

An aerial photograph of a village in a tropical region. The village is characterized by numerous small houses with red-tiled roofs, densely packed together. The surrounding landscape is lush green, with a mix of dense forest and agricultural fields. The fields in the foreground are divided into irregular plots, some of which are planted with crops, while others appear to be fallow or recently tilled. The overall scene depicts a rural, agricultural community.

Augmenting Technology for Resilient & Sustainable Development in NE Region

02nd December, 2025

NE India – Issues that make the region unique

Connectivity Challenges

Hazard Prone

Developmental Disparities

How to solve for these challenges?

Technology: To solve for sectoral transformation

Multi-Hazard
Preparedness & Risk
Anticipation

Water Intelligence &
Security
- Hydroinformatics Unit

Climate-Smart Agriculture &
Food Systems

Connected Markets &
Smart Logistics for Remote
Economies

Clean & Resilient
Construction for a Seismic
Region

Energy Access & Transition
for Distributed Settlements

Transformation in Action: Case of Land Governance

Challenges?

**Revenue Records vs Ground
Realities**

**Textual Records vs Spatial
Maps**

**Inter-departmental silos: Urban
vs Revenue, Revenue vs
Registration, Urban vs
Municipality**

Building the capabilities: Putting the pieces together



● Under process

100 (45+115)

Physical Infrastructure

Methodologies & Technological Advancements in Conducting Accurate & Reliable Ground Surveys



RASTER : ORI (TIFF)



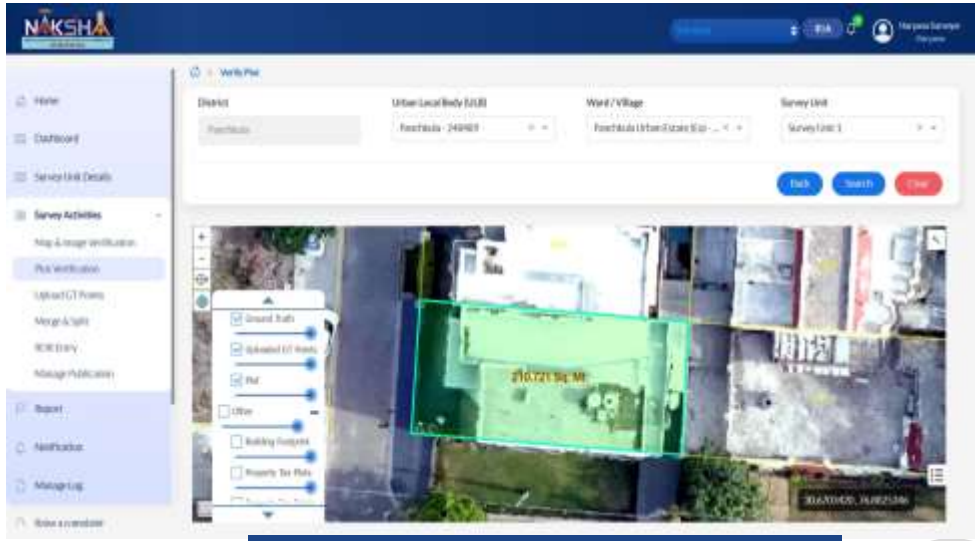
CONTROLLER



BUILDING FOOTPRINT (DXF)



ROVER

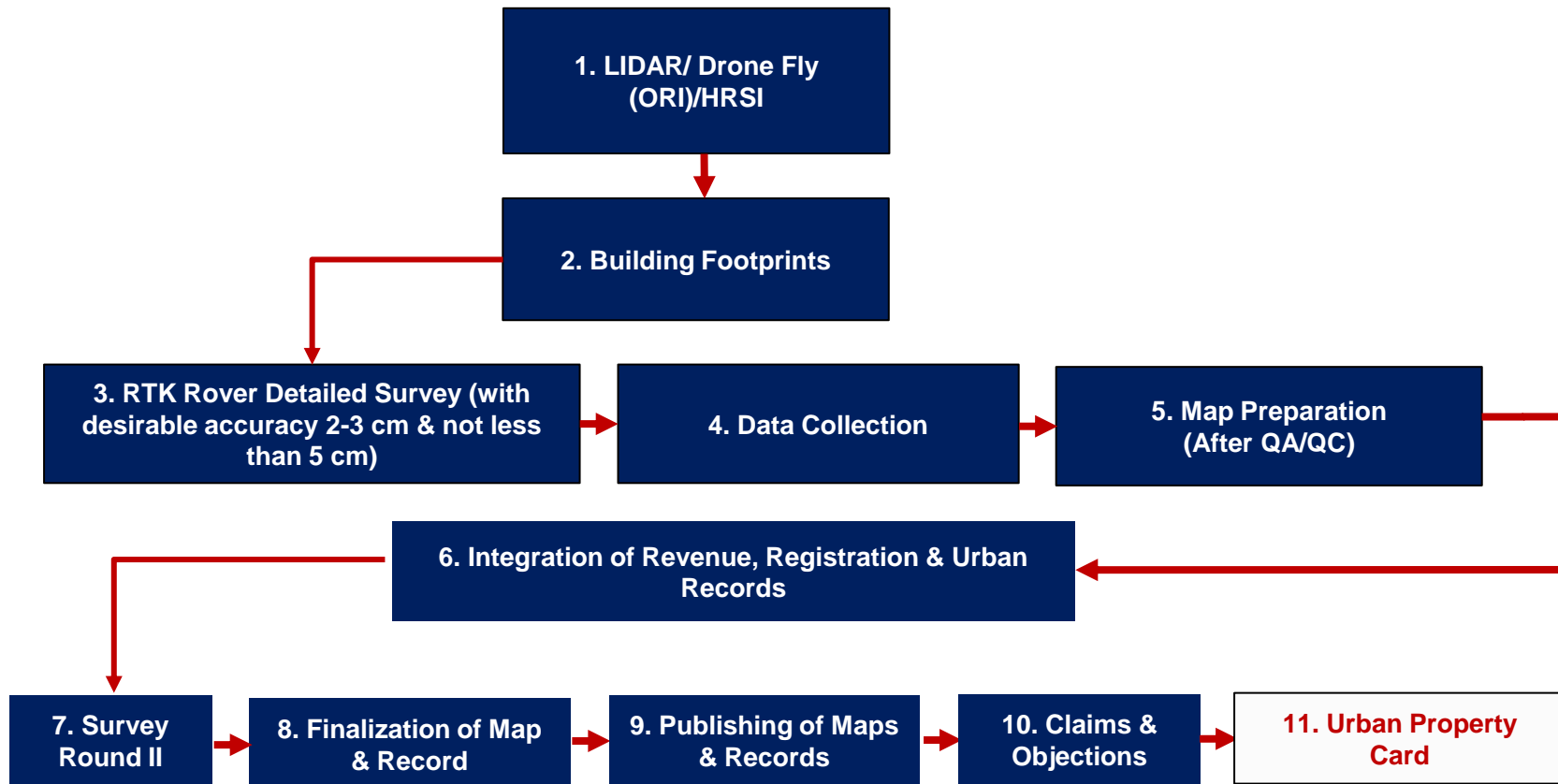


DATA COLLECTION TEMPLATE IN NAKSHA PORTAL



CADASTRAL VILLAGE LAYER (DXF)

Capturing Precise Land Boundaries & Attributes Essential for Effective Land Governance: Process Flow



Leveraging AI for extracting building footprint

Feature Extraction – Land Parcels

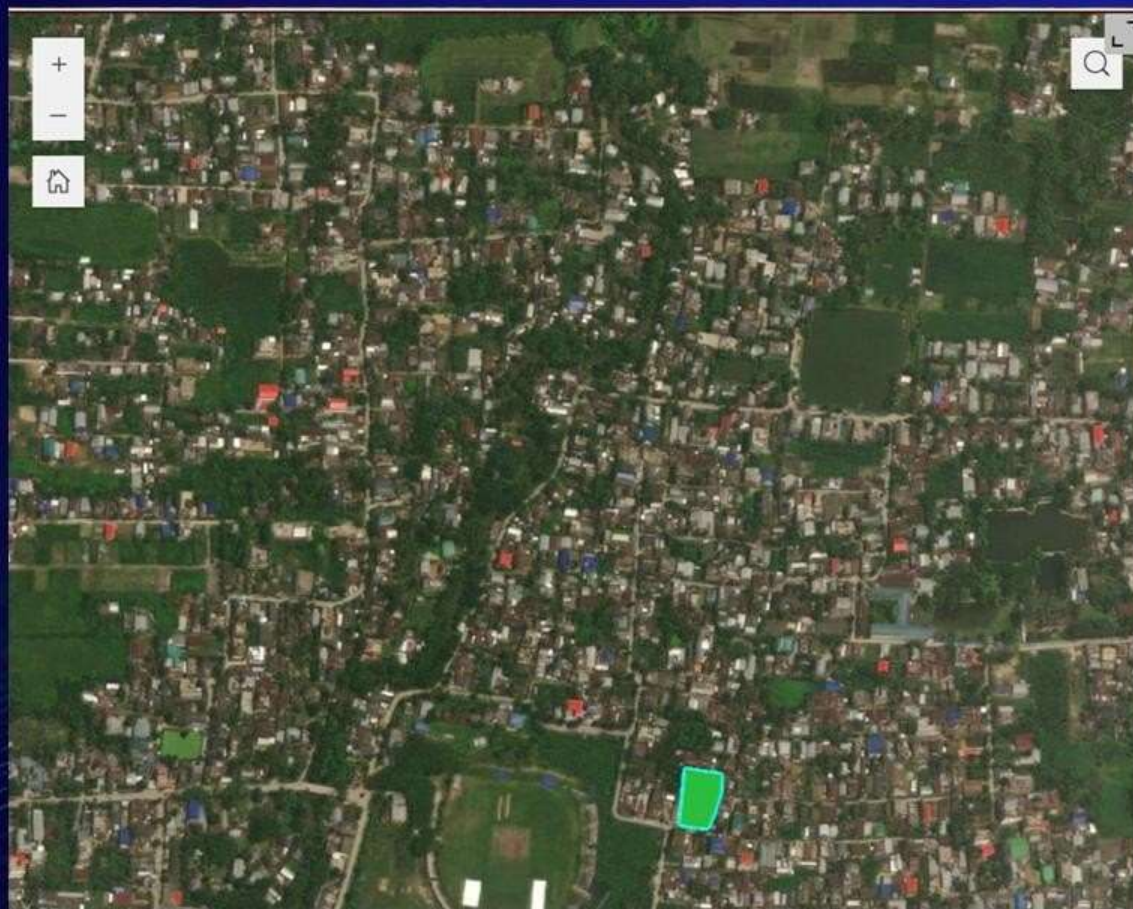


Rover Corrected Polygons (Land Parcels)



AI Generated (Land Parcels)

TransFuz – AI for Translation & Automation to find Common Identifier



Plot : 792 DAG : 1156/1161

UIN match (RCP - Property data)

UIN: MAN0802995867

Circle: MANGALDOI

Pattadar

Occupier
HOQUE JUL ALI

Property Data

Applicant name Haquzal ali
UIN MAN0802995867
Phone 8486996262
ASEB consumer no. 84000004636

Utility

Consumer no. 84000004636
Consumer name HAQUZAL ALI
Mobile 8486996262

Ward
WARD 2

District
DARRANG

Assam Land Records - Mangaldoi Land Stack

Total Parcels

4,149

Selected Parcels

2,076

Percentage

50 %

All Data

UIN Match

Phone No. Match

Name Exact Match

Name Fuzzy

Land Stack Information

Matching tag filtering

Esri tag for matching is any of

1 Selected

Apply

Cancel

Ward wise filtering

Ward is any of

0 Selected

Apply

Cancel

View filtered d...

Mangaldoi Land Stack

Match_Type

- UIN match (RCP - Property data)
- Phone number match (RCP - Property)
- Name(Exact) match (RCP - Property)
- Name(fuzzy) match (RCP - Property)
- Phone number match (RCP - Utility)
- Consumer name(Exact) (RCP - Utility)
- Consumer name(fuzzy) (RCP - Utility)



Powered by Esri

Pattadar

Occupier

NURUL HOQUE

Property Data

Property API

Applicant name: Nurul haque
 UIN: MAN0802611560
 Phone: 7002765919
 ASEB consumer no.: 84010071229

Utility

Utility API

Consumer no.: 84010071229
 Consumer name: NURUL HOQUE
 Mobile: 9854401958

Ward

WARD 2

District

DARRANG

Names in RoR

Shri Damburu
 Chetri, Miss
 Minara Begum
 Md. Nurul
 Haque

Deed name
 [{"partyName":
 "NURUL
 HOQUE",
 "partyAddress": "
 "partyType": "
 "Purchaser"}]

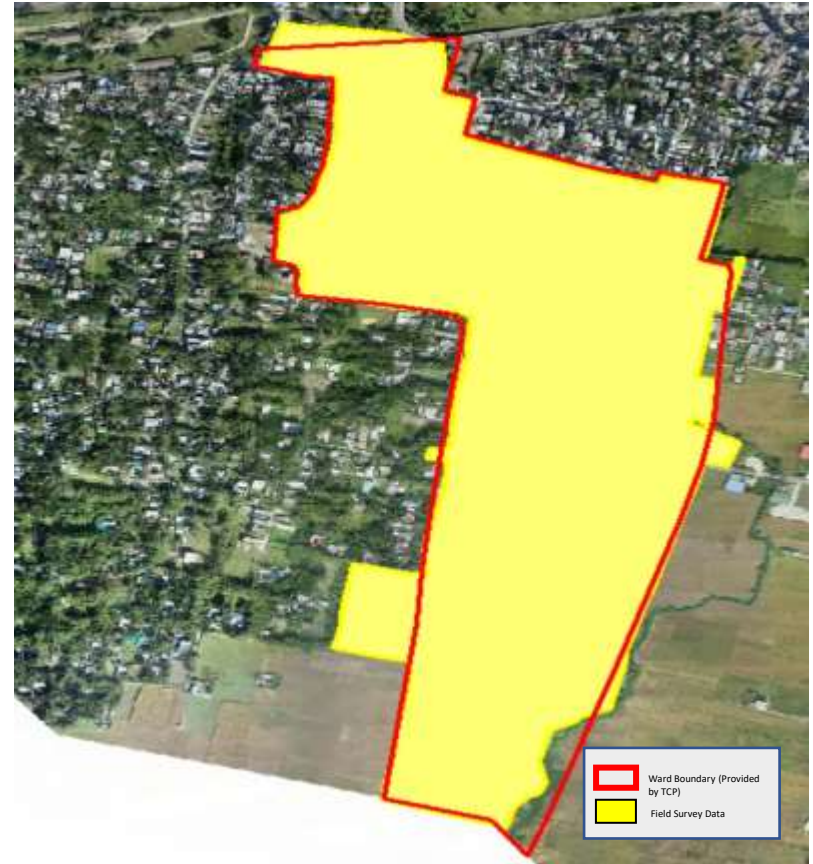
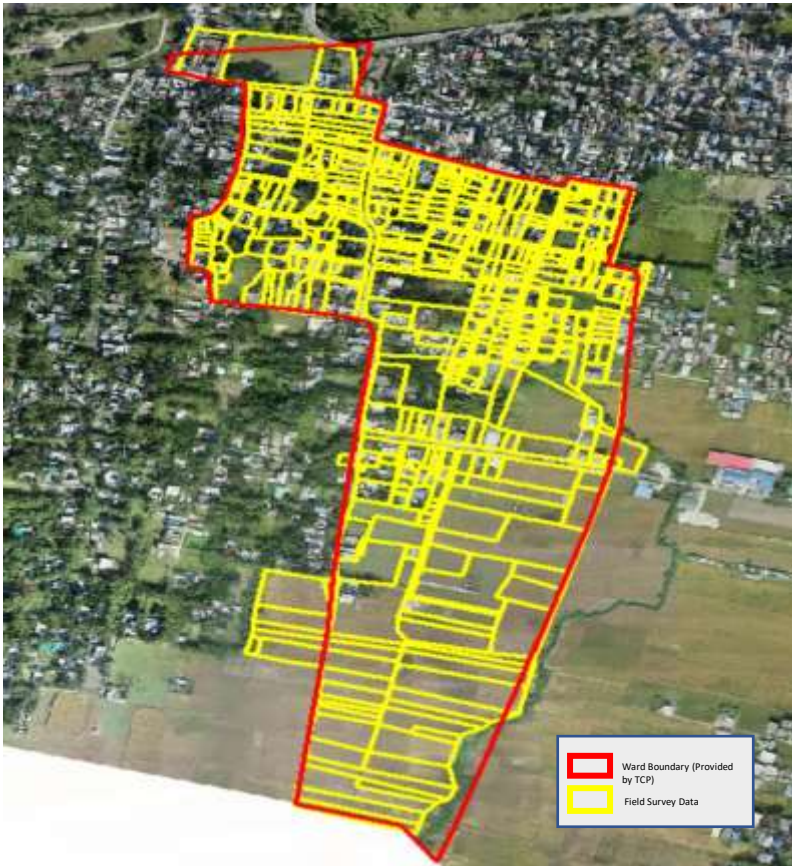
Deed API

AG - 1117

DAG - 161

DAG - 2115

Map Comparison of Old Ward Boundary & Field Survey Boundary Bongaigaon ULB, Ward No.19



Note: After ground truthing, it is found that the ward boundary needs updation. The remaining area as shown in the red boundary ward map provided by T&CP is to be updated as per the yellow boundary provided after field survey.

Comparison of Land Parcels between the Old Cadastral Map and the Newly Ground-Truth Surveyed Map of Mangaldoi ULB, Ward No. 8



Note: The yellow-coloured land parcel represents the old cadastral map, where the Dag No. of the parcel was 110. After ground truthing, it was found that Dag No. 110 has been subdivided into 11 parts. The red boundary indicates the newly surveyed data.

Attribute Essentials for Updating Land Records in NAKSHA



Creating a Unified data framework through UrPRO card

- ULPIN
- Plot ID
- Ward Name & No.
- Building Details
- Owner Details
- Ownership Documents
- Overview Map

Maharashtra Government
Urban Property (UrPRO) Card Number
(Valid until 31st Oct 2024 at 11:59 PM IST)
UR_PRO_CARD_NO

Form No. : **URPRO** /
 Owner's Name : **Shyam Nath**
Date : **2024**

1. Plot Details

State/UT Name	Asset	ULPIN	ULPIN (ID)
District Name	Category	Plot ID	3
Town/City Name	Municipality	Plot Area (sq. ft.)	507.00
City Survey No.	CSNO	Plot Address	Tarika Road
Plot Name & No.	Margosa (WB) - Ward No. 1	PN Code	154121
Ownership Type (Govt)	Private	Jurisdiction Type	UR

2. (a) Building Details in respect of individual buildings

Municipality ID	Purpose of Usage			
NA	NA			
Name of the Building	Total No. of Floors	Owner Floor No.		
NA	NA	NA		
Super Built-up Area (sq. ft.)	Parking Area (sq. ft.)	Garage Area (sq. ft.)	Property Address	
NA	NA	NA	NA	

2. (b) Building Details in respect of multi-ownership buildings

Municipality ID	Purpose of Usage <small>(Commercial/Residential/Industrial/Institutional/Other)</small>			
NA	NA			
Apartment Name/No.	Floor No.	Plot No.		
NA	NA	NA		
Super Built-up Area (sq. ft.)	Parking Area (sq. ft.)	Garage Area (sq. ft.)	Property Address	
NA	NA	NA	NA	

3. (a) Owner details (Plot)

Sl.	Name of Owner	Quantity / Shareholder's Name	Ownership Share	Year of Commencement of Ownership	Owner's Communication Address	Mobile No.	Aadhar No.	Owner's Photograph	Ownership/ Lease Hold/ Other Rights
1	Shyam Nath		100	2017	Tarika Road Margosa Wasti - 154121	XXXXXXXXXX	XXXXXXXXXX		Ownership

3. (b) Documents (Plot)

Sl.	Name of Document	Owner Identity Document Name	Document No.	Issuing Authority	Document Date
1	Shyam Nath	Nath (Shyam copy)	123456789	Mumbai City Police	2023-10-01

3. (c) Owner details (Individual buildings/individual ownership Group Housing Society)

Sl.	Name of Owner	Quantity / Shareholder's Name	Ownership Share	Year of Commencement of Ownership	Owner's Communication Address	Mobile No.	Aadhar No.	Owner's Photograph	Ownership/ Lease Hold/ Other Rights
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

3. (d) Ownership Documents (Individual buildings/multi-ownership Group Housing Society)

Sl.	Name of Document	Owner Identity Document Name	Document No.	Issuing Authority	Document Date
NA	NA	NA	NA	NA	NA

4. Mutation No. with Date of Mutation

NA / NA

5. Encumbrance/Mortgage/ Other rights

NA / NA

6. Remarks

NA / NA

7. Location Map

(Scale: 1:5000)
 To the scale of the ENCUMBRANCE AREA IN RED
 LAND RECORD AREA 1: 500 (sq. ft.) PLAT 1552 (7th ed.) No.

8. Overview Map

9. Photo of the Building/ of Land from Neighbouring Structure

10. Digital Signature

Property Officer
 City Corporation
 Generated on: 2024

Note: This is a digitally signed document and does not require physical signature.

Thank You