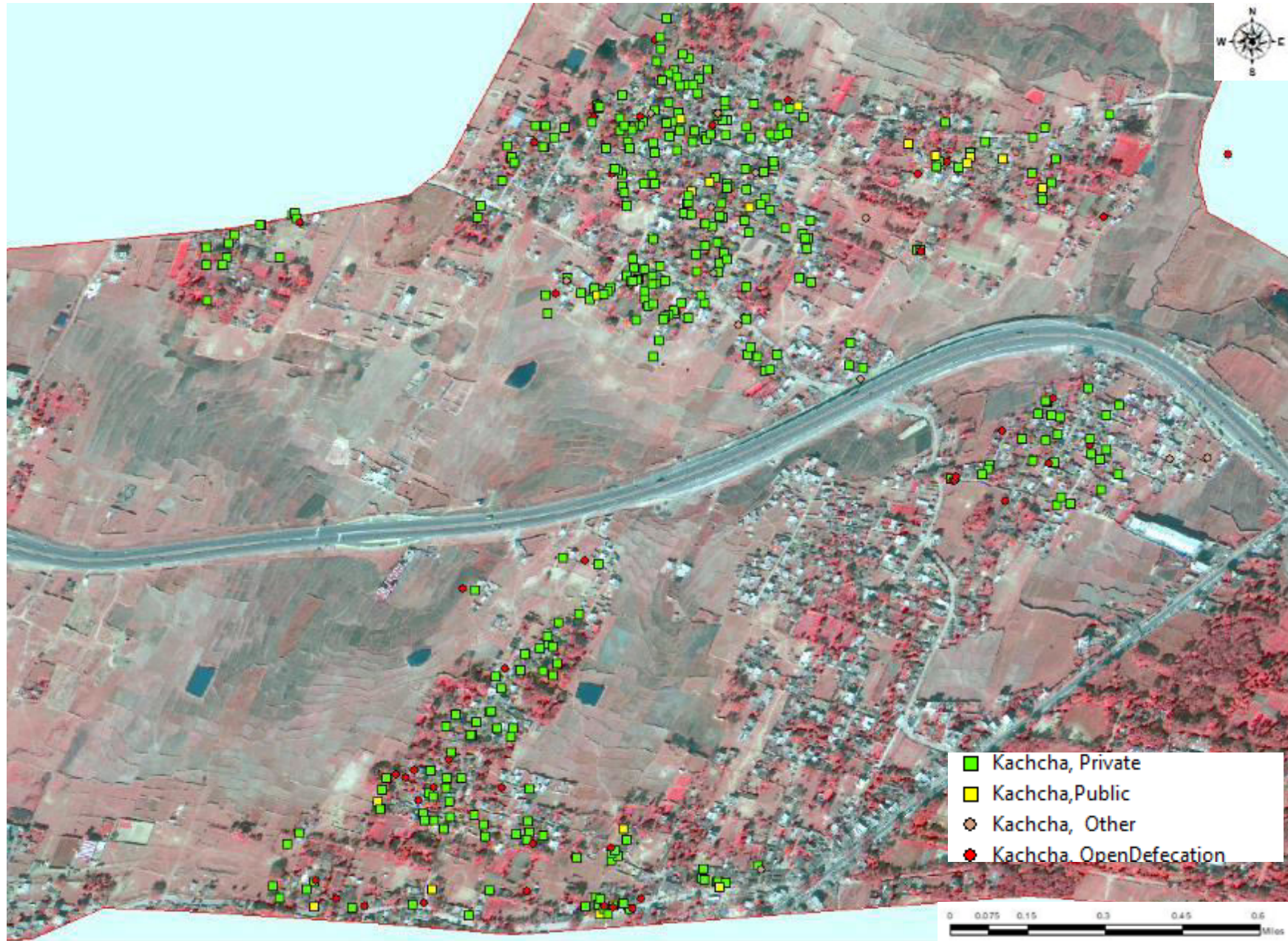
Spatial distribution of Kachcha Houses based on condition of house



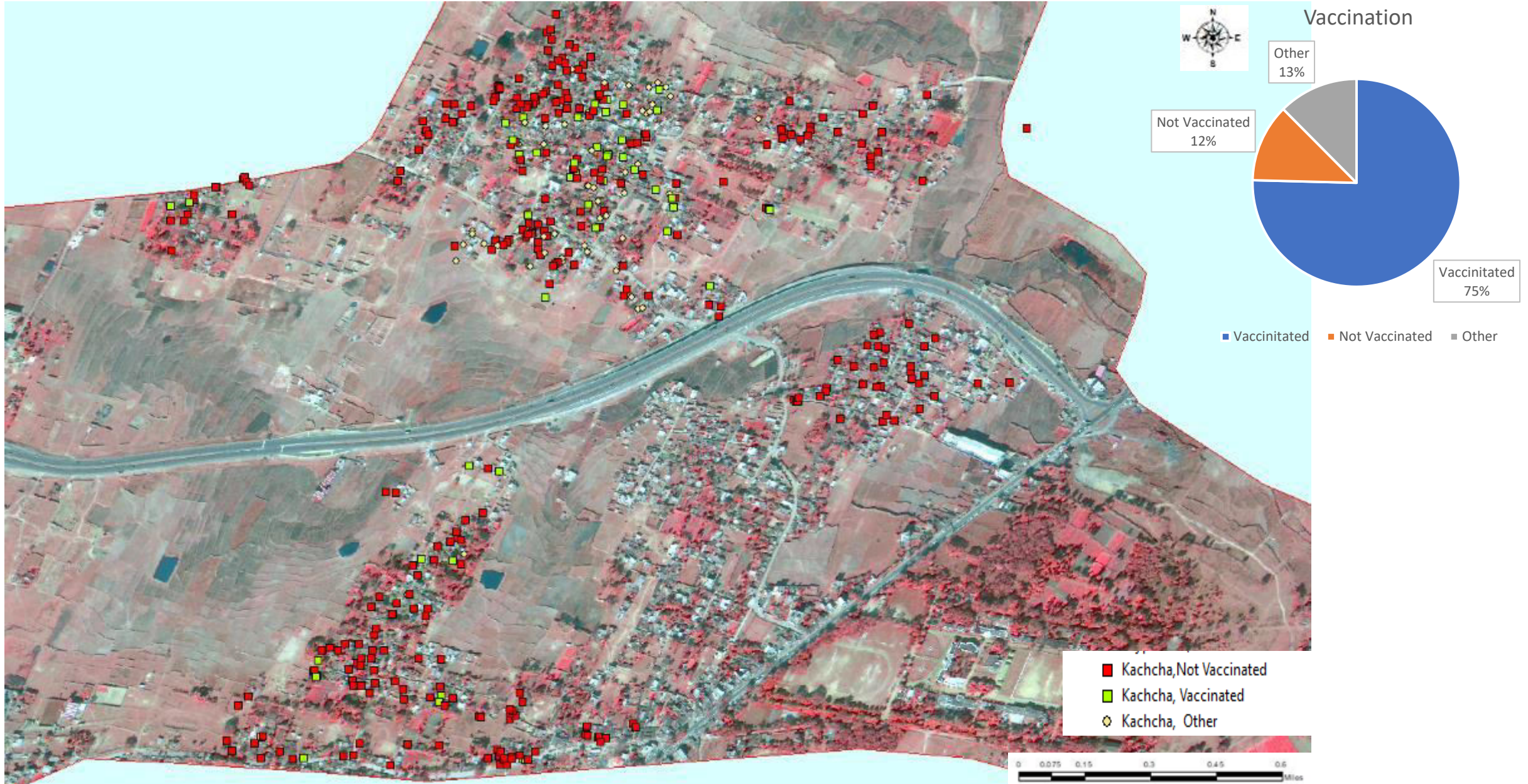
Condition of House



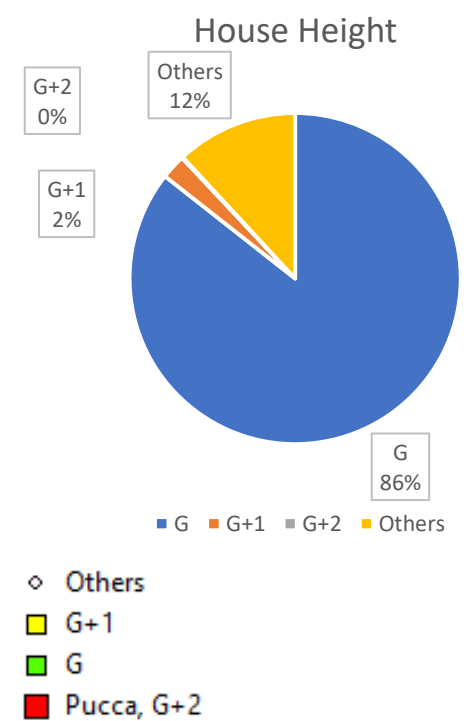
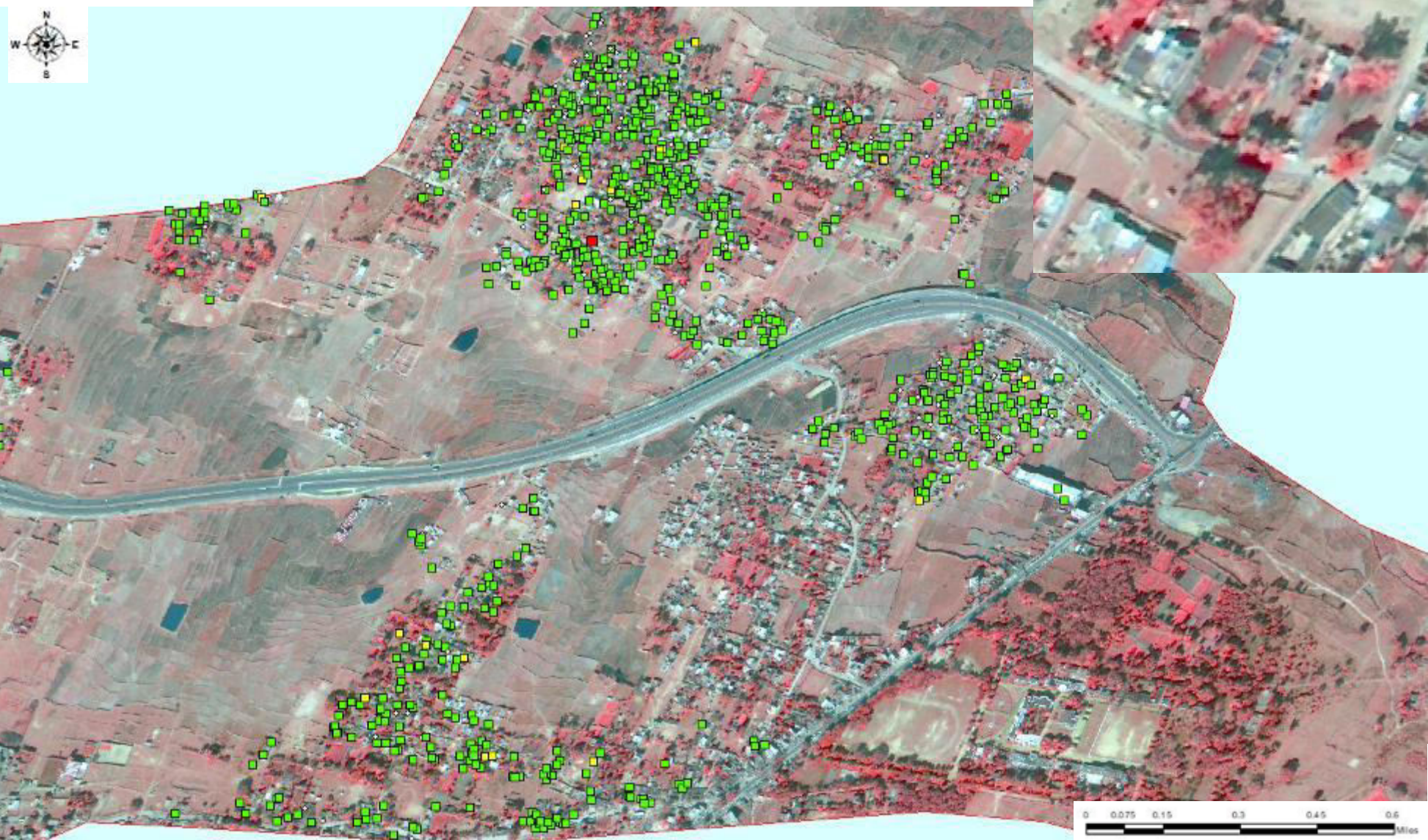
Spatial distribution of Kaccha Houses based on availability of Toilet



Spatial distribution of Kachcha Houses based on vaccination

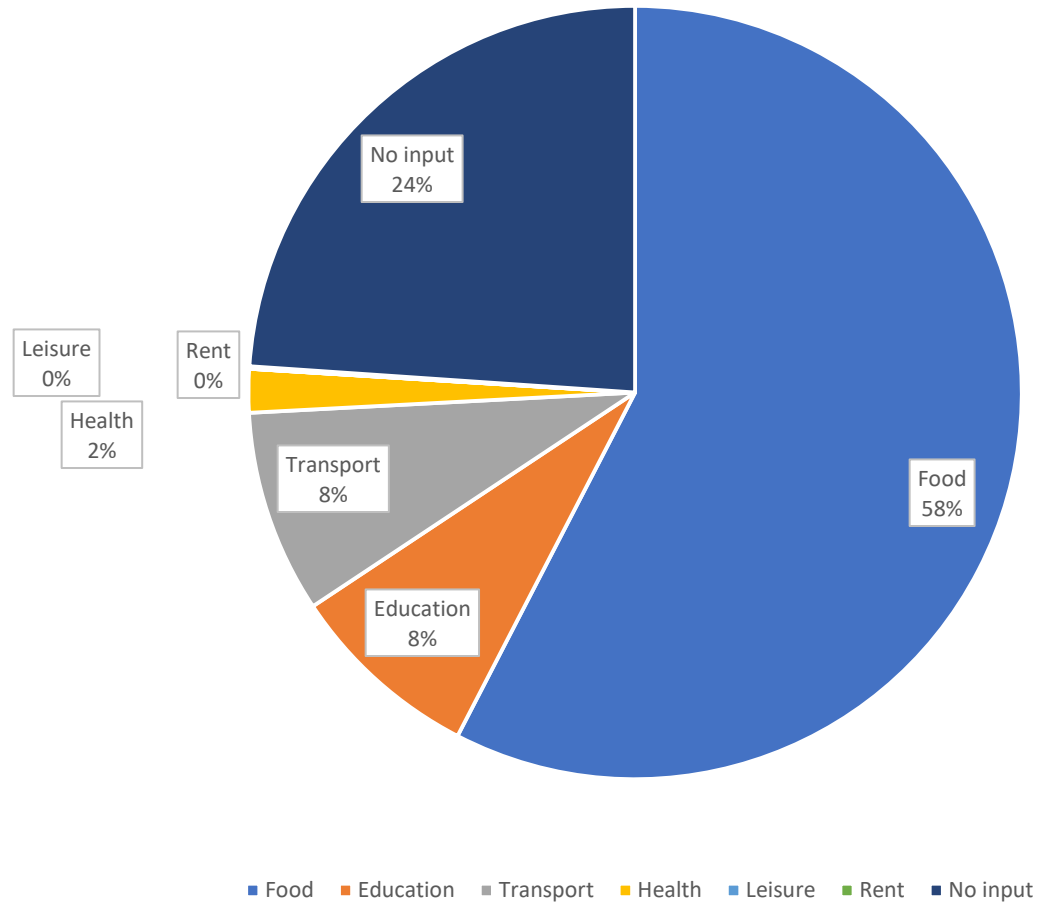


Spatial distribution of Houses based on Height



Monthly expenditure of residents staying in Neori

Monthly Expenditure(Ranking 1 as highest)



Thank You

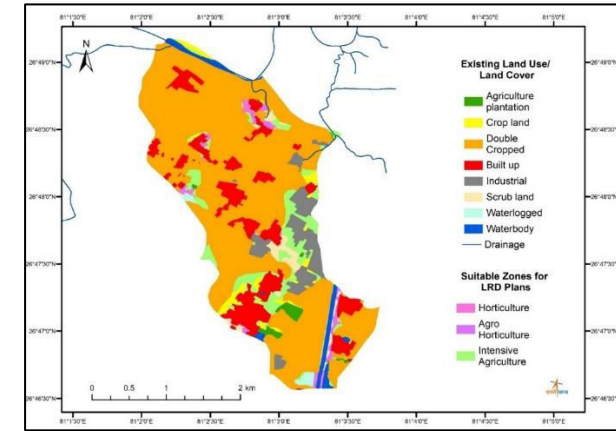
Regional Remote Sensing Center - North
National Remote Sensing Centre
Indian Space Research Organisation
New Delhi

Pilot Project - Gram Panchayat Spatial Development Planning (GPSDP)

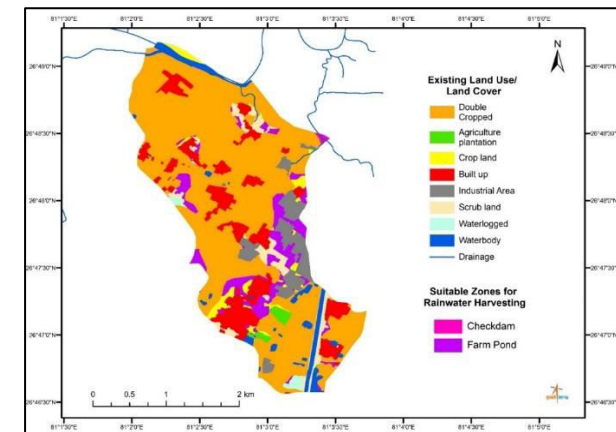
User : Ministry of Panchayati Raj (MoPR)

34 Gram Panchayats across India selected for the GPSDP Pilot Project, in collaboration with IITs, NITs and Planning institutes

- **Inventory of Natural Resources** using very high resolution satellite (VHRS) data at Gram Panchayat (GP) level
- Generation of Land Resource Development Plan (**LRDP**) & Water Resource Development Plan (**WRDP**) for Gram panchayats
- Development of Cross platform **mobile application** for carrying out **household** survey in gram panchayats
- **Household** survey data **analysis** at Bhuvan Panchayat portal
- **Capacity building** to partner institutions (IITs, NITs, Schools of Planning and Architecture etc.) in using the mobile app and the thematic data



LRDP of Bakkas GP, UP derived using VHRS data

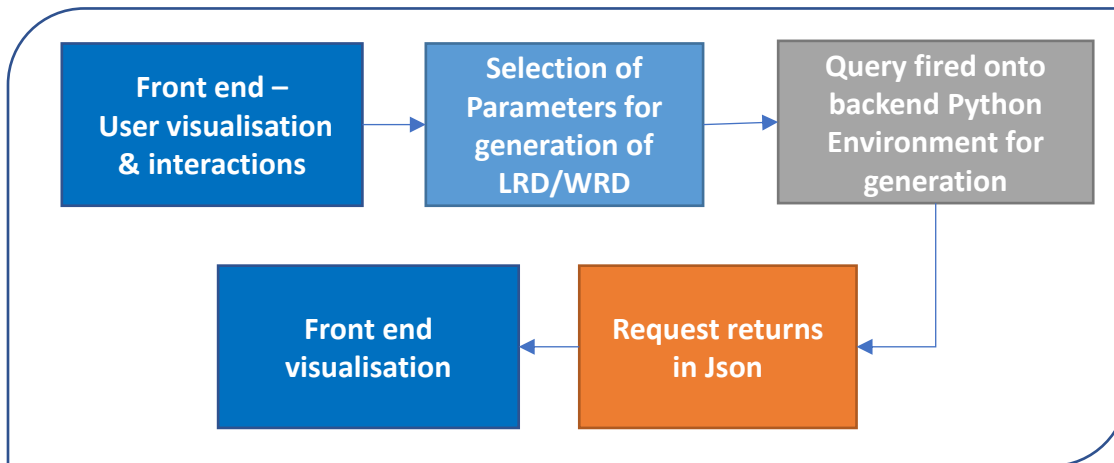


WRDP of Bakkas GP, UP derived using VHRS data

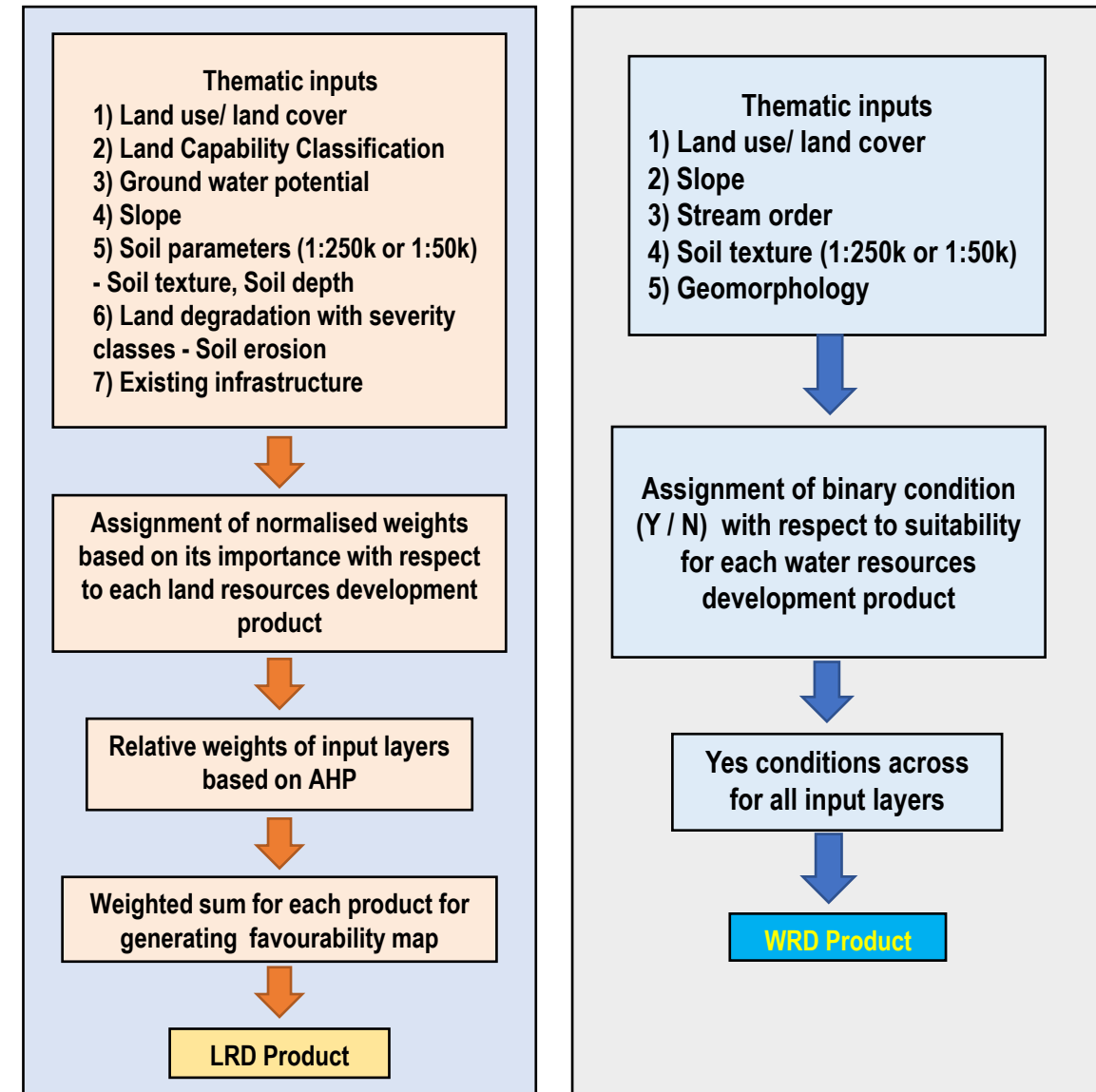
Automated Tool for Land and Water Resources Development Planning (GPSDP)

- **Objective:** Open source Tool for generation of Water Resource Development Plan (WRDP) and Land Resource Development Plan (LRDP).
- **Approach:** Process Automated using Python and integrated to existing Bhuvan-Panchayat Portal.
- **Novel methodology** to generating specific products and thematic services for the GPSDP planning by analysing thematic layers.
- Automated tool developed on Bhuvan Panchayat with feedback mechanism for iterative refinement.

Process Flow Diagram



LRDP & WRDP- Process Automation



- Team of Regional centres has generated the inputs for all 34-gram panchayats identified under the project. These inputs are shared with Partner institutions for inclusion in the final report of the Gram panchayat.