



जनगणना से जन कल्याण
Janganana se Jan Kalyan

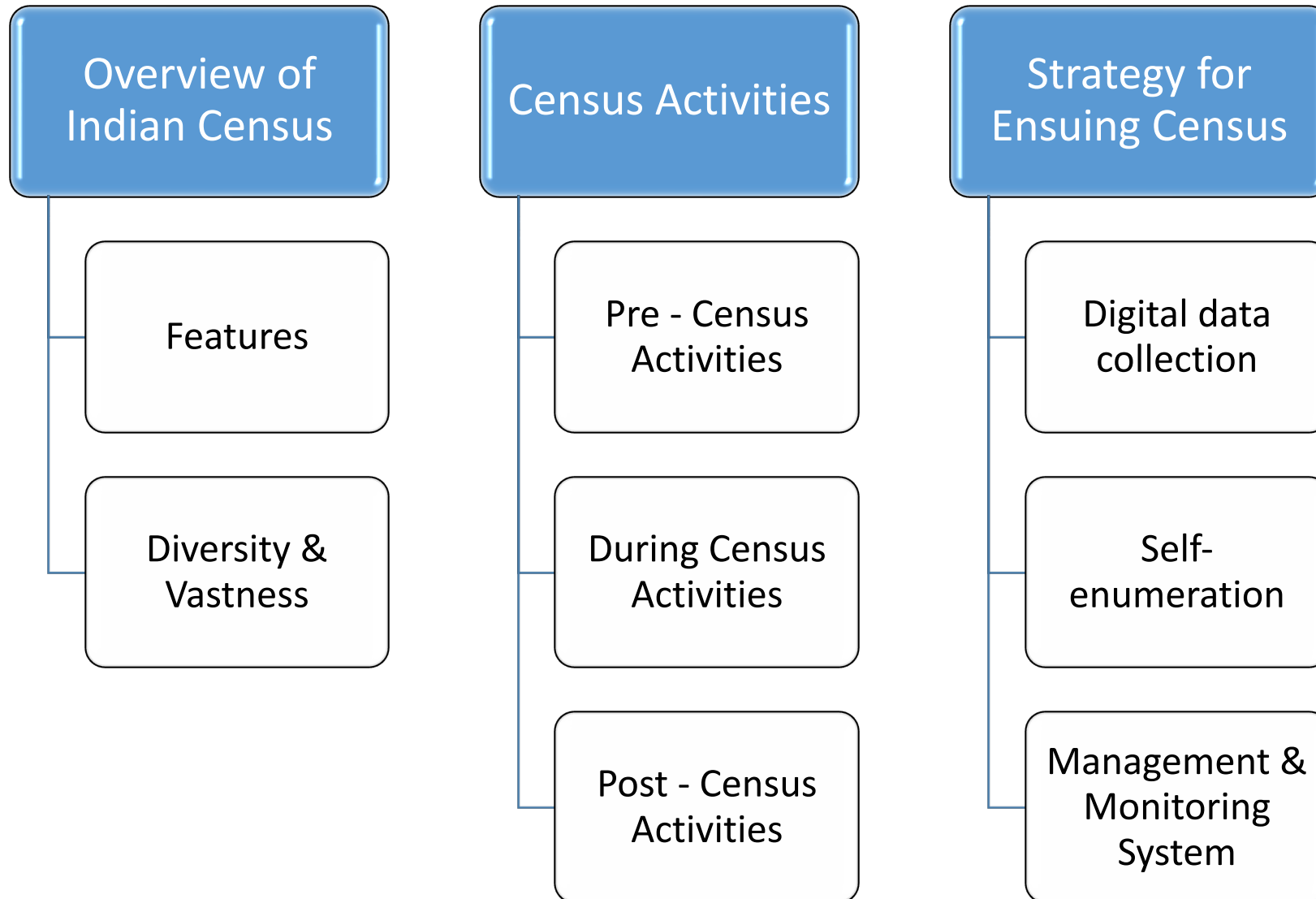
Session 9: Census Planning

Title: Emergence from paper to digital mode

31st Population Census Conference, ANCSDAAP at Tokyo, Japan

Mritunjay Kumar Narayan
Registrar General & Census Commissioner of India

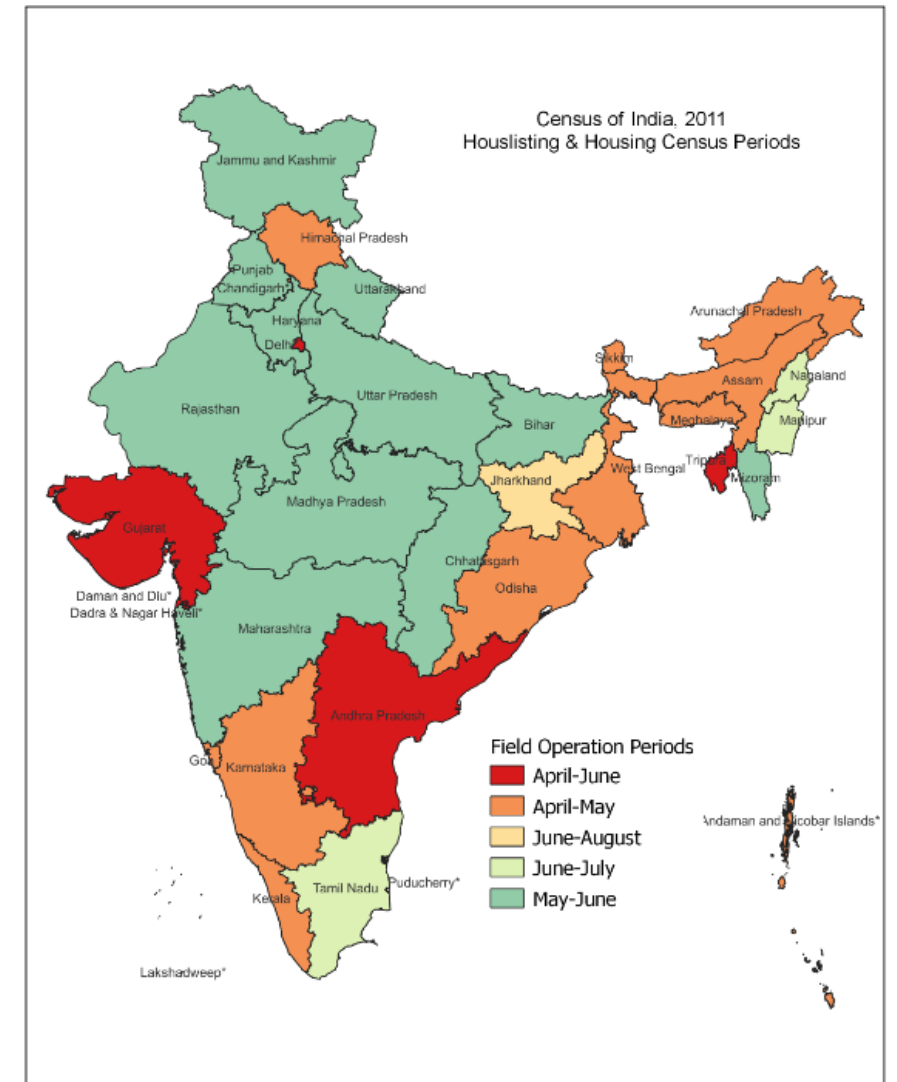
Outline



Overview of Indian Census

Indian Census

- Only source of primary data at village, town and ward level
- Face to face canvasser method
- Conducted in two phases:
 - ❖ **Phase-1: Houselisting & Housing Census** (HLO: 30 days period during April to September)
 - i. Information on housing, household amenities and assets
 - ii. Frame for Population Census
 - ❖ **Phase-2: Population Enumeration** (PE: 20 days period during February)
 - i. Extended *de facto* method used for data collection
 - ii. Data on demographic, socio-economic, cultural & and migration etc. indicators



Features



Legal Backing – Census Act 1948



Complex Logistics



Highly manpower intensive – about 3 million persons



Use of GIS/ICT in pre Census and Census activities



ICR Technology for data processing

Diversity & Vastness (2011 Census)



Multi- Level

- 6.4 lakh Villages
- 7935 Towns



Large population

- 2.4% of world's surface area
- 1.2 billion population
- 2nd largest in the world



Multi-Ethnic

- 4,635 ethnic groups

Diversity & Vastness



Multi- Cultural

- 655 religions and other persuasions
- 6661 mother tongues
- 18 languages (training)
- 16 languages (canvassing)



Urban Slum

Diverse Groups

- Nomads, Homeless, Forest/Island dwellers
- Infants, Elderly women, Disabled



The Jarwa tribe

Difficult Areas

- Slum areas
- Inaccessible terrain

Census Activities

Pre-Census Activities

- Updation of jurisdictional changes & finalization of administrative units
- Finalization of rural-urban frame
- Finalization of questionnaires, Apps & instruction manuals
- Issue of relevant notifications
- Preparation of budget estimates
- Holding of pre-test
- Carving of Enumeration Blocks

The screenshot displays the 'Jurisdictional Changes' web application. The top navigation bar includes links for Dashboard, Circulars, Documents, Administrative Units, Reports, Important Dates, and Users. The main content area features five summary cards for 2021 data: 36 States/UTs, 650 Districts, 6008 Sub-Districts, 640922 Villages, and 9081 Towns. Below these is a 'Statewise Administrative Units - Census 2011 - Census 2021' section with a search bar and a table comparing administrative units between the two census years.

Administrative Units - Census 2011							Administrative Units - Census 2021						
State Code	States/UTs	Districts	Sub-districts	Villages	Towns	Wards	State Code	States/UTs	Districts	Sub-districts	Villages	Towns	Wards
1	Jammu & Kashmir	22	82	6553	218		1	Jammu & Kashmir	22	82	6553	218	
2	Himachal Pradesh	12	117	20090	67		2	Himachal Pradesh	12	117	20090	67	
3	Uttarakhand	13	71	10000	61		3	Uttarakhand	13	71	10000	61	
4	Uttar Pradesh	18	75	10000	57		4	Uttar Pradesh	18	75	10000	57	
5	Madhya Pradesh	18	18	10000	57		5	Madhya Pradesh	18	18	10000	57	
6	Chhattisgarh	10	10	10000	57		6	Chhattisgarh	10	10	10000	57	
7	Odisha	10	10	10000	57		7	Odisha	10	10	10000	57	
8	West Bengal	19	19	10000	57		8	West Bengal	19	19	10000	57	
9	Assam	13	13	10000	57		9	Assam	13	13	10000	57	
10	Nagaland	1	1	10000	57		10	Nagaland	1	1	10000	57	
11	Mizoram	1	1	10000	57		11	Mizoram	1	1	10000	57	
12	Manipur	1	1	10000	57		12	Manipur	1	1	10000	57	
13	Arunachal Pradesh	1	1	10000	57		13	Arunachal Pradesh	1	1	10000	57	
14	Northeast India	1	1	10000	57		14	Northeast India	1	1	10000	57	

Pre-Census Activities (Contd.)..

- Publicity
- Census Management and Monitoring System portal (CMMS)
 - Creation of users & bulk upload
 - Logistics management
 - Training
 - Appointment of Census Functionaries (enumerators, supervisors etc.)
- Self-enumeration Portal
- Adoption of Geo-tagging of Enumeration Blocks (EBs)

During Census Activities

- Census Operations
- Establishing of help centers
- Publicity during Census Operations
- Monitoring and supervision

Geo-tagging of Enumeration Block (EB)

Houselisting Block
Mobile Mapping App

Boundaries of EBs
capture by collecting
location points

Identification of
omitted/overlapping
areas

Geo-referenced
database.
Standardizing the
lowest geographical
location



Census Operations

Phase 1: Houselisting & Housing Census (HLO)

- Identification of each building, structure
- Collection of data on housing conditions, amenities and assets
- Enabled equitable work distribution in the second phase

Phase 2 : Population Enumeration

- Basic data from Phase 1-HLO will be available in PE App
 1. Building number
 2. Census House Number
 3. Actual Use of Census House
 4. Name of the head of household

The screenshot shows the PE App interface for Phase 1 HLO data entry. The title bar is green with the text 'मकानसूचीकरण_जनगणना 2021'. Below the title bar is a yellow header with the text 'भारत की जनगणना' and the Census of India logo. The main content area is yellow and displays location particulars for a specific block (15/28). The details are as follows:

लोकेशन विवरण - मकानसूचीकरण ब्लॉक(15/28)	
राज्य/ संघ राज्य क्षेत्र	02-HIMACHAL PRADESH
जिला	03-LAHUL & SPITI
तहसील/उपजिला	001-UDAIPUR
नगर/ गाँव	0001-Dhar Bhitara (182)
वार्ड कोड	0000
मकानसूचीकरण ब्लॉक नम्बर	0159

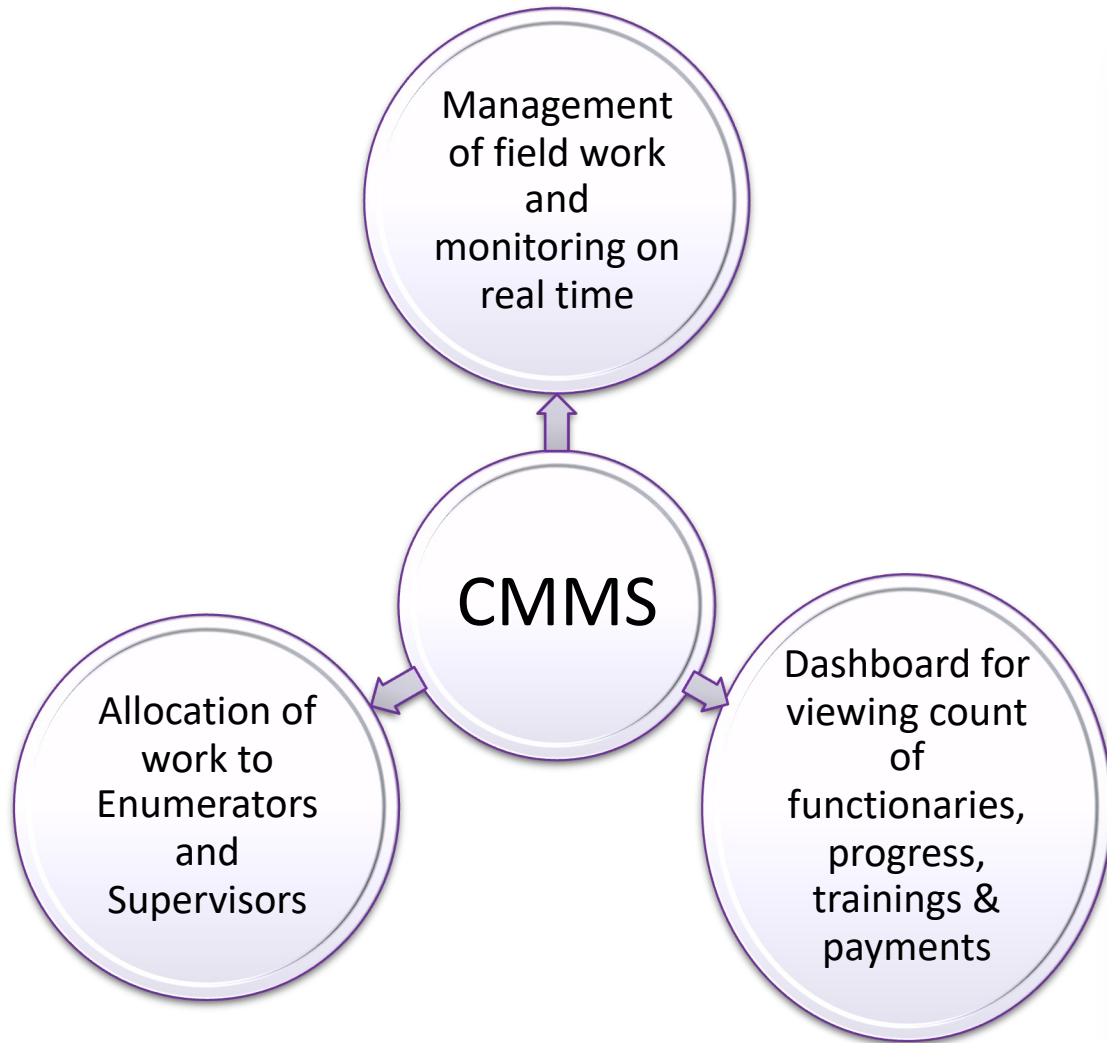
Below the table, there is a button labeled 'अगला मकानसूचीकरण ब्लॉक'. At the bottom, there are two input fields: 'नज़री नक्शे के अनुसार जनगणना मकानों की संख्या' and 'परिवारों की अनुमानित संख्या'. A button labeled 'मकानसूचीकरण प्रविष्टि के लिए क्लिक करें' is at the bottom.



The screenshot shows the PE App interface for Phase 2 PE data entry. The title bar is blue with the text 'PE_Census 2021'. Below the title bar is a green header with the text 'Census of India' and the Census of India logo. The main content area is green and displays location particulars for a specific block (1/4). The details are as follows:

LOCATION PARTICULARS - EB (1/4)	
State/UT :	18-ASSAM
District :	03-GOALPARA
Subdistrict :	001-LAKHIPUR
Town/Village :	7008-Lakhipur (MB)
Ward Code :	0001
EB :	0001
Sub EB :	01

Below the table, there is a button labeled 'NEXT EB'. At the bottom, there are three buttons: 'CLICK FOR HOUSEHOLD SCHEDULE ENTRY', 'REVISIONAL ROUND ENTRY', and '100% WORK COMPLETED'. At the very bottom, there is a footer that reads 'Designed and Developed by National Data Centre, ORGI, MHA'.

Role of CMMS during Census



**CENSUS OF INDIA**
Office of the Registrar General & Census Commissioner, India
Ministry of Home Affairs, Government of India



Census Management and Monitoring System (CMMS)

ਦੇਵਸਤਿ ਗੜਿਰੀ**Ka Census na ka bynta ka jingmyntoi ki paidbah ** जनगणनेतयान लोक कल्याण ** கணநெய்தயான லோக கலாண ** जनकल्याणसाठी जनगणना ** जनगणनाबा

User Id


Password

[Forgot Password?](#)



Login

Only **Authorised user** have access to this portal



Notifications

Mobile Application

Mobile Application can be downloaded from **Google Play Store**

E-Learning

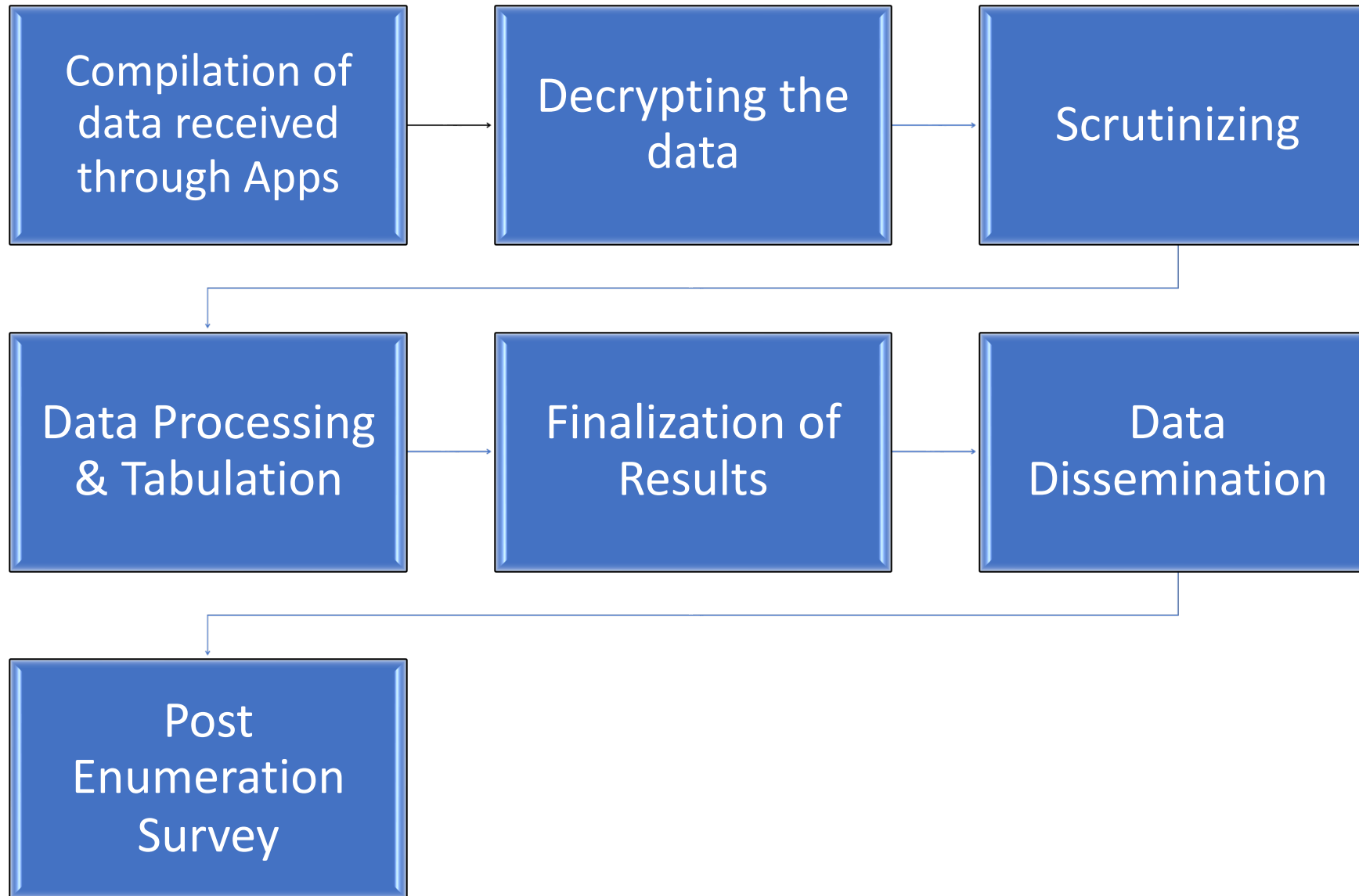
Frequently Asked Questions

Mobile Application
House Listing
Population Enumeration

Help Desk

In case of any problem, call us at
Toll Free No : XXXX XXX XXXX

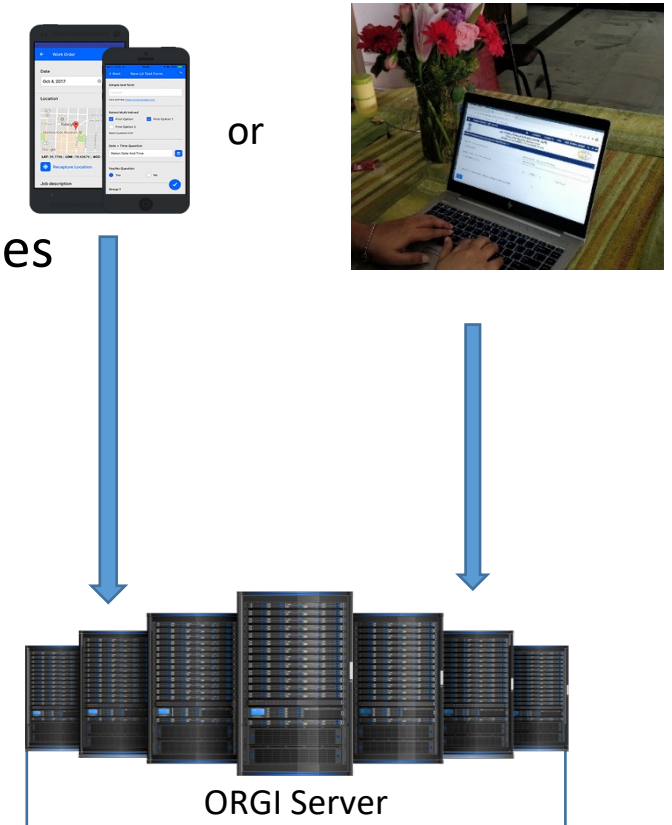
Post Census Activities



Strategy for Ensuing Census

Methodology for Ensuing Census

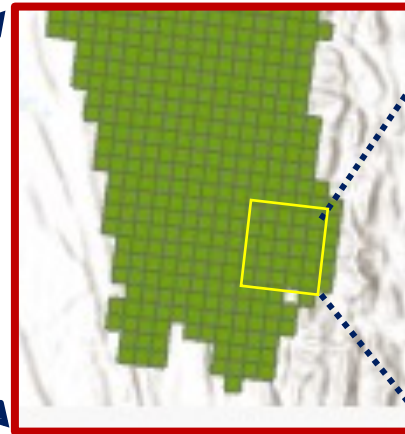
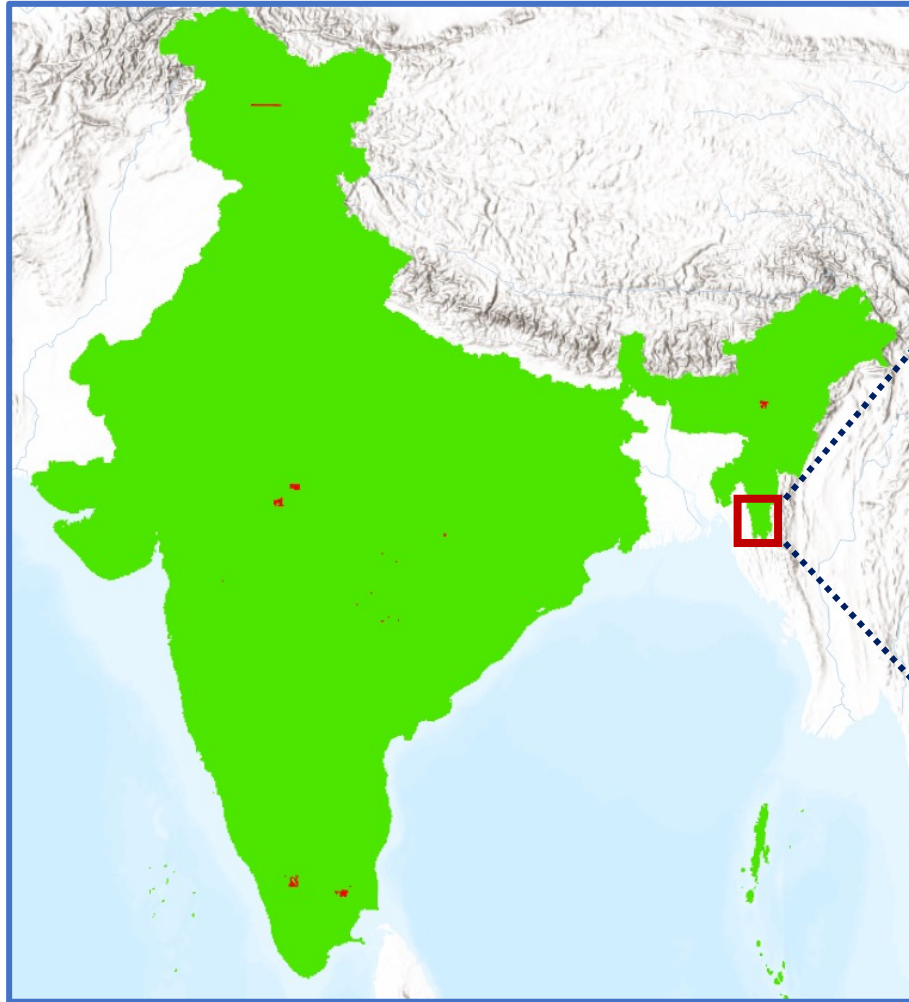
- Digital data collection
 - Enumerators bring their own device
 - Higher honorarium for digital data
 - Procurement, maintenance and post census upkeep of Mobiles eliminated
 - Paper schedules only in rare cases of connectivity
- Self Enumeration
- Code Directory introduced for codifying descriptive questions
- Mobile number collected for Census related communication and Self-enumeration



Digital Data Collection

- **Mobile Apps (HLO, PE)**
 - Both iOS and android version
 - Offline Apps in 16 languages
 - Encryption features inbuilt
 - Only authorized access in registered devices
 - Inbuilt validations
 - Basic Artificial Intelligence capabilities inbuilt
- **Self-enumeration portal** - Both web version and mobile responsive version

Built-Up Area (BUA) Digitisation



Entire country has been divided into
1,35,314 Spatial Grids

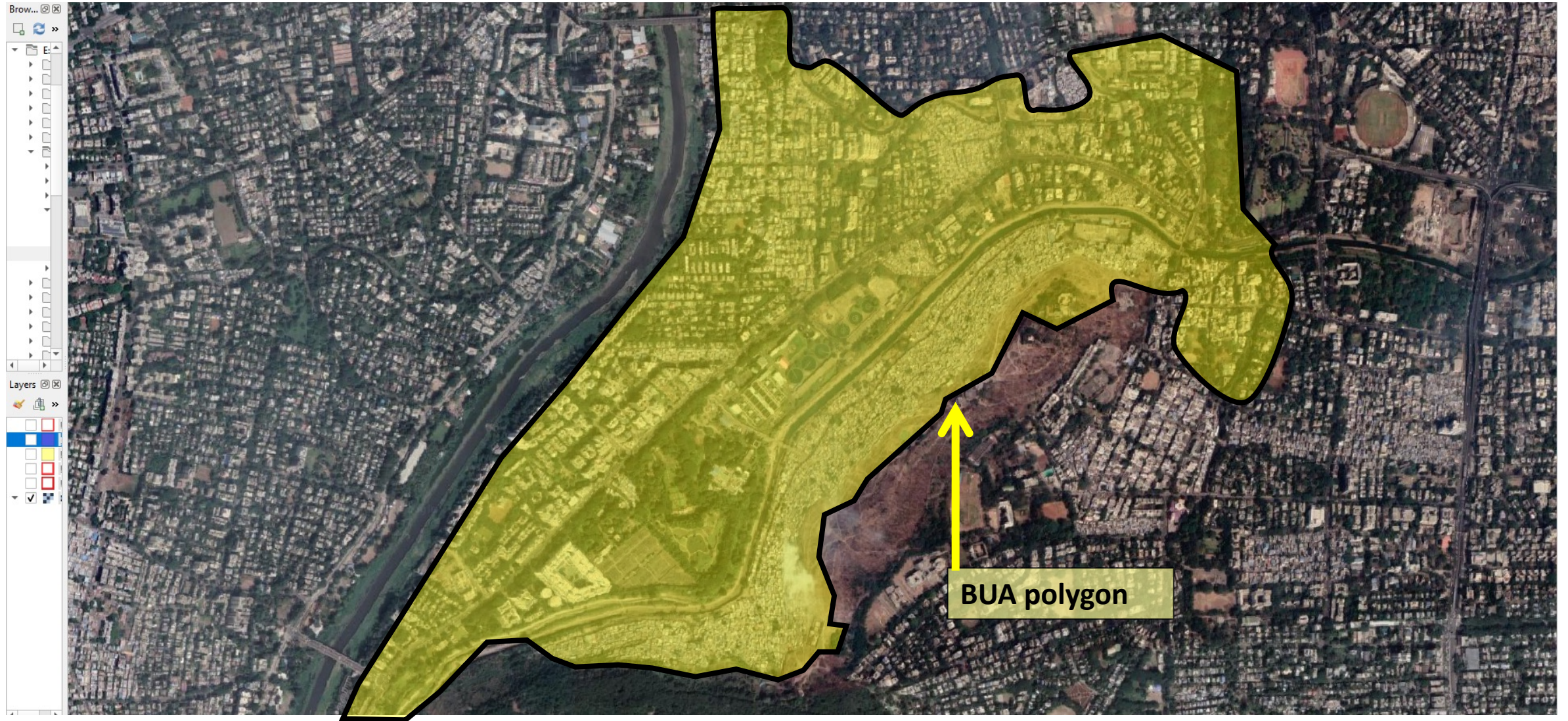


One Grid
(25 Sq. Km)

Example: Built-Up Area polygons



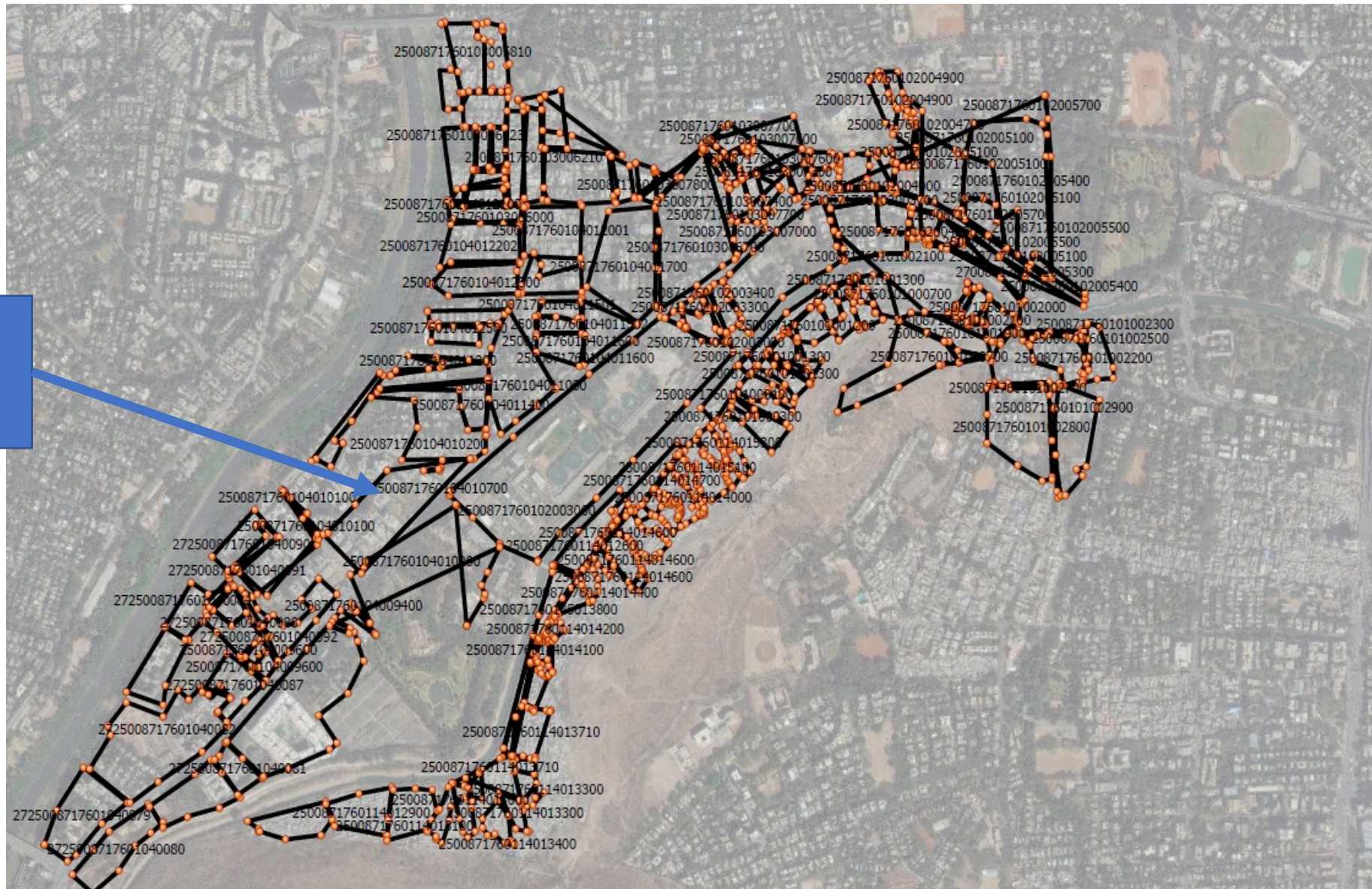
Open Source Satellite Imagery and BUA polygon



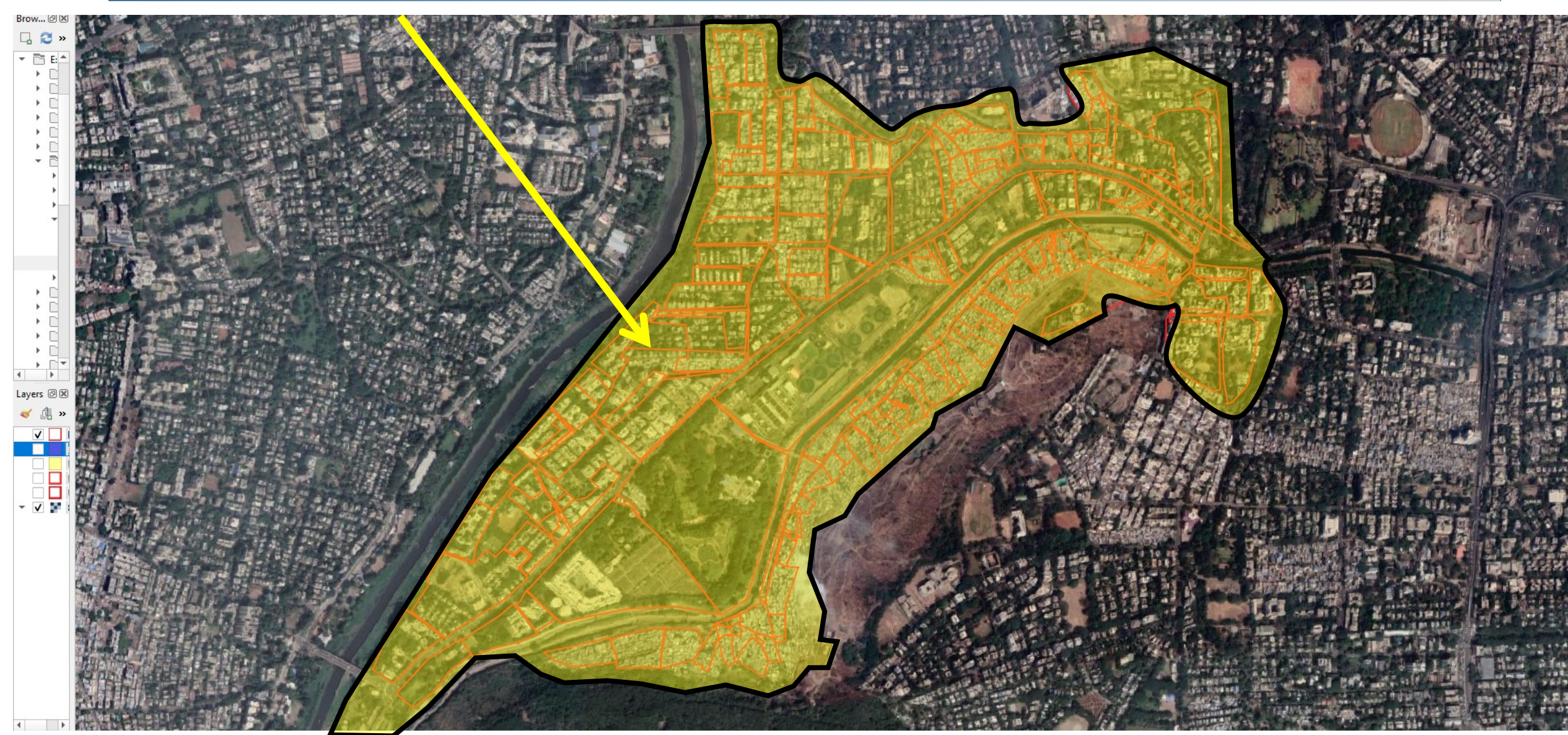
Field data captured using Mobile Mapping App

(Field data captured on pilot basis using EBs of Census 2011)

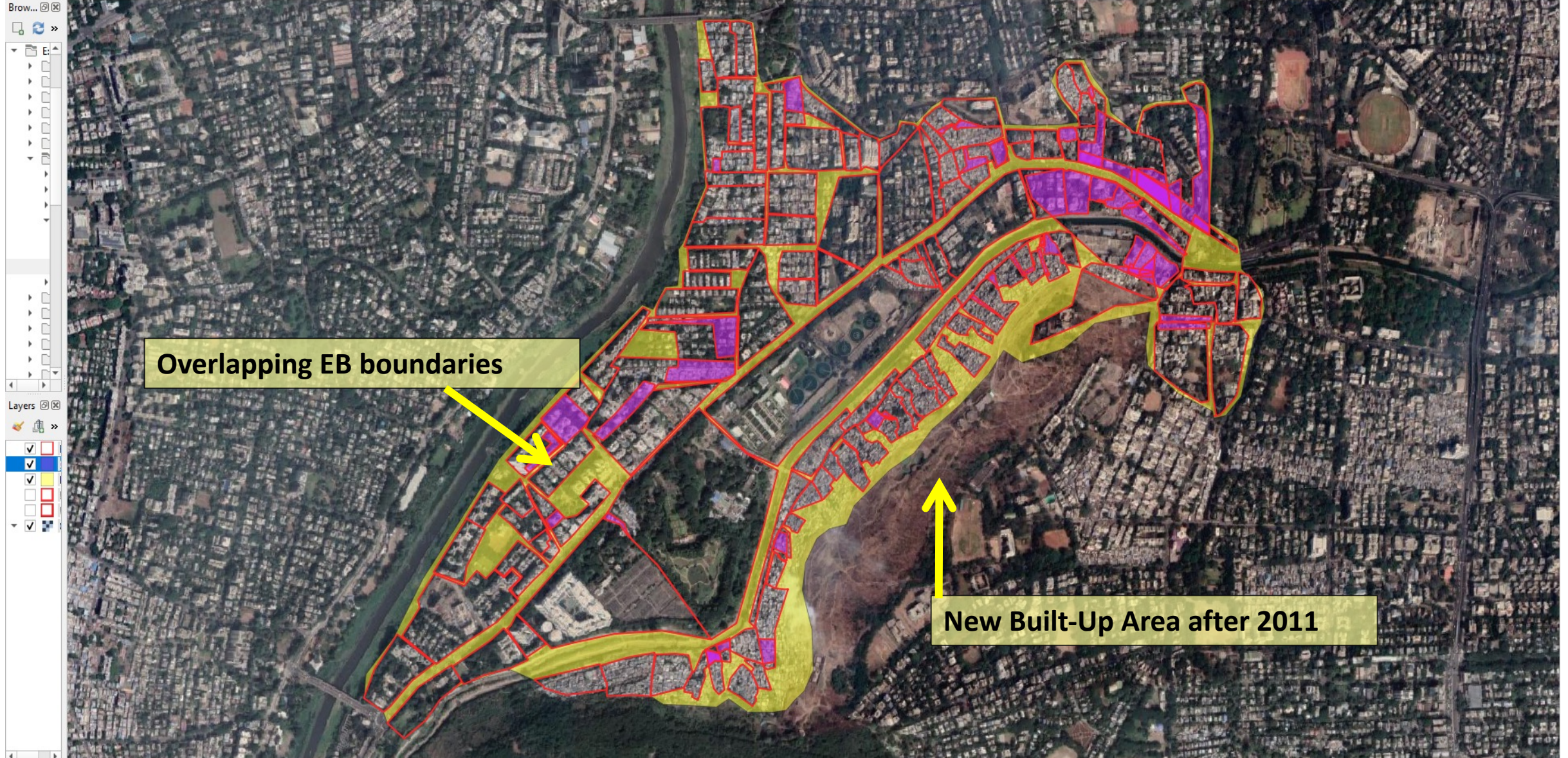
Terminal points
captured in the field
for 2011 EBs



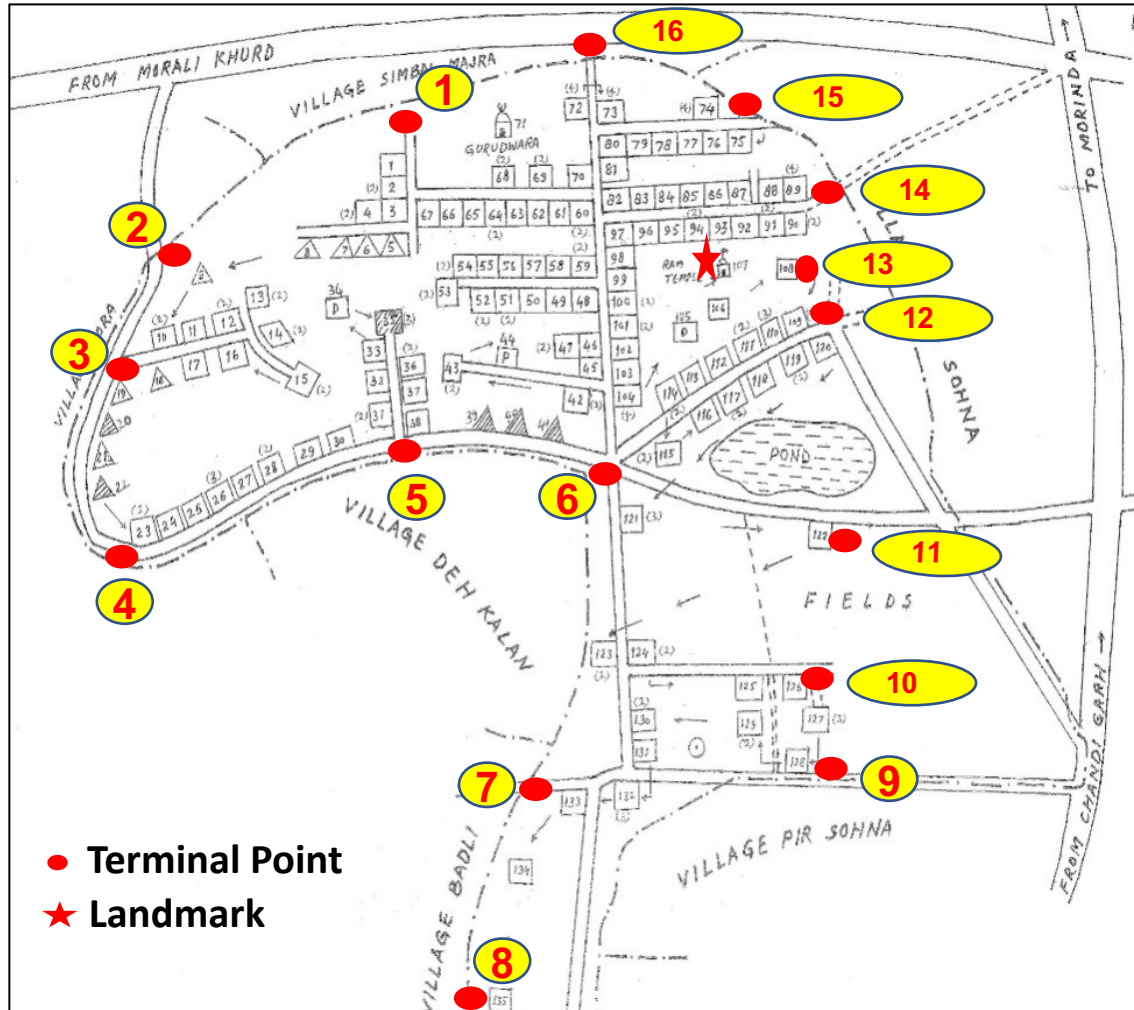
Processed EB Boundaries intersected with BUA Polygon data



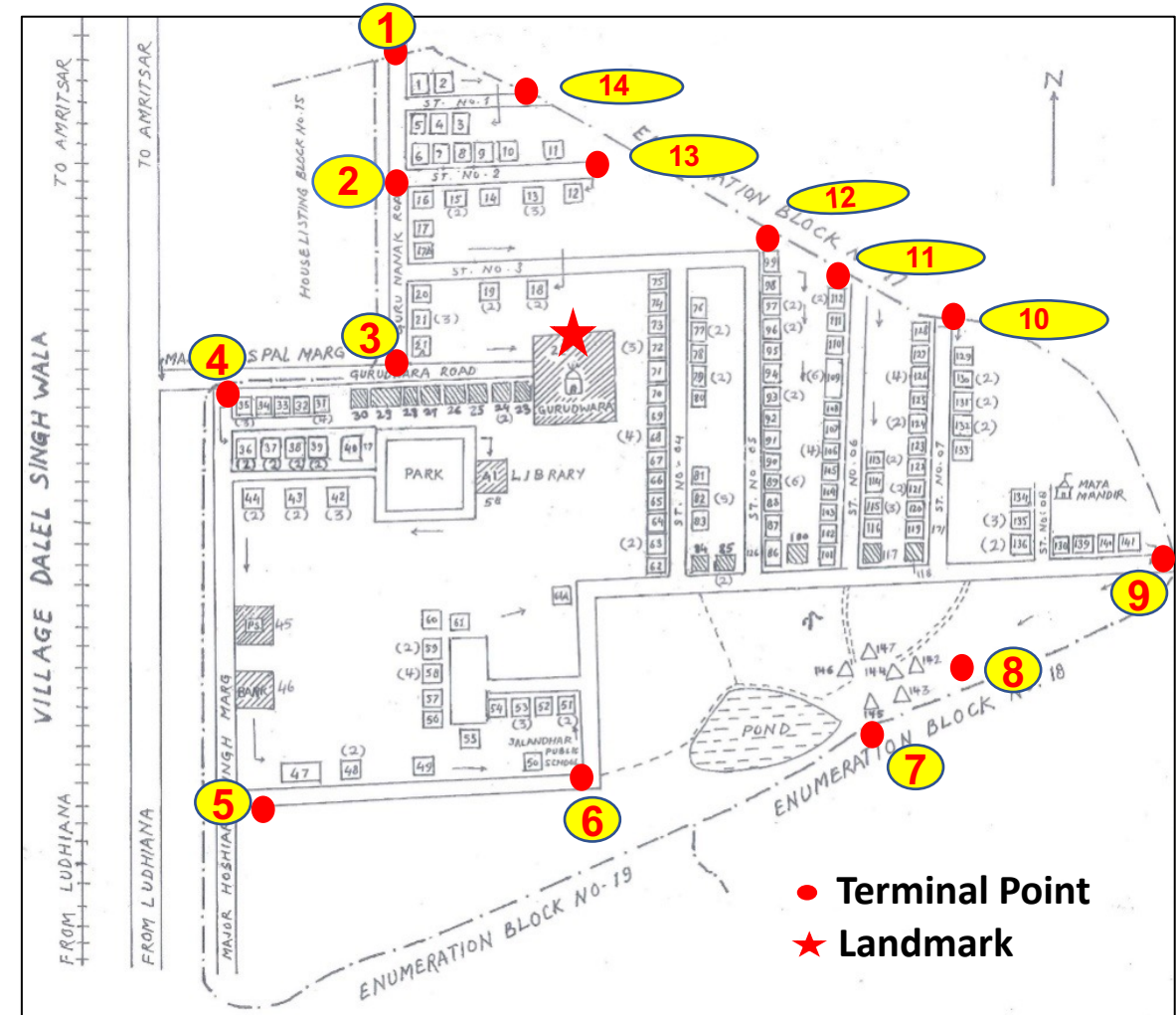
Example: EBs with overlapping areas



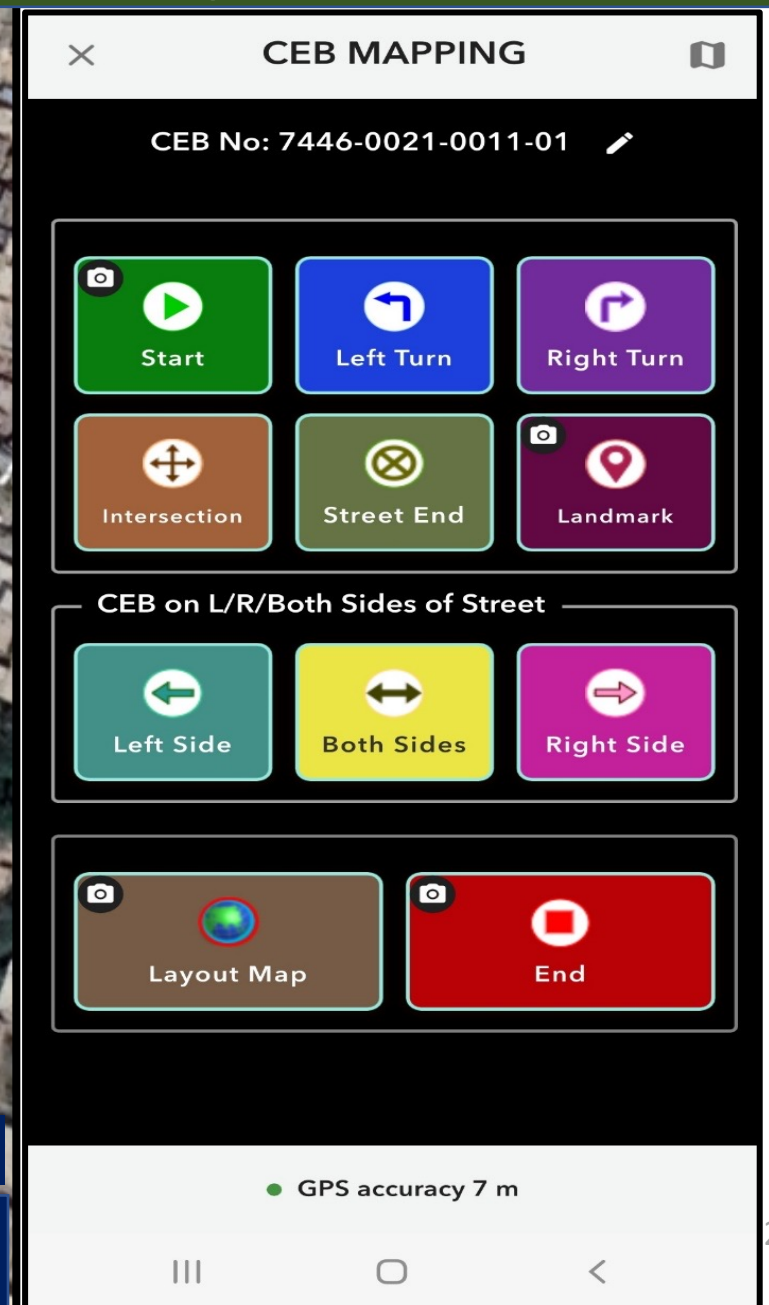
Rural HLB



Urban HLB



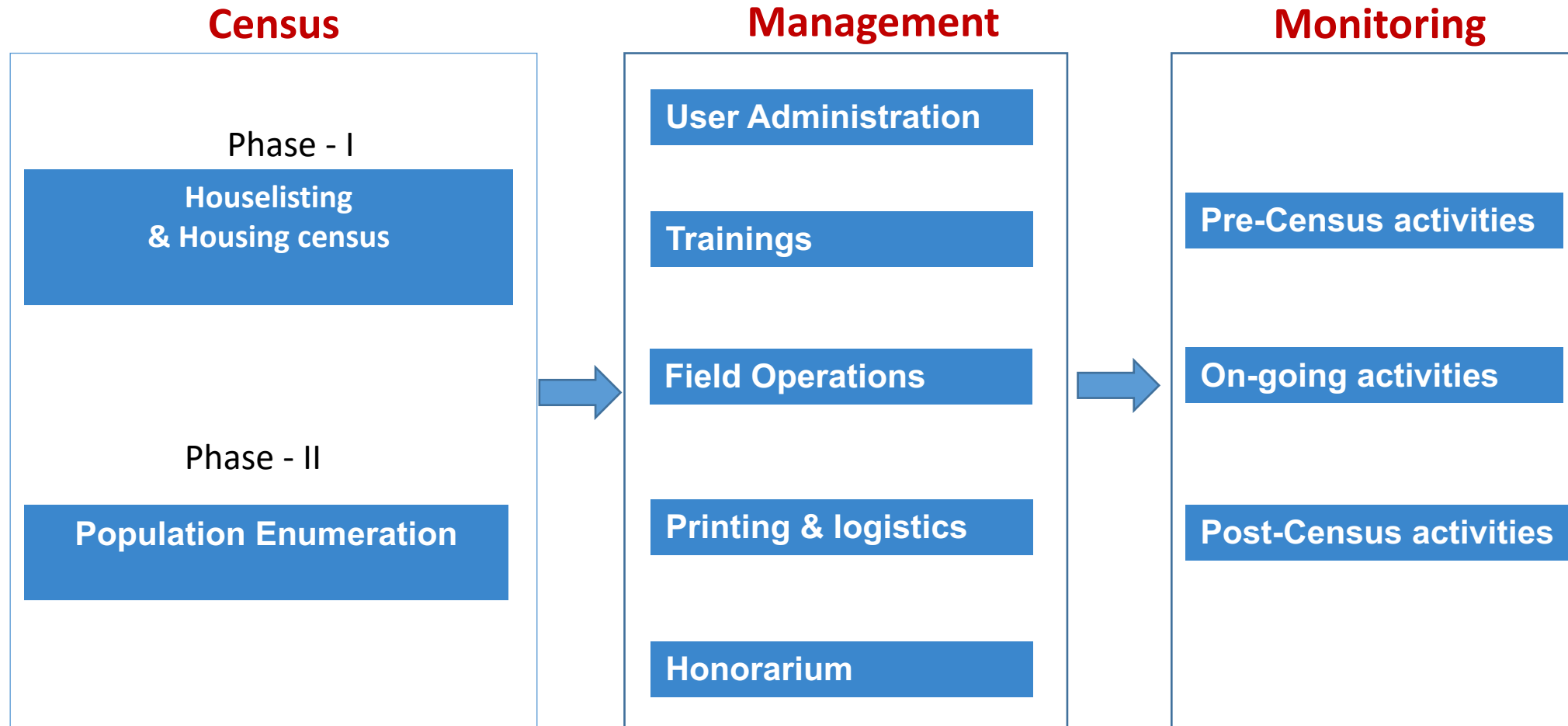
Mobile Mapping App and the Concept



Security While Data On Mobile

- Multi-layered security approach while data is on mobile, during transmission and resting on server.
- Before collection, App will check for any malware
- After a due date, data will be removed automatically from mobile
- 128 Bit encryption to secure online transactions
- Encrypted data will be transferred from Mobile to ORGI server
- Data uploaded will be kept on a separate server
- Data on ORGI Server will rest in Encrypted Form

Entire management of Census through portal



CMMS Portal- Dashboard

Dashboard for viewing the number of functionaries, progress of work, trainings on real time basis at India/State/District/Sub-district level

The screenshot displays the CMMS (Census 2021 - Management and Monitoring System) dashboard. The interface includes a top navigation bar with a helpline number (1800 180 2021), a skip to main content link, and user controls (A+, A, A-, Policies). The main header shows the system name and the user's name (deepak). The left sidebar contains navigation links for Administration (User Management, Notifications, Notification Service), Census Progress (Dashboard, HouseListing, National Population Register, User Reports, Training Reports, HLO Report, Training Schedule Report), PFMS (Beneficiary Status, Payment Master), and Payment Request.

The main content area displays the following metrics:

- Functionaries (More...)**

Category	Count
Enumerators	(1113)
Supervisors	(312)
Field Trainers	(207)
Master Trainer	(111)
- Training Batch (More...)**

Category	Count
Total Created	(478)
Total conducted	(11)
Yet to be conducted	(64)
Attendance updated	(323)
- Training Participants (More...)**

Category	Count
To be Trained	(4146)
Nominated	(1617)
Yet to be Trained	(2529)
Attendance Updated	(1488)
- Progress**

	In Progress	Completed
HLO (More...)	245	931
NPR (More...)	175	432
- Workload**

Category	Count
State/UT/District/M. Corp.	
Charges	
HLB/EB	
- Payments**

Category	Count
Credited to beneficiary account	
Processed, yet to be Credited	
Yet to be Processed	

The bottom of the dashboard shows a Windows taskbar with the system clock (4:45 PM, 04-05-2022) and temperature (36°C).

CMMS Portal- Census Progress

- Real time Census progress can be monitored

CMMS

census.gov.in/#/hloreport

Helpline Number: 1800 180 2021

Census 2021 - Management and Monitoring System (CMMS)

deepak

Census Timeline

Session Time Left: 15 Mins:15 Secs

Administration

- User Management
- Notifications
- Notification Service
- Census Progress**
- Dashboard
- HouseListing
- National Population Register
- User Reports
- User Info
- Charge Info
- Training Reports
- HLO Report
- Training Schedule Report

PEMS

Houselisting and Housing Census

All States

State/UT	Total HLBs	Capture Mode	HLBs			Total Number of Census Houses (From Col 3 of HL Schedule)	Number of Census Houses by use Col 7 of HL Schedule			Vacant Census Houses	Total of Columns 5 and 6	Census Houses put to other uses (col 2 minus col 7)	Total number of Households (From Col 9 of the HL Schedule)	Total Population (From Col 10 of the HL schedule)
			In Progress	Completed	Yet To Start		Wholly Residential	Partly Residential	Total of Columns 3 and 4					
A	1	B	1.1	1.2	1.3	2	3	4	5	6	7	8	9	10
23-Madhya Pradesh	417	Mobile	5	18		384	287	17	304	17	321	63	309	1692
		Paper	0	2	392	35	22	6	28	2	30	5	28	94
		Total	5	20		419	309	23	332	19	351	68	337	1786
24-Gujarat	629	Mobile	9	47		546	383	45	428	38	466	80	430	1433
		Paper	0	0	573	0	0	0	0	0	0	0	0	0
		Total	9	47		546	383	45	428	38	466	80	430	1433
26-Dadra And Nagar Haveli And Daman And Diu	248	Mobile	2	4		72	50	8	58	1	59	13	59	261
		Paper	0	0	242	0	0	0	0	0	0	0	0	0
		Total	2	4		72	50	8	58	1	59	13	59	261
27-Maharashtra	4460	Mobile	31	7		949	524	70	594	30	624	325	662	2966
		Paper	0	1	4421	30	24	0	24	2	26	4	24	62
		Total	31	8		979	548	70	618	32	650	329	686	3028
28-Andhra Pradesh	697	Mobile	6	19		718	564	54	618	15	633	85	646	2557
		Paper	0	0	672	0	0	0	0	0	0	0	0	0
		Total	6	19		718	564	54	618	15	633	85	646	2557

CMMS Portal- Payment Module

Direct Benefit Transfer (DBT) of honorarium through Public Finance Management System(PFMS) to 30 lakh Census functionaries using CMMS portal

er: 1800 180 2021

Skip To Main Content A+ A A-

Edit Payment

User ID

User Name

Not Applicable

Not Applicable

User Group

Mobile

Not Applicable

Not Applicable

Send Back To

Save as Draft

Forward To

User ID

User Name

dsa_0107

Jatinder Kumar

User Group

Mobile

District Admin

9354332142

User Summary

User Group	On Mobile		On Paper	
	HLO	NPR	HLO	NPR
Enumerator	3	3	0	0
Total	3	3	0	0
Census Functionaries				3

Payment Summary

User Group	On Mobile		On Paper	
	HLO	NPR	HLO	NPR
Enumerator	22500	18750	0	0
Total	22500	18750	0	0
Total Amount Requested				41250

Search

Search

Download

S No.	Is Verified	User ID User name User Group	Bank Name Bank IFSC Code Bank Account Number	Beneficiary Code	Houselisting Operation				Mode	National Population Register				Mode	Amount Payable	Last Remarks by	Remarks	Remarks History
1	2	3	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	<input checked="" type="checkbox"/>	et_01070097021_roshan Roshan Enumerator	THE JAMMU AND KASHMIR BANK LTD JAKAOPAROLE 0041040100012387	BININ04142449	0016	40	181	Yes	Mobile	0016	196	165	Yes	Mobile	13750			
2	<input checked="" type="checkbox"/>	et_01070097021_sukhdev Sukhdev Enumerator	THE JAMMU AND KASHMIR BANK LTD JAKAOPAROLE 0041040100004442	BININ04142450	0014	41	210	Yes	Mobile	0014	229	176	Yes	Mobile	13750			
3	<input checked="" type="checkbox"/>	et_01070097021_angrez Angrez Saini	THE JAMMU AND KASHMIR BANK LTD JAKAOPAROLE	BININ04142448	0008	26	104	Yes	Mobile	0008	23	19	Yes	Mobile	13750			

Data Dissemination

- Data analytics and dissemination for planned and customized tabulation
- Census as a service – includes query based responses
- Ministries/States/other users to get desired aggregated information – through tables and maps through Application Programme Interface (API)
- Provisional population
- Houselisting & Housing Census data
- Population Enumeration data - Village-wise primary data
- Other Population Enumeration data
- Census website- www.censusindia.gov.in



जनगणना से जन कल्याण
Janganana se Jan Kalyan

THANK YOU

Houselisting & Housing Census App- HL_Census 2021

9:26

HL_Census 2021



Census of India

LOCATION PARTICULARS - HLB(4/ 5)

State/UT	08- RAJASTHAN
District	12- JAIPUR
Subdistrict	001- KOTPUTLI
Town/Village	7070 - Kotputli (M)
Ward Code	0021
Houselisting Block No	0039

NEXT HLB

No. of Census house as per Layout Map

100

Expected no. of households

150

CLICK FOR HOUSELIST ENTRY

VIEW SUMMARY OF CENSUS HOUSES/HOUSEHOLDS

EDIT RECORD

EDIT ALREADY SYNCED RECORD

DELETE RECORD

HLB COMPLETED

Designed and Developed by National Data Centre, ORGI, MHA