



PP
RA
ONE MAP
PROJECT

PROGRAM
PERCEPATAN
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AGRARIA



THE WORLD BANK

WORLD BANK LAND CONFERENCE 2024

COMPLETE AND SYSTEMATIC LAND REGISTRATION IN INDONESIA

Presented by:

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Ministry of Agrarian Affairs and Spatial Planning/National Land Agency

Washington DC, 17th May 2024

Melayani, Profesional, Terpercaya

INSIGHT and OULTINE



Approximately Land Parcels in Indonesia: ± 126 Million



The annual registered land using sporadic method was ± 1-1,5 million parcels



In 2016, the registered parcels were 46 million, Jokowi's mandate was to accelerate the land registration



Limited Government Budget



Efforts to accelerate the land registration in Indonesia:



1 Complete-Systematic Land Registration (PTSL) : Integrated-PTSL approach FFP LA



2 Community involvement through participatory mapping



3 Open Land Data & Journey for Completeness



Land Registration Periods



36%

1961 – 2016 (People Demand)

Surveyed Parcels: ± **46 million parcels**

- Sporadic
- Conventional-terrestrial Approach mostly, combines with the modern tools.
- Some can not be mapped (due to the use of local coordinate reference system)
- Capacity of the Government's Land Registration Program was 500 thousand parcels per year

88,9 %

2017 – April 2024 (Government driven and People demand)

Surveyed parcels : ± **112 million parcels**

- Unregistered parcels as target
- The instruction was to implement a systematic survey and mapping (but the sporadic approach is still applied)
- Modern surveying tools
- Base map is using satellite imageries (low accuracy ± 10m/ unknown)
- No improvement to the existing spatial data

100%

2024 – 2025 (Government driven)

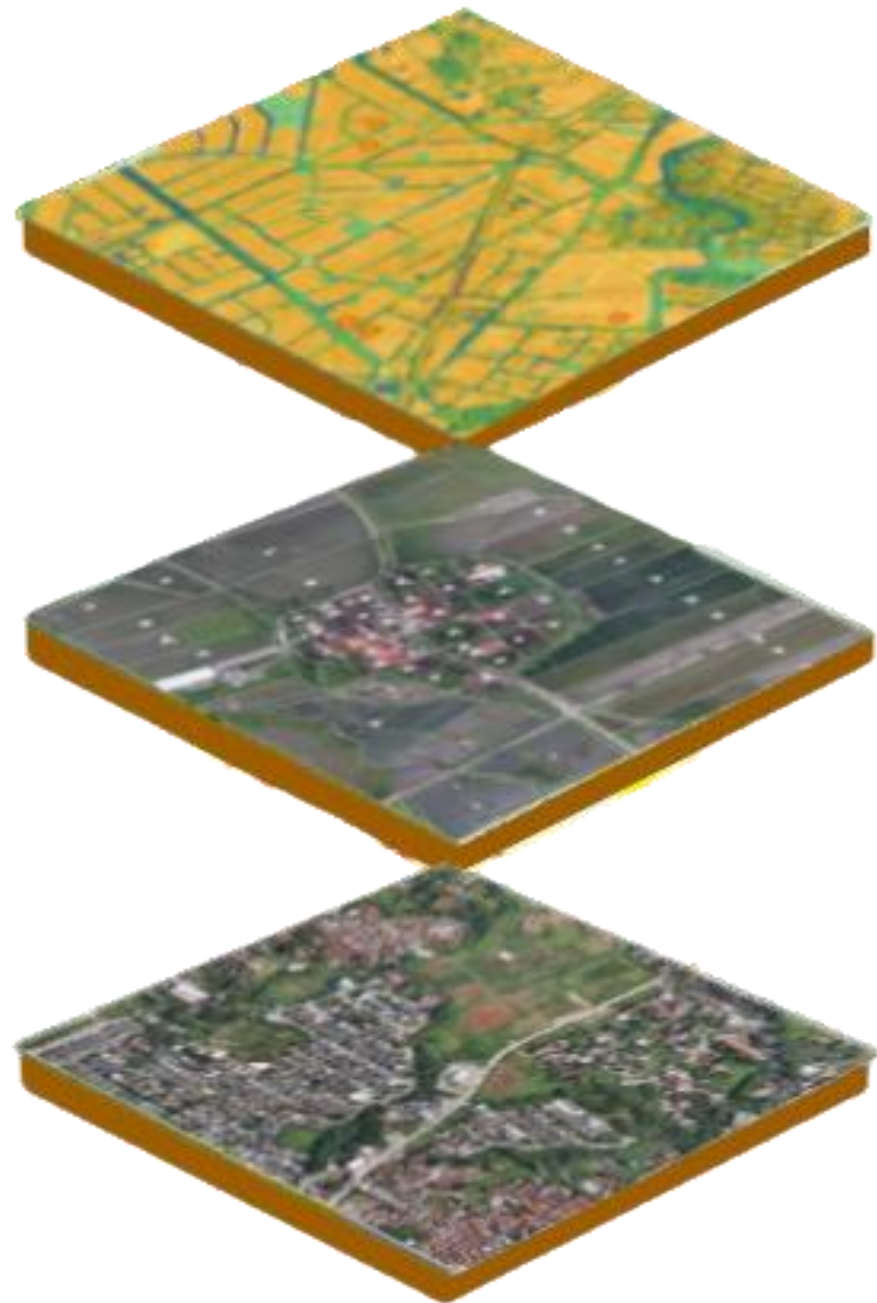
Target : **100 %**

- Using **photo map is a mandatory** (GSD ≤ 0,12 m, sub-meter accuracy h ≤ 0,4 m, v ≤ 2 m), or **better accuracy**
- **Systematic approach** is a must
- Mapping using photo map for visible parcel boundary, and combination for the invisible
- Improvement to the existing spatial data is compulsory (**Photo Map**)

Sporadic Mapping

Mass Mapping

Systematic Mapping



Framework Agreement



➤ Mapping **unregistered land parcel & improve data quality** for all land parcel

➤ Collect land use & utilize data & information

➤ Mapping acceleration

➤ Identify field boundary points and ground survey

➤ Use aerial imagery as a base map

➤ photo map acquisition using UAV

3

1. Improved Data Quality for Sporadic services
2. Integrated PTSL for Systematic mapping

2

Participatory Boundary Identification using Photo Map



Boundary Confirmation to the Land Claimant



1

Why?

- **GSD and accuracy are considerably better than satellite imageries**
- **More flexible in terms of defining Aoi**
- **Considerably cheaper than the conventional aerial imageries**

Collaboration With Mapping Communities (MAPPA.ID)

1. framework agreement for licensed surveyors
2. Support Good Governance,
3. increasing effectiveness, efficiency, collaboration, synergy and participation

Introducing Communal Land Title For Indigenous People



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PTSL FOR INDIGINEOUS PEOPLE WITH COMMUNAL LAND TITLE



Benefit:

- 1 Provide legal certainty
- 2 Facilitate collaboration to improve the economy
- 3 Maintain local wisdom: protect forests & rivers, reserve carbon CO2 stocks

Open Land Data and Journey for Completeness



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bhumi.atrbpn.go.id

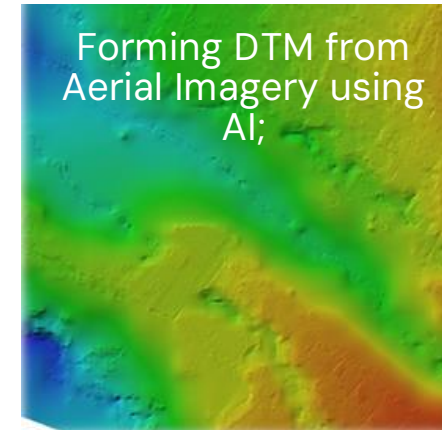
How is Bhumi the right system for a modern & effective land administration?

1. Focused on supporting an effective land administration and management system
2. Built on the needs of all land management paradigms/services
3. Created as a place of innovation



1

Ground Extraction Surface (DTM) & Building Footprint



2

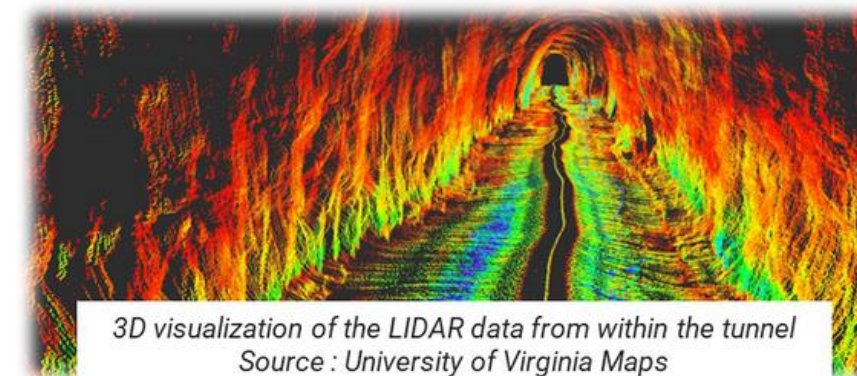
Strata Title / 3D Title

Say goodbye to 2D limitations and welcome the future of land registration with our 3D cadastral maps. Get a clear, complete view of land rights and parcels. More efficient and precise land registration process.

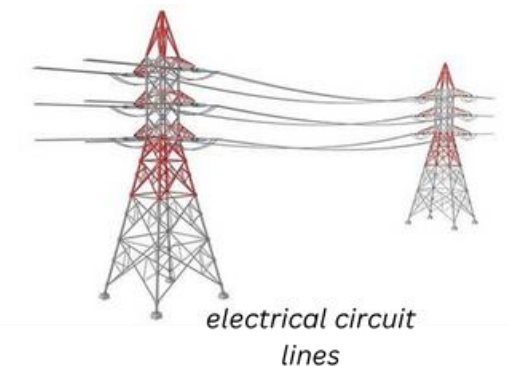


3

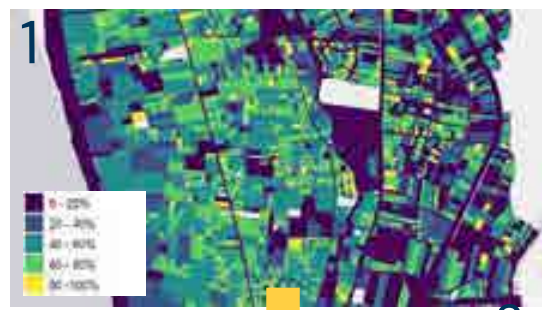
Upper Ground and Underground Mapping



3D visualization of the LIDAR data from within the tunnel
Source : University of Virginia Maps



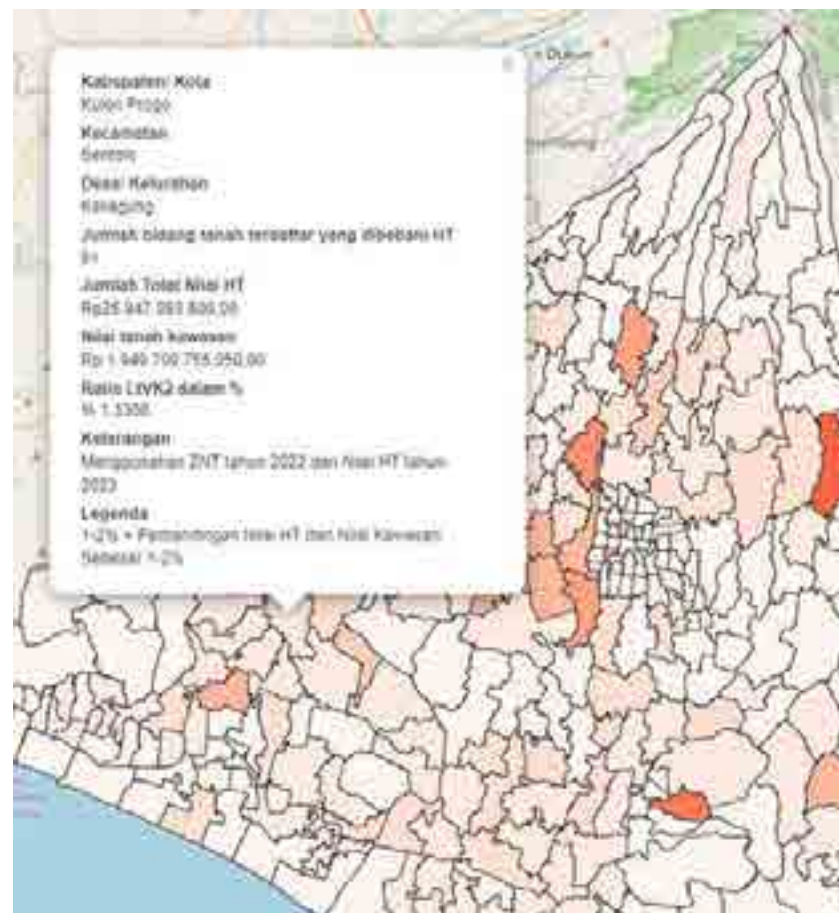
DERIVATION of THEMATIC MAP as the NEW SOURCE of REVENUE



2



Field-Based Basic Building Coefficients



Loan to Value

THANK YOU

FOR YOUR ATTENTION



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DEPARTMENT OF AGRARIAN REFORM

SUPPORT TO PARCELIZATION OF LANDS FOR INDIVIDUAL TITLING (SPLIT) PROJECT

World Bank Land Conference | May 17, 2024

Project Development Objectives

Improve Land Security



Strengthen Property Rights of Agrarian Reform Beneficiaries



PROJECT COVERAGE

Project SPLIT will cover areas with balances in parcelization survey and individual titling and agricultural lands with approved survey plan (ASP) but without individual titles yet (subject to relocation survey and redocumentation)

1,368,883 HECTARES **PHYSICAL TARGET**

15 REGIONS NATIONWIDE | **78 PROVINCES**

Regions I/III/IX **PILOT REGIONS**

Remaining 12 Regions **SCALE-UP REGIONS**

PROJECT BENEFICIARIES **1,140,735**

Total number of ARBs expected to be issued with individual titles

PROJECT MILESTONE ACTIVITIES

1

Inventory of Collective Certificates of Land Ownership Award (CCLOA) from the Collective CLOA Inventory System (CCIS)

2

Field Validation of Collective CLOAs

3

Compliance to Safeguards Requirements

4

Conduct of Survey Activities

5

Redocumentation of Collective CLOAs

6

Registration of e-Titles

7

Distribution of e-Titles

PROJECT MILESTONE ACTIVITIES

1

Inventory of Collective Certificates of Land Ownership Award (CCLOA) from the Collective CLOA Inventory System (CCIS)

The screenshot displays the 'Project SPLIT - Collective CLOA Inventory System' interface. The left sidebar shows a navigation menu with 'CAR' selected, and 'Abra' highlighted under 'eTitles CAR'. The main content area shows a table of records for the Abra region. The table has columns for SeqNo, CLOASerialNo, Region, Province, Municipality, and Barangay. The data rows are as follows:

SeqNo	CLOASerialNo	Region	Province	Municipality	Barangay
3	0002087	CAR	ABRA	VILAVICOSA	CALEAO
4	0002108	CAR	ABRA	LUBA	
5	0002078	CAR	ABRA	VILAVICOSA	POBLACION
6	0002096	CAR	ABRA	BUCAV	TABOG

2

Field Validation of Collective CLOAs



3

Compliance to Safeguards Requirements

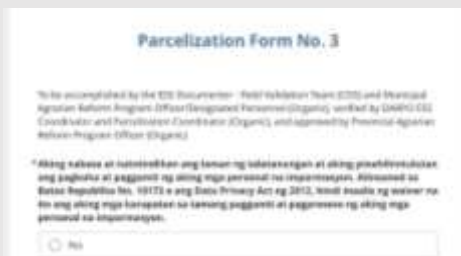
Parcelization Form 1 – ESMF 1/ CARPER LAD 70-B



Parcelization Form 2 – ARB



Parcelization Form 3 – Actual Occupant



The Grievance Redress Mechanism Process



GRM Infographic Translated into Ilokano



Conduct of Localized Environmental and Social Assessment (ESA)



4

Conduct of Survey Activities



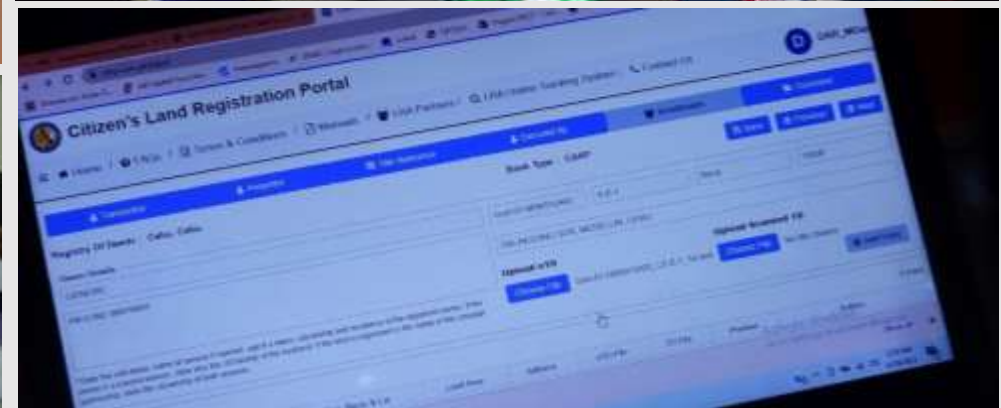
5

Redocumentation of Collective CLOAs



6

Registration of e-Titles through the Citizen's Land Registration Portal (CLRP)



The CLRP is a web-based application that serves as a conduit for the submission of registration information.

PROJECT MILESTONE ACTIVITIES

7

Distribution of e-Titles



Distribution of e-Titles with the President of the Philippines and the DAR Secretary



Sample CLOA

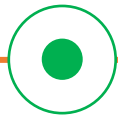


Sample e-Title

TIMELINE OF PROJECT EXTENSION EFFORTS



April 30, 2024



Investment Coordination Council – Technical Board Meeting

The ICC Secretariat recommends endorsing DAR's request for the restructuring of the SPLIT Project to the ICC-CC for approval without any caveat or conditions.



May 7, 2024



Investment Coordination Council – Cabinet Committee Meeting

The ICC CabCom recommends the approval of DAR's request for the restructuring of the SPLIT Project to the NEDA Board.



May 15, 2024



National Economic and Development Authority Board Meeting



Maraming Salamat!

DEPARTMENT OF AGRARIAN REFORM

SUPPORT TO PARCELIZATION OF LANDS FOR INDIVIDUAL TITLING (SPLIT) PROJECT

Enhancing Systematic Land Registration Project in Lao PDR (ESLRP)

Department of Land (DoL)

Mr. Khitlaxay KOKMILA

Enhancing Systematic Land Registration Project in Lao PDR (ESLRP)



Total budgets: 31.375.000 \$(USD)
 Loan from World Bank: 25.000.000
 \$(USD)
 Grant from Swiss Government:
 6.375.000 \$(USD)
 Periods: 5 years. 2021 to 2026

Component 1: Systematic Registration of Land Use Rights

- Systematic Land Registration
- Training, Capacity Building and TA

Component 2: Modernization of Land Administration and Service Delivery

- Service Centers and Enhanced Service Delivery
- Scanning, Digitization and Archiving of Existing Land Records
- Lao LandReg Development and Rollout

Component 3: Implementation, Policy and Legal Framework Development

- This component will support the further development of inclusive and comprehensive land policies, laws and regulatory frameworks, as well as their implementation procedures.

Component 4: Project Management

- Project Management Unit (PMU)
- Monitoring and evaluation (M&E)
- Procurements: equipment, RTK, CORS, Computers, Vehicle...

Systematic Land Registration

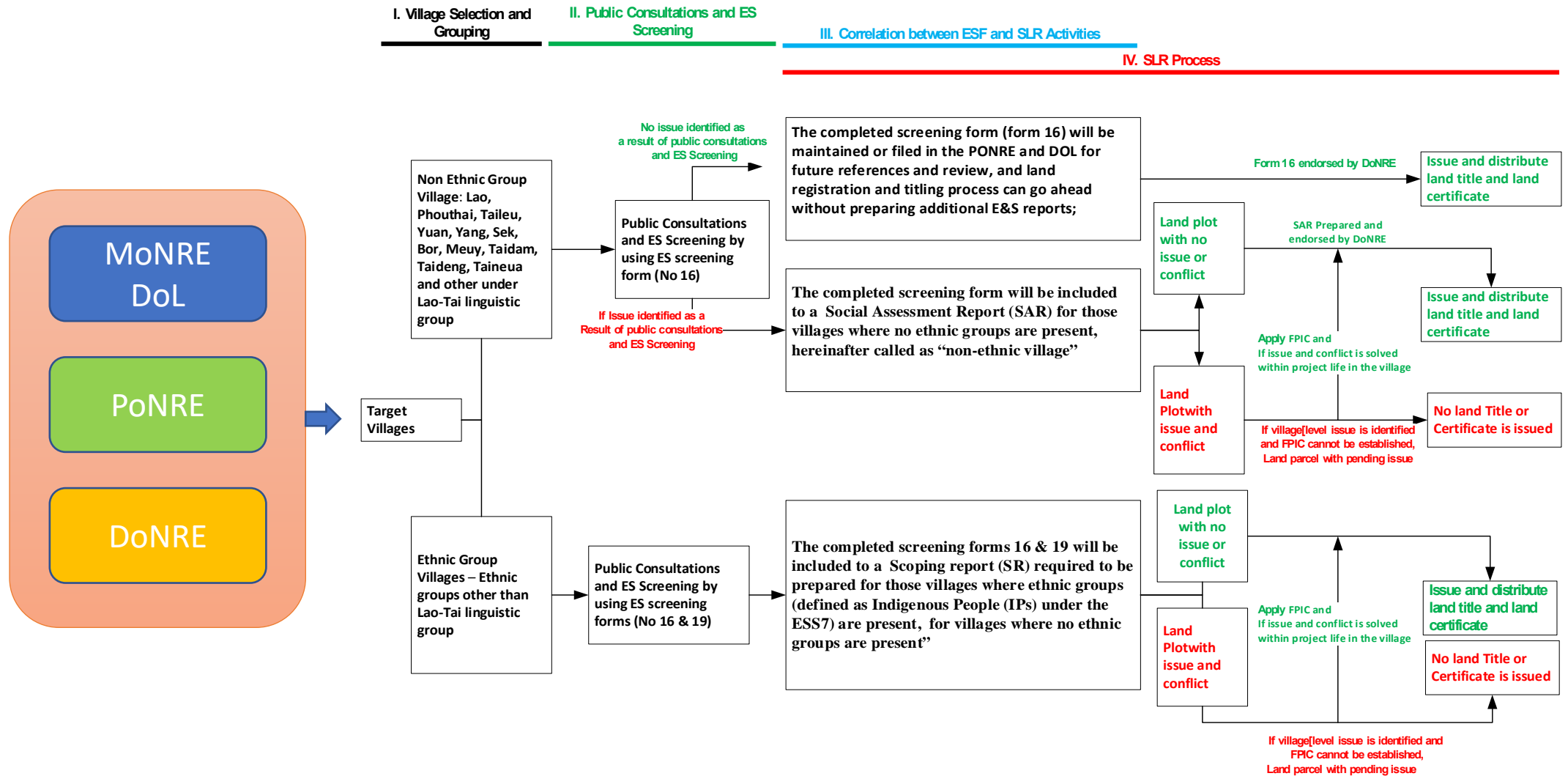
How to work with Land Registration and Issue
Land Titles/Certificates: 1.000.000 plots of land



Systematic Adjudication Team(SAT): government authority + contract staff(privates)
32 SATs/32 districts, 18 provinces/, 1SAT/27 persons

Environment Social Framework(ESF)

New ESF Implementation Approach (Apply in addition to the S-ESMP)

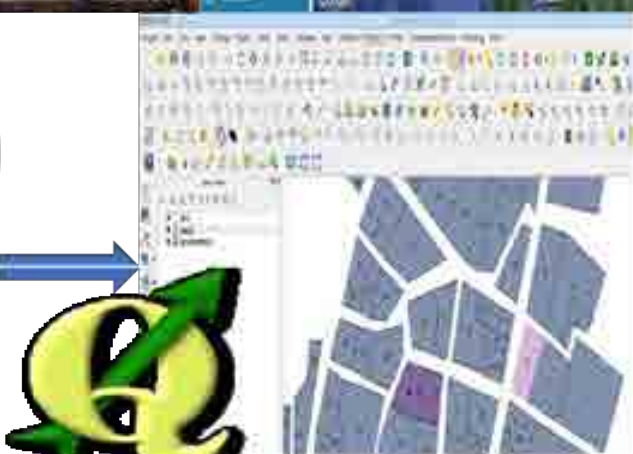
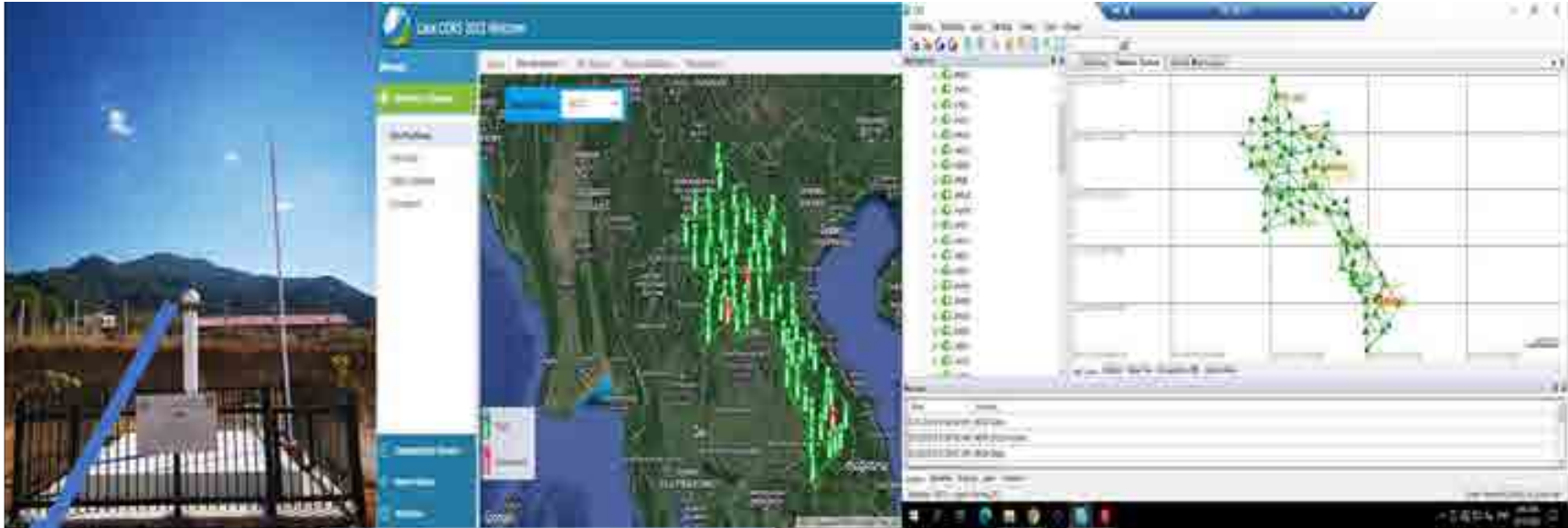


Public Awareness

- Government authority/responsible
- Announcement to public/Provinces/Districts
- Consultation meeting/government sectors/people/land owner
- FPIC/government sectors/people/land owner
- *And Gender*

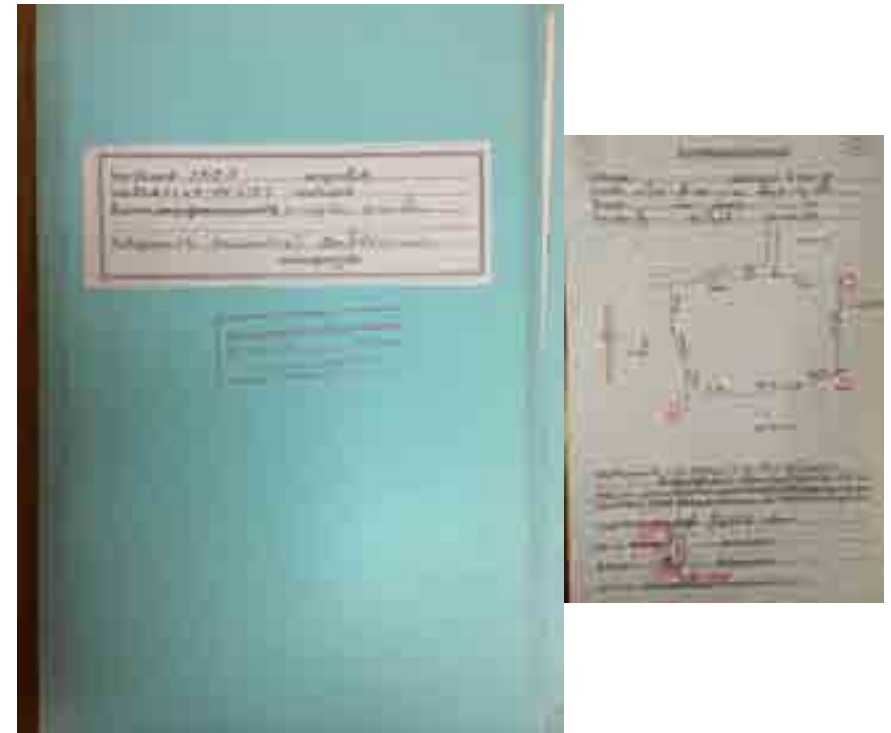


Land Survey and Cadaster Map

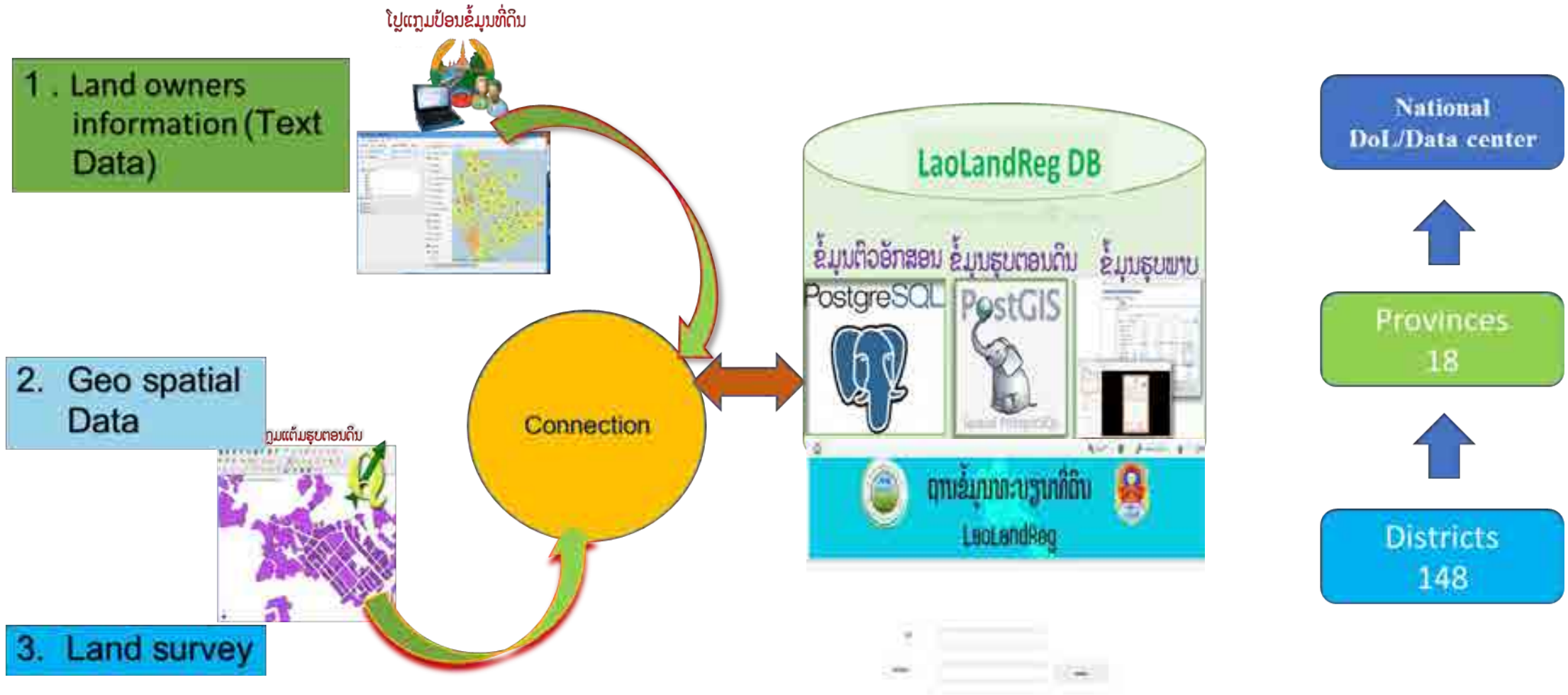


Land Adjudication

- Government authority, responsible
- Data collection and proving
- Input land owner information/land use information
- Set up land files/add land profile/land owner profile



Data input to Laolandreg/Server



Land classification and Public Announcement

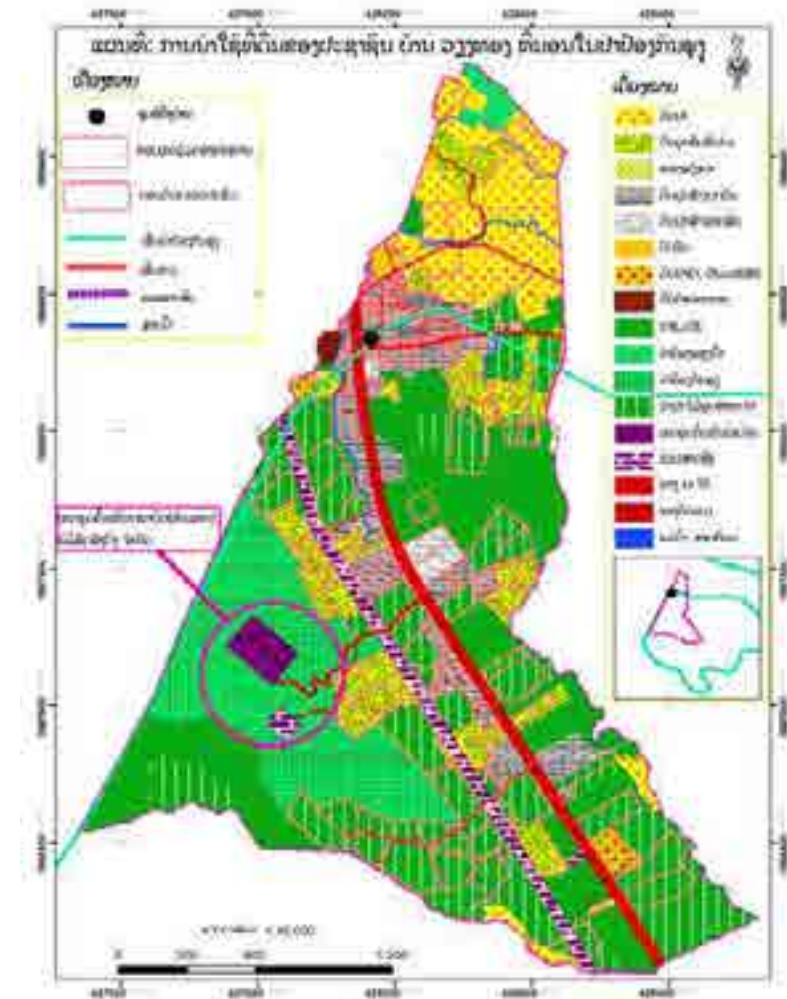
Committee of land classification:

1. Representative DoNRE office
2. Head of SAT
3. 2 Deputy Head of SAT



Land use right classify 3 classes:

1. **Class 1**, Land use rights of individuals, legal entities or organizations of Lao citizens
2. **Class 2**, Land use rights of forest area
3. **Class 3**, Land use rights of state land



Land title/Certificate Issue

- DoNRE issue land titles/land Certificates
- Land owners received land title/Certificate

- Issued titles: 50.000 titles (2023)
- year 2024 : 200.000 titles/certificate



Challenges

- Villages located in rural/remote areas/access difficult
- No villages plan/no up date land use planning map
- No clear forest categories boundary
- Mountain areas, rainy season can not access
- Agricultures land/big parcels/large area/take time to survey
- Land owners no interested/no participate/pour
- People use land with documents/permission

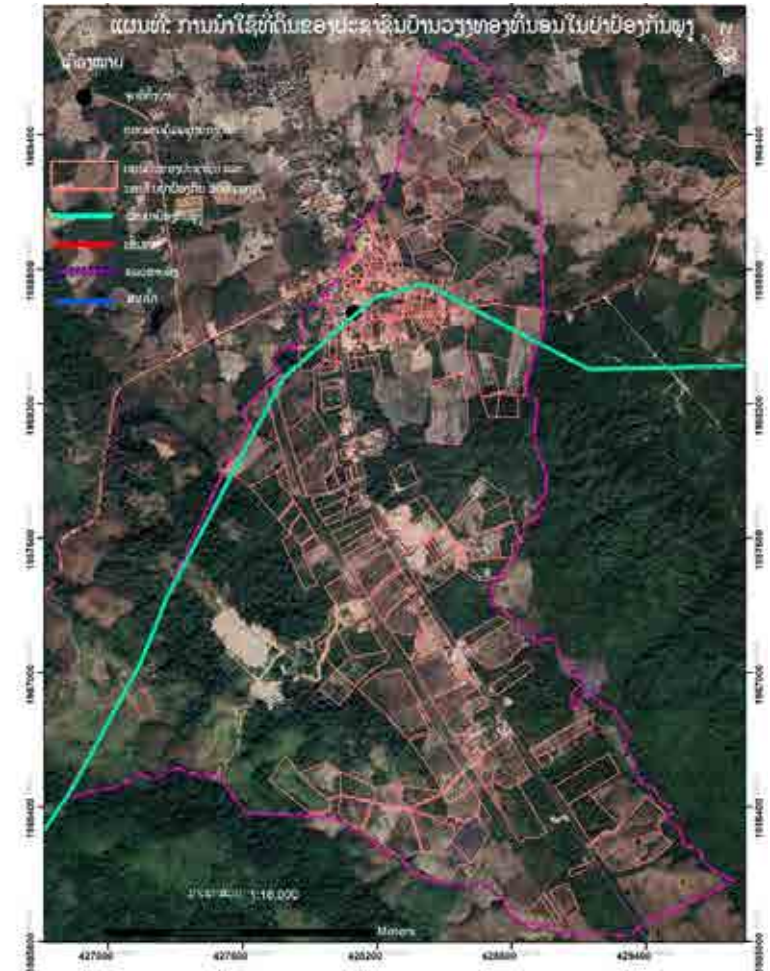


**Not receive targets: 1.000.000 titles/certificates
End of project 2026**



Future Plan

- To accelerate land registration and title/certificate
 - Adjudication work, government authority responsible
 - Use of private company
 - Land survey: land plots/cadaster map/RTK+CORS/Drone/Arial-photo
 - Land data collection: application + tablets/modernize
 - Land data entry: digital formats/import & export to Laolandreg softwear



ຂອບໃຈ

??????????

Korean Land Management and Cadastral Resurveying Cases

Republic of Korea



Ministry of Land,
Infrastructure and Transport



CONTENTS



1 Korean Cadastral System

2 Cadastre and Urban Development

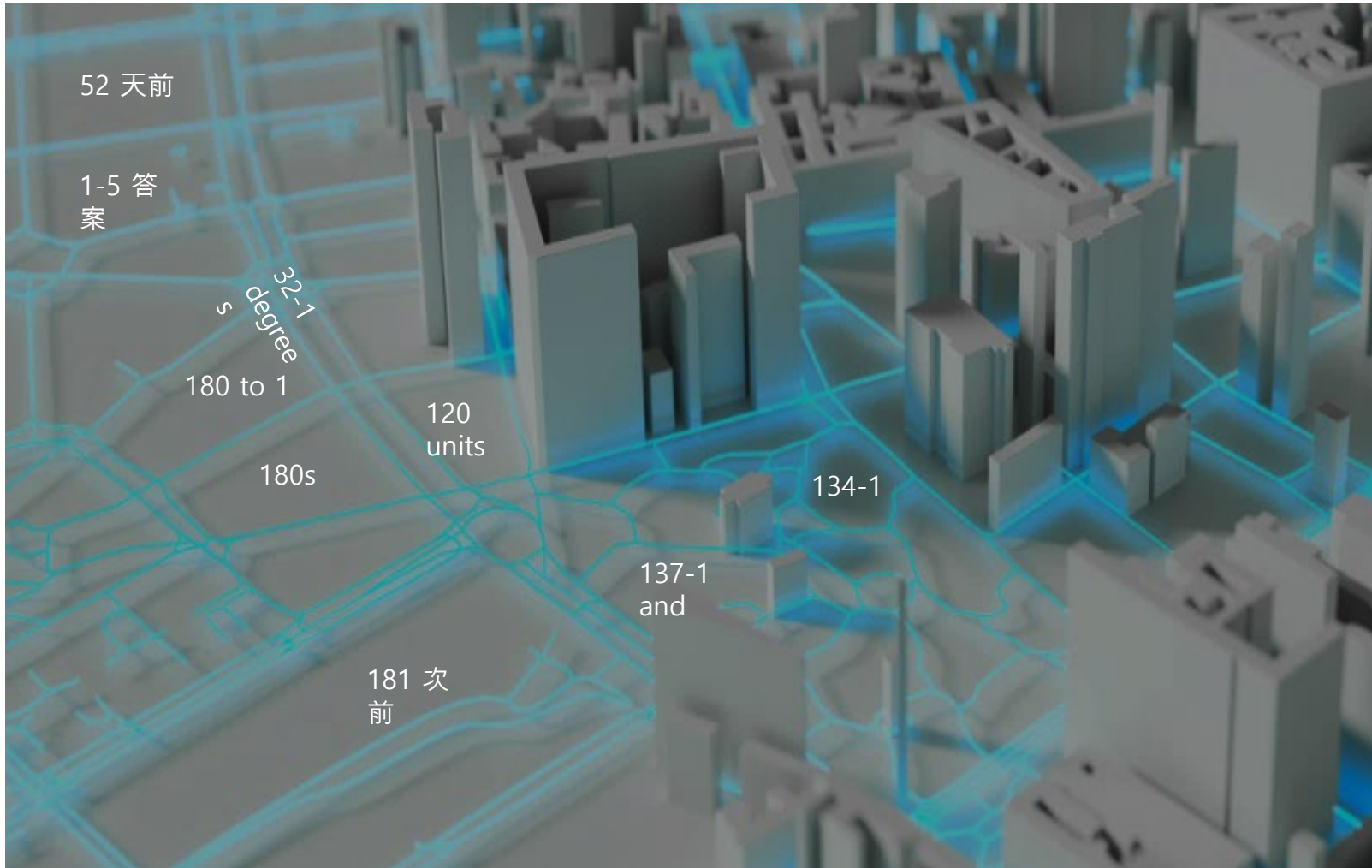
3 Cadastral Resurvey

4 Application Cadastral for Climate Change

Korean Cadastral System

What is the Korean cadastral system and its characteristics?

Korean Cadastre



Features

" Principle of Cadastral "

- The register of cadastral records is determined by the state.

① The state determines the location, lot number, use type, boundaries, areas, etc of land that are details of registration

② Nationally, standardized content with real-world surveys to register the factual relationships

Korean Cadastral System

What is the Korean Cadastral System and its characteristics?

Korean Cadastre



Features

“Ex officio Registration”

- Compulsory registration and Management of land nationwide

① Utilization of registration, taxation, transactions, land use planning, and more through registering the entire country

② Ex officio, survey and registration of unregistered land found across the country

Korean Cadastral System

What is the difference between a cadastral and a registered system

|Registration

“ Land Public Announce System in Korea is divided into cadastre and registration”

	Cadastral System	Registration System
Content	<ul style="list-style-type: none"> ① Announcement: location, number, title, boundaries, coordinate system of lands ② System for announcing the rights objects 	<ul style="list-style-type: none"> ① Announcement: ownership rights, and rights other than ownership rights. ② System for announcing the subject of rights
Features	Emphasized factual relationships	Emphasized rights relationships
Registration	<ul style="list-style-type: none"> ① Land register : Landmark, Ownerships, the government announced land price ② Drawings : location, lot number, land category, Boundaries, etc. ③ Numerical terrier : location, lot number, coordinates, etc. 	<ul style="list-style-type: none"> ① Related to real estate marks ② Related to Ownerships ③ Related to rights other than ownership
Types	Enrollment (listed for administrative purposes in records of administrative offices)	Registration (listed for announce purposes in the records of the registry office)
Books	Cadastral records	Real Estate Registry
Objectives	Landmarks	Marks of land and buildings
Manage	MOLIT (Ministry of Land, Infrastructure, and Transportation)	Judiciary

Korean Real estate Administration intelligence System (KRAS)

- Comprehensive management and operation of land information, including land, building marks, information of owners, etc.
- Unify disparate 18 types of public records related to land (7 types of cadastres, 4 types of buildings, 4 types of land uses, and 3 types of registrations)




Korean Cadastral System

What is the difference between a cadastral and a registered system

|KRAS (Korean Real estate Administration Intelligence System)

결합번호	483101000-1-0111-0000				건축물명칭	가게 시설	장번호	6-4
소재지	경상남도 거제시 고현동 317				소유번호	1174010300-1-0519-0000	건축물 동명칭	호명칭
부동산종합증명서(토지, 건물)					부동산종합증명서(토지, 집합건물)			
토지 표시 (지번 표시) (국유지, 공유지 제외)					건물 표시 (건축물명칭, 용도, 면적 등 기재된 토지)			
구분	면적(㎡)	지번	지목	지번(㎡)	지번(㎡)	용도	면적(㎡)	비고
국유	317.00	317	농지	317.00	317.00	농지	317.00	
공유								
합계	317.00			317.00	317.00			
토지 소유자					건물 소유자 (공동소유는 분구 기재됨)			
구분	연령	성명	주소	구분	연령	성명	주소	구분
소유자	1987.11.22	김재기	경남 거제시 고현동 317	소유자	1987.12.21	김재기	경남 거제시 고현동 317	소유자
합계				합계				합계
토지이용계획도(1:500) (용역축척 1:2000)					토지이용계획			
					<p>이 도면으로는 축양, 건축용계도면 등 그 밖의 목적으로 사용할 수 없습니다. 이 도면으로는</p>			

결합번호	483101000-1-0111-0000				건축물명칭	가게 시설	장번호	6-4
소재지	경상남도 거제시 고현동 317				소유번호	1174010300-1-0519-0000	건축물 동명칭	호명칭
부동산종합증명서(토지, 건물)					부동산종합증명서(토지, 집합건물)			
토지 표시 (지번 표시) (국유지, 공유지 제외)					건물 표시 (건축물명칭, 용도, 면적 등 기재된 토지)			
구분	면적(㎡)	지번	지목	지번(㎡)	지번(㎡)	용도	면적(㎡)	비고
국유	317.00	317	농지	317.00	317.00	농지	317.00	
공유								
합계	317.00			317.00	317.00			
토지 소유자					건물 소유자 (공동소유는 분구 기재됨)			
구분	연령	성명	주소	구분	연령	성명	주소	구분
소유자	1987.11.22	김재기	경남 거제시 고현동 317	소유자	1987.12.21	김재기	경남 거제시 고현동 317	소유자
합계				합계				합계
토지이용계획도(1:500) (용역축척 1:2000)					토지이용계획			
					<p>이 도면으로는 축양, 건축용계도면 등 그 밖의 목적으로 사용할 수 없습니다. 이 도면으로는</p>			



- Providing fitted information to citizens proactively as enabling digital platform government Korea
 - Restructuring the system for accessible everyone as open land-related information
- ➡ Enhanced with cloud by 2026

Korea Cadastral System

What is the role of cadastre?

| The role of the cadastre

“The basics of using and managing of national territory as the home of people’s lives”



| The basics of land transaction and taxation



| The basics of land registration and addresses



| The basics of Urban Planning

Korean Cadastral System

What is the role of the cadastre?

|The role of the cadastre

“Contributing to post-war recovery and economic growth based on registered cadaster despite damage of the Korean War(1950.6.25).”



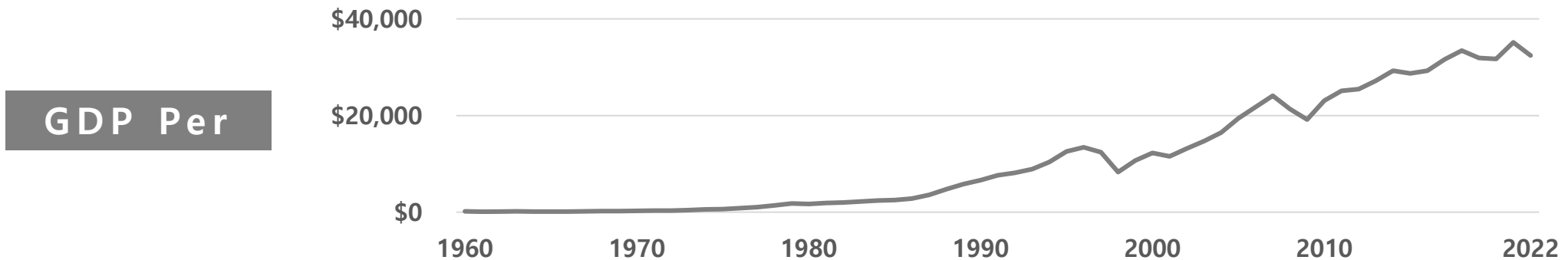
< The Korean War >



< Damage occurred >



< Quick recovery >



GDP Per

Cadastre and Urban Development

Case of Urban development based on the cadastre

SaeJong(2007)

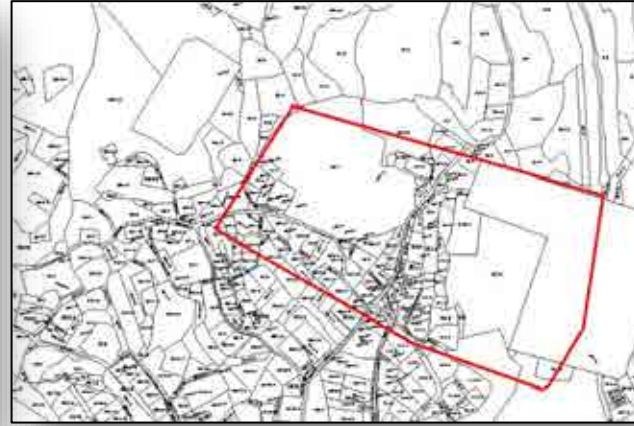


Saejong(2023)



Cadastral and Urban Development

Case of Urban development based on the cadastre



Numerical Cadastral Records

부호	도	부호	카	프	부호	카	프
			X	Y		X	Y
2		3		4		X	Y
1					1	423456.36	212561.23
					2	423455.45	212566.90
					3	423459.05	212565.24
					4	423478.12	212568.11
					5	423498.31	212590.16
					6	423488.05	212588.12

Registration of numerical cadastral records of Urban Development Project district and Cultivating district through confirmation surveying, etc. (1975~)

Cadastre and Urban Development

Case of Urban development based on the cadastre

Administrative city “SaeJong”



Cadastre and Urban Development

Case of Urban development based on the cadastre

Supply houses through New Urban Development



Korea Cadastral System

How to a register the cadastre

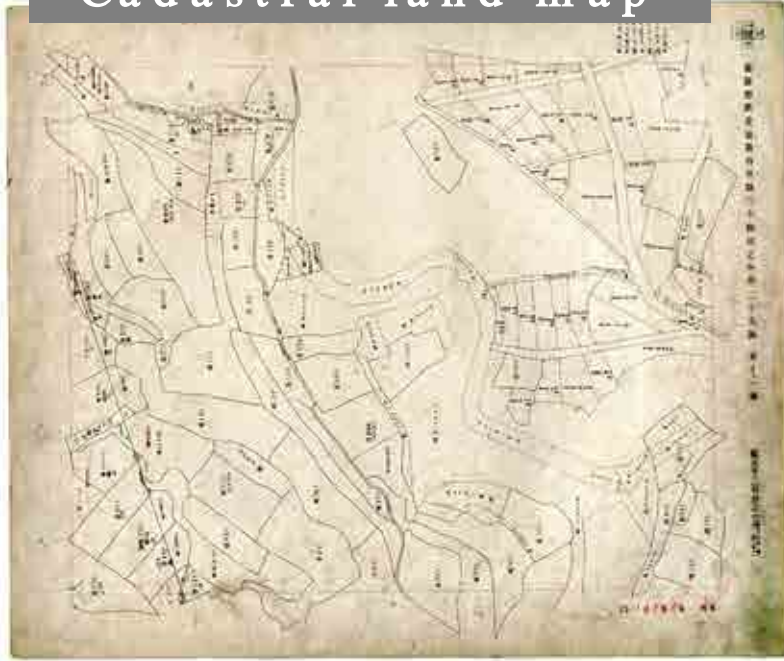
|Cadastral records

“Records and maps that record the marks and owners of land, etc “

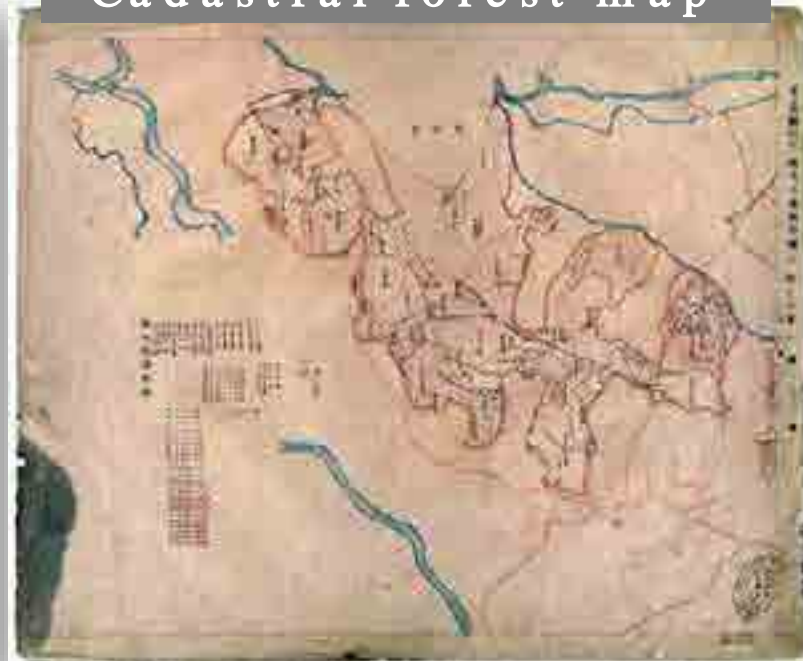
📍 **Map: Registered to scale on field surveys and paper drawings.**

➤➤ **Registration errors for paper maps due to drawing stretching, wear, and tear, moisture, etc**
➔ **Spreading errors to digitized files**

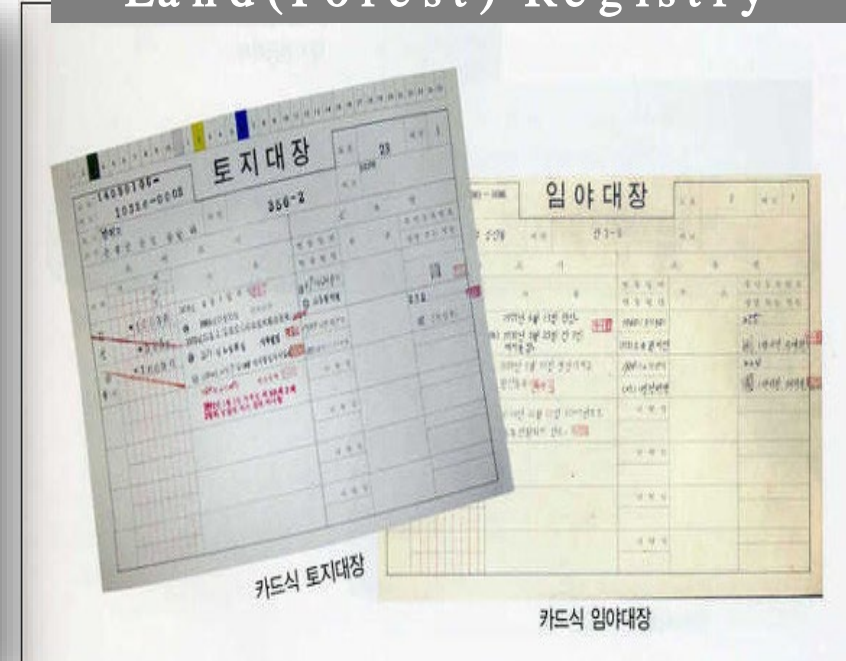
Cadastral land map



Cadastral forest map



Land(Forest) Registry



※ Digitalized all 748,000 cadastral land and forest maps for 5 years from 1999 to 2003

Korea Cadastral System

How to a register cadastre

| Digitalization of cadastral records

The first cadastral
land map in 1913



Redrawing (1st) in
1962



Redrawing (2nd) in
1988



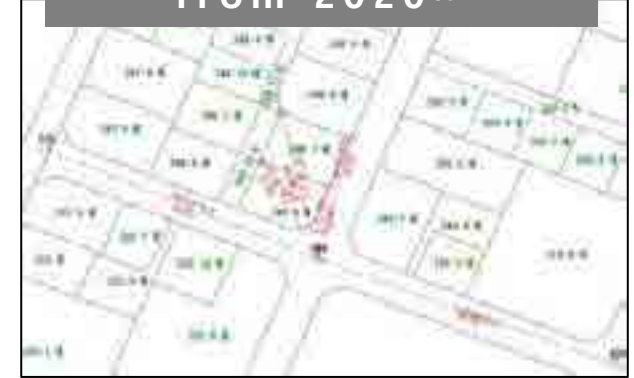
Redrawing (3rd) in
1997



Digitalization in
2002



Resurvey
from 2020~

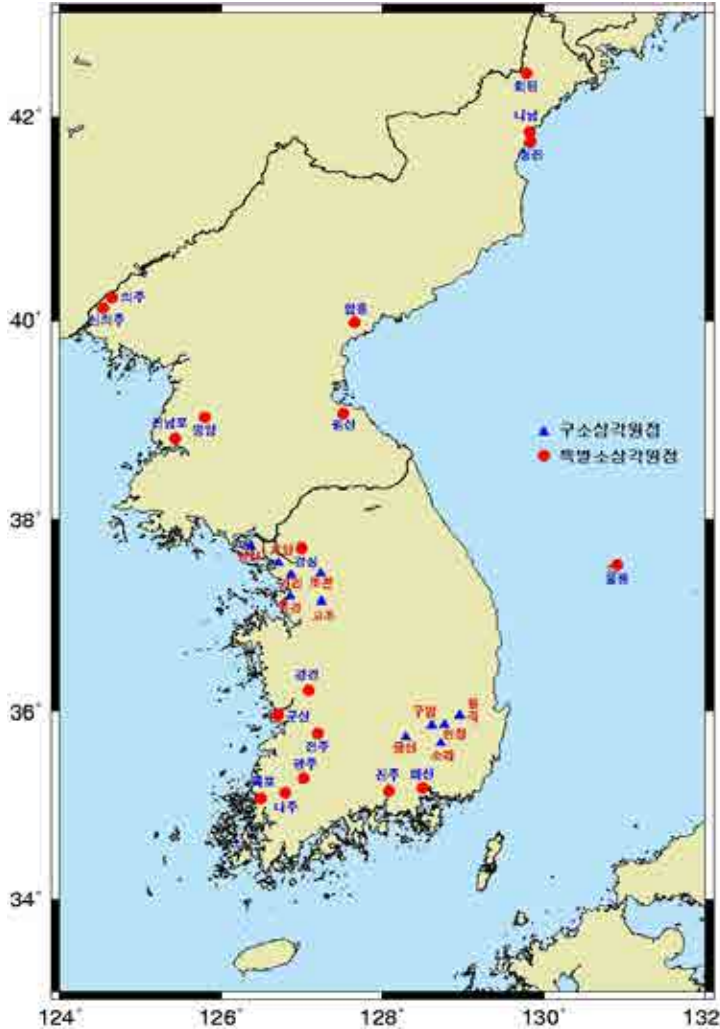


※ Digitalized all 748,000 cadastral land and forest maps for 5 years from 1999 to 2003

Cadastral resurvey project in Korea

Why did we start cadastral resurvey?

Lack of uniformity of survey origin points



Limitations of equipment and surveying technology



Reference point loss due to the Korean War



Abrasion and damage to paper maps



\$420 million in annual litigation costs



Deepening social conflict



B/C Analysis 0.8

B/C Analysis 2.4



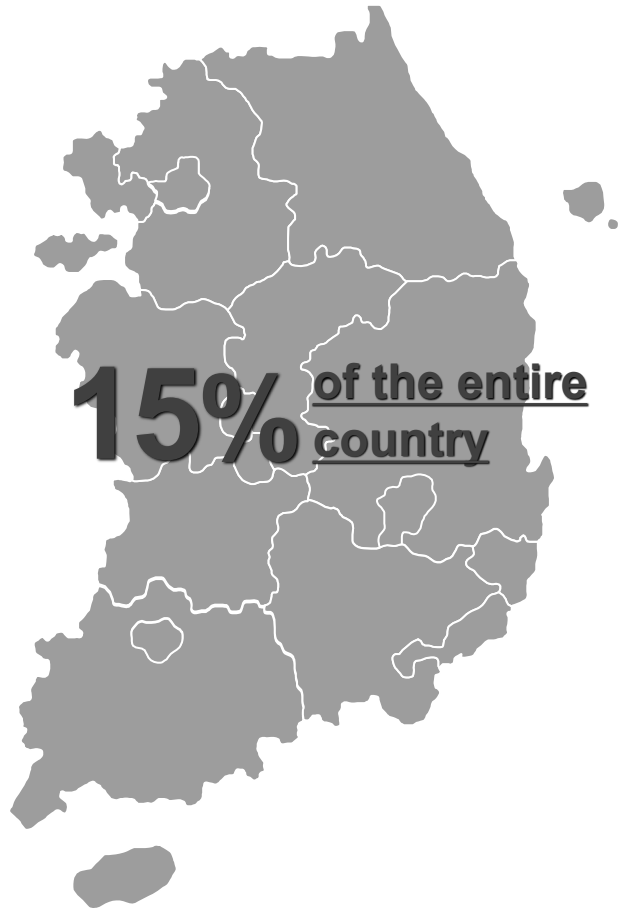
2012~2030

Cadastral resurvey project in Korea

Introduction to Cadastral Resurvey

Land with errors on the cadastral map

Areas with severe errors are selected as priority project targets (about 15% of the entire country)



Project method

The government + Public company + Private companies jointly divide and promote

Government



Public company



Private companies



Establishment of project plan
Conflict resolution

Pre-survey preparation
Boundary adjustment

Basic survey



Drone



GNSS



Mobile survey



Digital maps

*GNSS: Global Navigation Satellite System



Conflict Management

Arbitration of conflicts between individual owners, settlement of adjustments to minimize economic loss, elimination of business risks using public land, creation of digital cadastral book

Climate change and cadastral resurvey

What is the connection?

Recovering from climate change disasters with cadastral resurveying

국토부, 강원 산불피해지역 지적재조사 실시...주거안정 지원

기사출신 2019-08-15 13:28:31

🔍 📄 🗨️ 📧 📱 📺



정부가 강원도 산불피해 지역의 주거안정을 위해 드론과 모바일측량 등 신기술을 활용해 지적재조사 사업을 추진한다.

국토교통부는 지난 4월 발생한 강원도 산불피해지역 주민들의 경제적 부담 경감과 신속한 복구를 위해 강원도 고성군, 한국국토정보공사와 함께 고성군 피해지역 일원을 긴급 지적재조사 사업지구로 8일 중 지정에 추진한다고 15일 밝혔다.

• Wildfires



Climate change and cadastral resurvey

What is the connection?

Recovering from climate change disasters with cadastral resurveying

전남도, 곡성·담양 수해 농경지 543필지 지적재조사

[특집=복합] 김명진 기자 | 2020-09-31 11:48:00



9월 전남 곡성·담양 수해 농경지 543필지 지적재조사
9월 전남 곡성·담양 수해 농경지 543필지 지적재조사. 2020년 9월 31일 뉴스1 취재 기자

• Landslides



• Floods



Cadastral resurveying for Islands

Cadastral resurveying to correct Island position



Due to registration without coordination, 100m difference between the cadastral land map and the real village location.



Reconcile actual village locations with historical research and field surveys

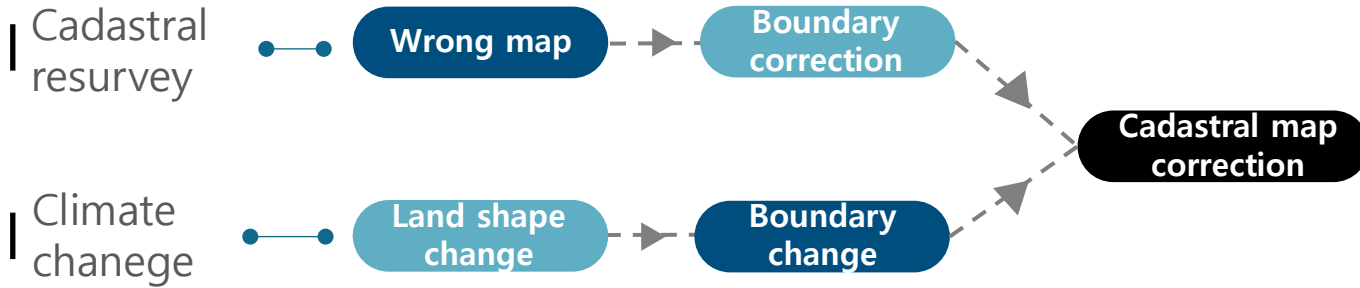


Gageo Island



Climate change and cadastral resurvey

What is the connection?



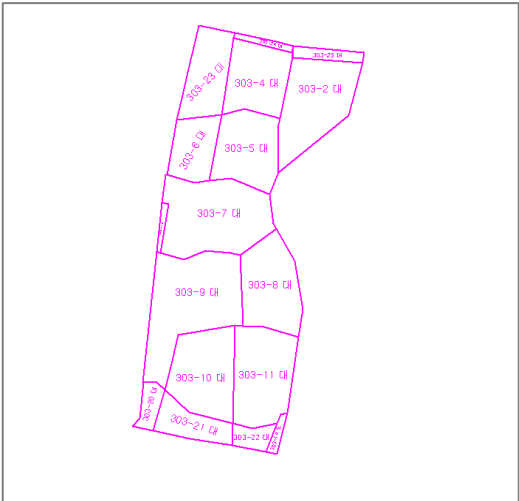
Directivity

How to deal with social conflicts caused by land shape changes?

→ Necessity to meet the needs of equity members of society for land change

Cadastral resurvey

- Correct the wrong cadastral map by surveying the boundary of reality



Climate change

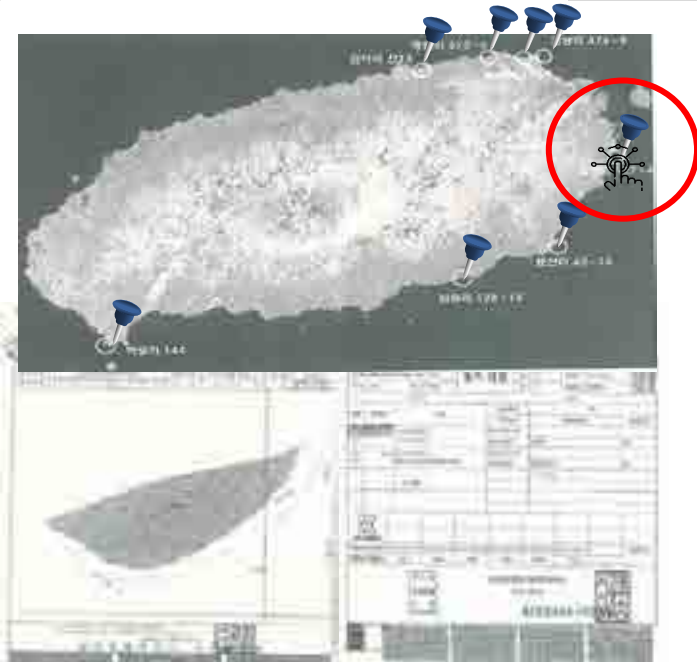
- Tracking and managing changes in land shape due to climate change



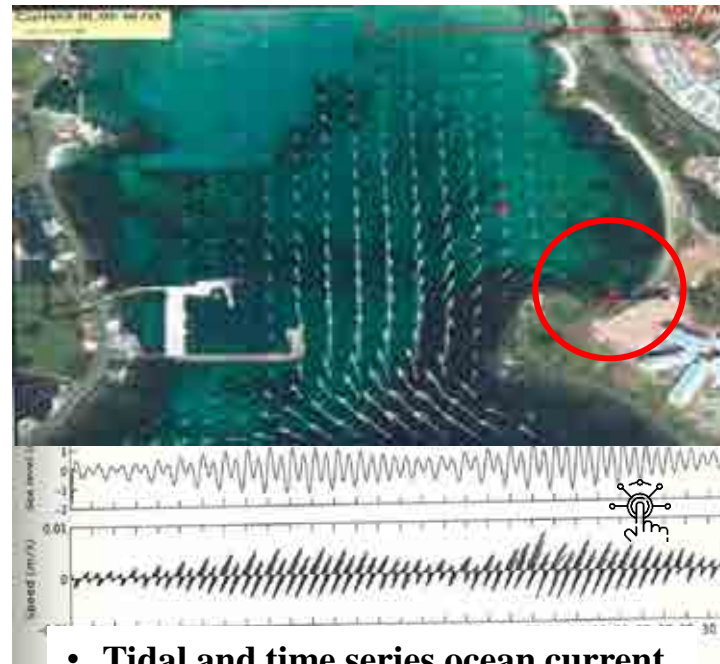
Climate change and cadastral resurvey

What is the connection?

Changes in Jeju Island's land shape due to climate change



- Geopolitical locations(8) of submerged land's target area and details (Goseung-Ri)



- Tidal and time series ocean current data for waters near Goseung-Ri



- Boundary of land submerged by sea and lipid distribution history

Solution?

When designating a cadastral resurvey district, national and public land is set as a buffer for land redistribution and conflict resolution

'The government actively intervenes in project to minimize risks and manage conflicts'

Proposal

Action plan

“Production and distribution of a global standard land climate change response guide by investigating current response cases by country for land change due to climate change”



(1st year) Promoting the Pilot Project, Feasibility for project promotion (business analysis, evaluation, etc.), project size, completeness and list minimization

- ▶ Disaster response status survey by type → Demonstration/research → Evaluation

(Full-scale research) Diversification of land change prediction models based on the results of the first research, completion of the global climate change response standard guide + Need to present additional items for consideration suitable for continental and national environments



Beach

Republic of Korea (Jeju) → Investigation of the current status of land management that has disappeared due to rising waters in the Pacific Ocean and a study on suggesting a direction



Agricultural land

California, U.S. (Tulare) → Investigation of response status and a study on suggesting a reasonable response direction for the compensation system



Desert

Horn of Africa → Derive guides such as physical and economic compensation for large-scale residential space movement, such as the occurrence of victims due to rapid desertification

Thank you



Ministry of Land,
Infrastructure and Transport



PULSE

PUNJAB URBAN LAND SYSTEMS ENHANCEMENT

www.pulse.gop.pk

Faiz-ul-Hassan,
Project Coordinator,
M.Phil in Management Sciences
faiz.hassan@punjab-zameen.gov.pk



INTRODUCTION OF PUNJAB PROVINCE - PAKISTAN



Land of "five rivers"



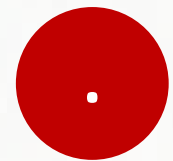
2nd largest province by area 205,344 km² (80th country out of 199)



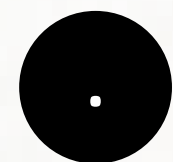
GDP annual growth rate 6.10



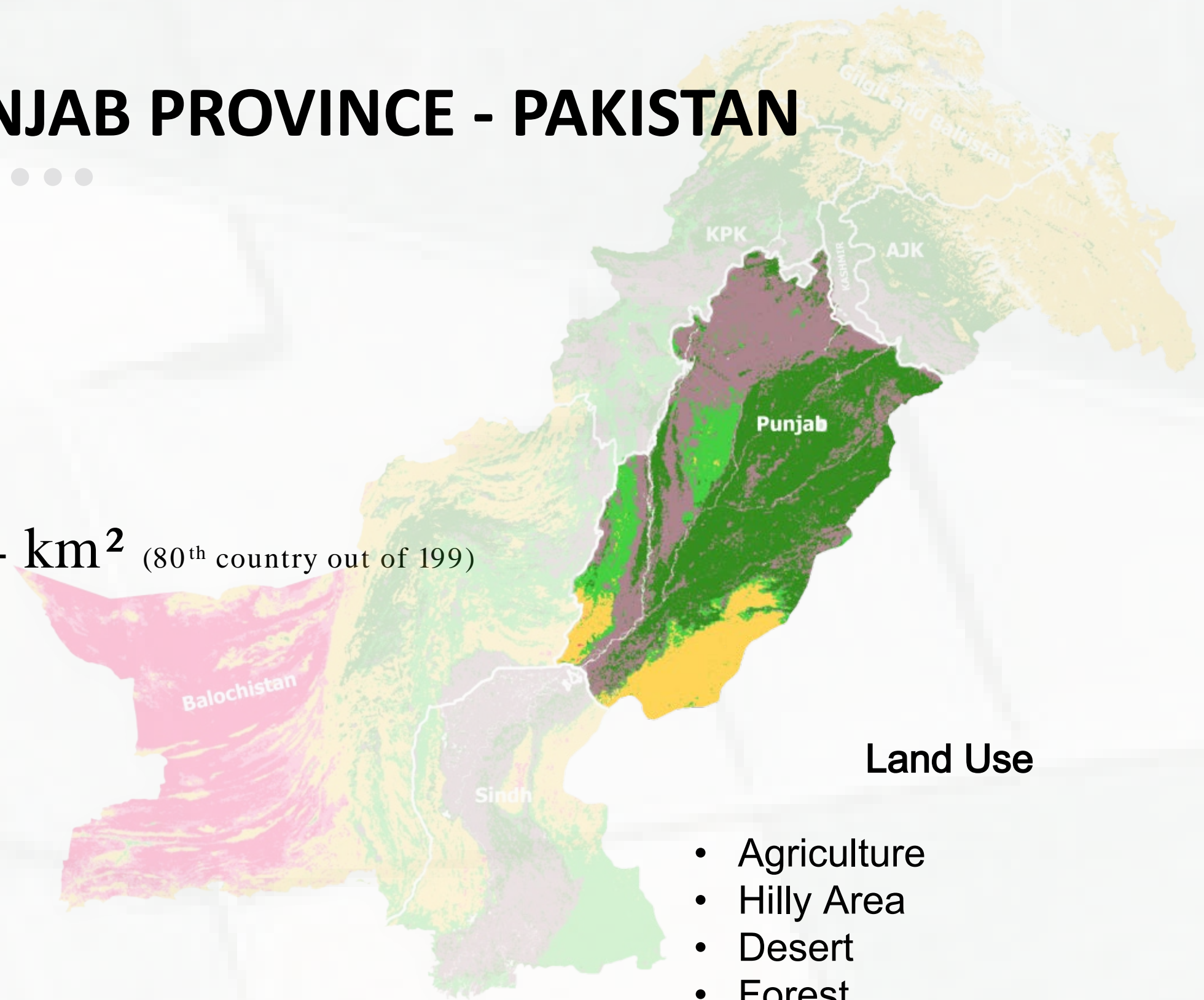
Population: 127 million (10th country out of 199)



63% population in rural areas



Parcels: 70 million+



Land Use

- Agriculture
- Hilly Area
- Desert
- Forest
- Residential & Commercial
- Water Bodies
- Road & Rail

PLRA (PUNJAB LAND RECORDS AUTHORITY)

ACHIEVEMENT - BACKGROUND

In 2007, Punjab initiated the Land Records Management Information System with the financial support of World Bank for digitization of Rural land records.

Textual record of rural areas digital



152
Arazi Record Centers
(ARCs)



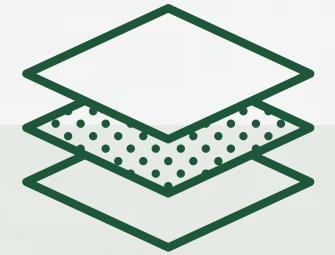
43
Qanoongoi Arazi Record Center
(QRC)



24/7
Online access to land
records



22.5
Million Owners
database



44.5
Millions Parcel
Database



24
Million Tenant
Database



OWNERSHIP DOCUMENT

فارم VII ب

دیہ (پاٹن) تپوال تھوہ تعلقہ ضلع

خوری کارڈ، قیر قارجورجسٹر

THEN

1	2	3	4	5	6	7	8	9	10
رقبہ	رقبہ	رقبہ	رقبہ	رقبہ	رقبہ	رقبہ	رقبہ	رقبہ	رقبہ
...

نقل رجسٹر داران زمین (مسل میعاد) PLRA (DIGITIZED)

QR Code: فردی تصدیق کے لیے اس کوڈ (QR) کو سکن کریں

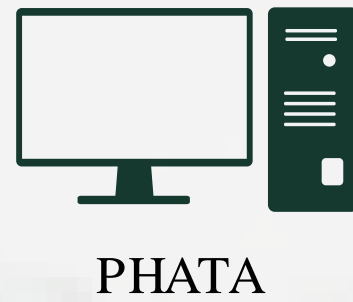
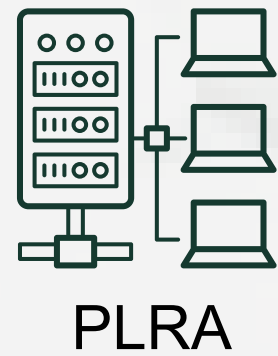
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
...

برائے ذاتی ریکارڈ

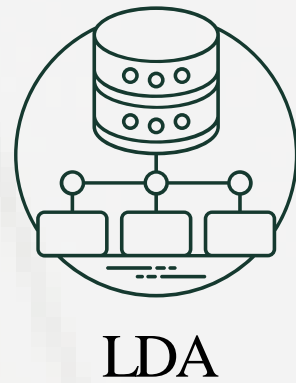


STILL - KEY CHALLENGES

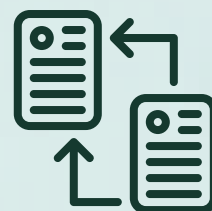
- Over **800 +** standalone agencies managing urban properties
- Inefficiencies & inconsistencies
- No single agency maintaining updated land records
- No Standardization
- Rapid Urbanization



Semi-Digitized Systems with no central repository of data



MANNUAL RECORD KEEPING

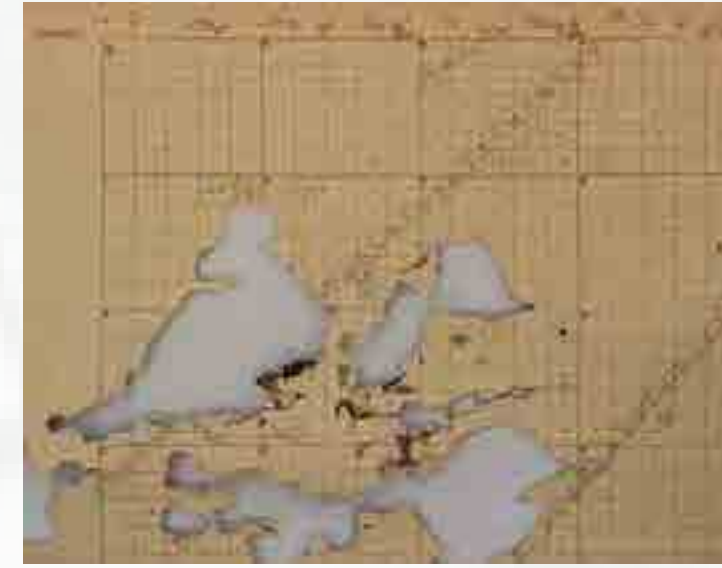


32 Million

YET TO DIGITIZED



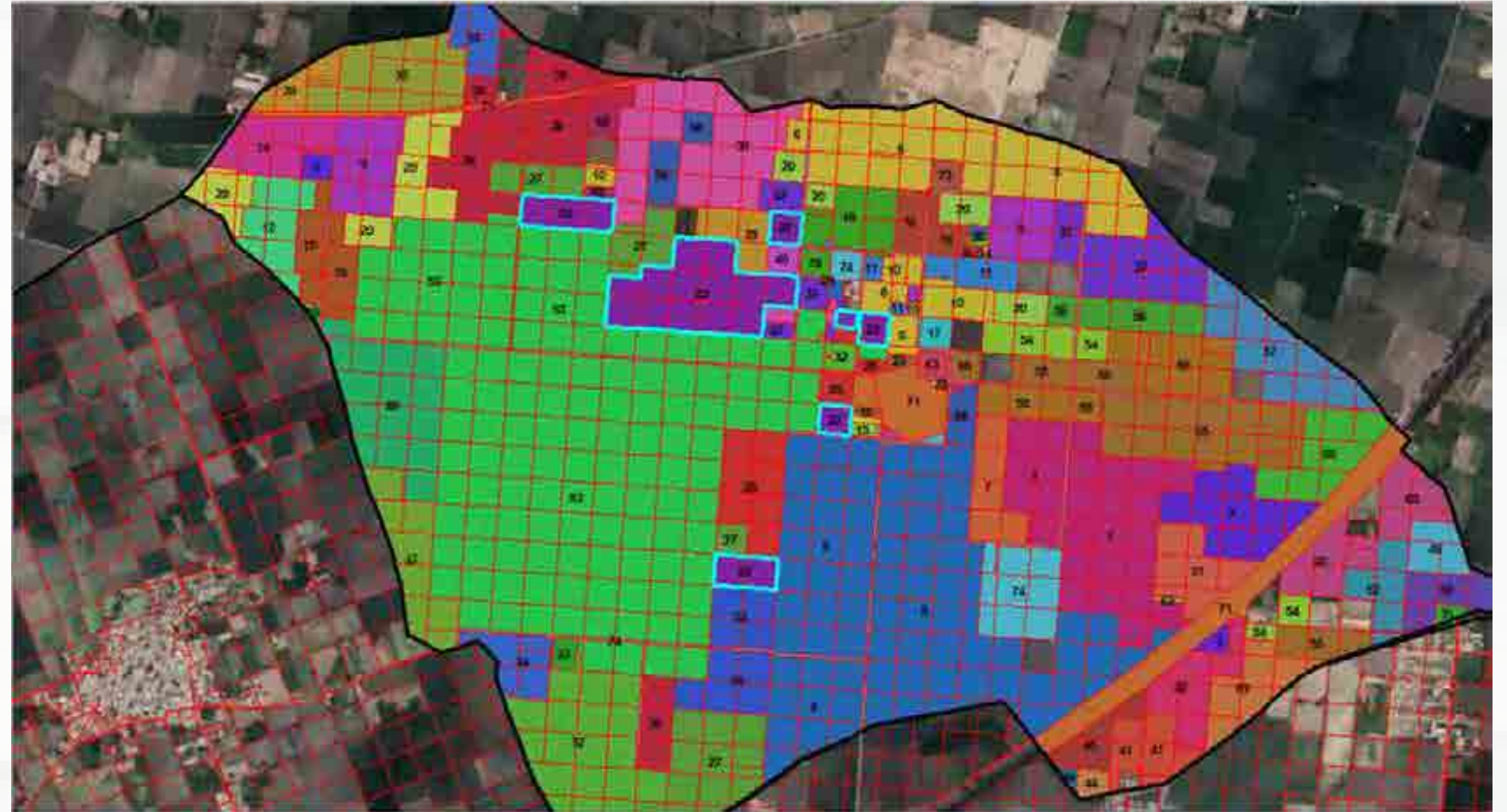
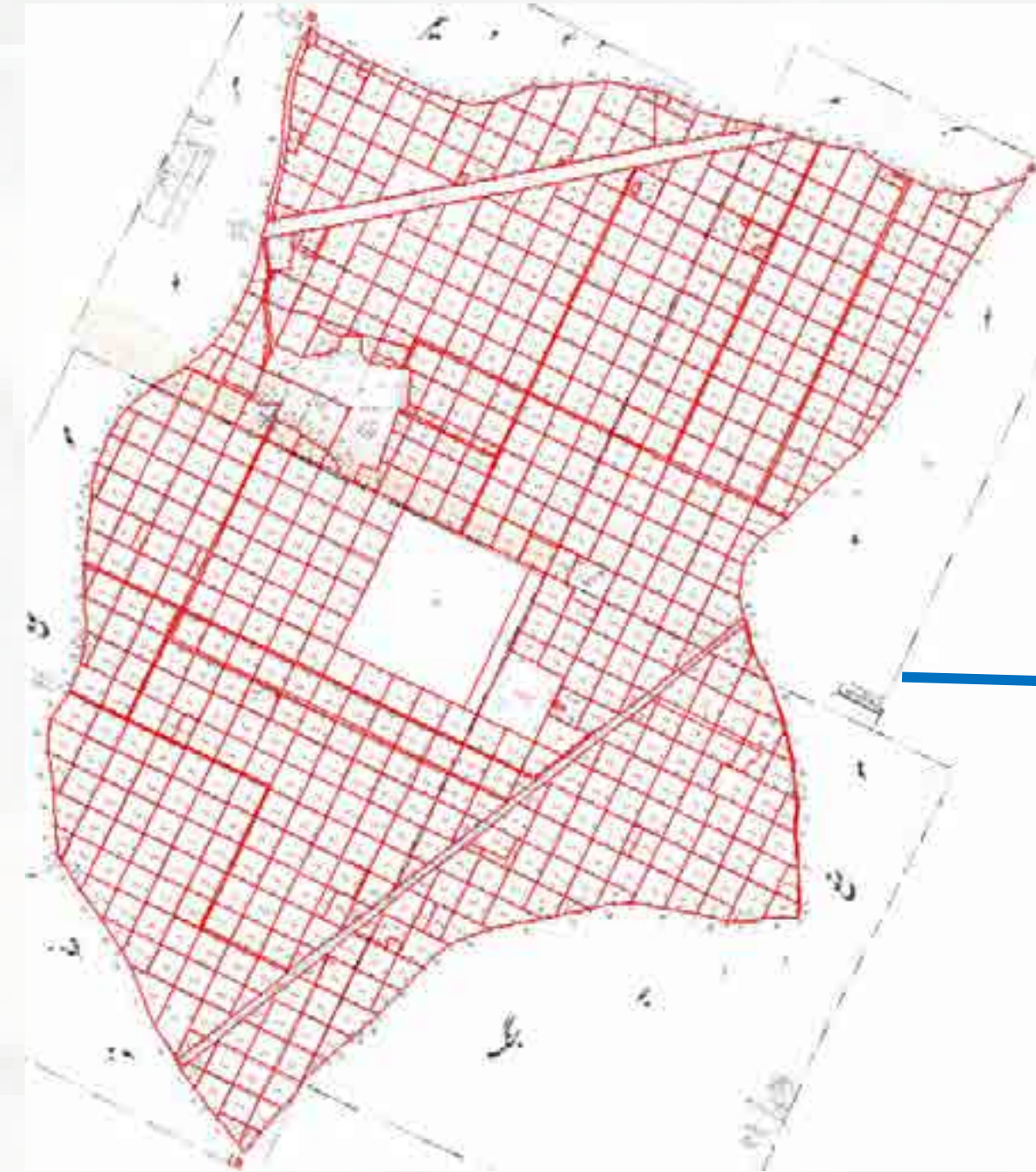
KEY CHALLENGES



- **Outdated Massavi Maps**
- **Significant Mis-Match between textual records and actual ground realities**
- **Missing/damaged Massavi maps**



KEY CHALLENGES



- Khewat (sum of parcels) based / land ownership based land system
- Every owner in the khewat is proportionally owner in each parcel
- No confirmation of possession of land
- Absent occupant



NO RECORD OF SETTLED AREAS

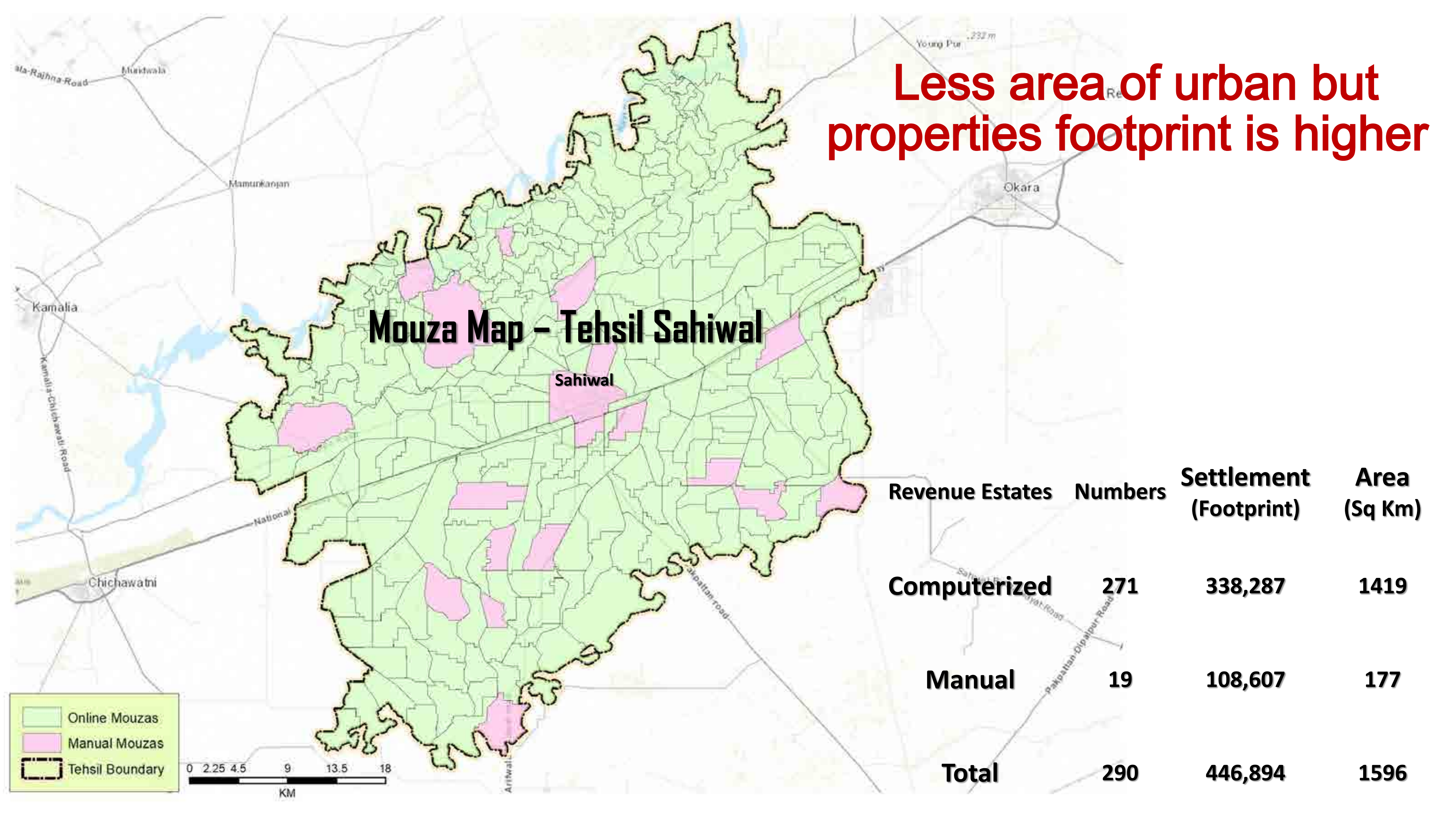


- No ownership record inside **Lal Lakeer**
- No updation of revenue record
- Only possession record available



Less area of urban but properties footprint is higher

Mouza Map - Tehsil Sahiwal



Revenue Estates	Numbers	Settlement (Footprint)	Area (Sq Km)
Computerized	271	338,287	1419
Manual	19	108,607	177
Total	290	446,894	1596

The Goal

Parcel Document
MDT-JHT-0CC-001-0012-0000
PARCEL ID

Property Address: 12, CivicCenter, Phase-I, M.A JOHAR TOWN

Parcel Area: 1 Kanal 0 Marla 0 Feet
Covered area: _____
North side: No Data Available
East side: No Data Available
South side: No Data Available
West side: No Data Available

Nature of use: Commercial
Department/Agency: Board of Revenue Punjab
Occupant Name: Zahid
Occupant CNIC: 3420258793841
Transfer Date: 2024-03-25
Status: Clear


<https://lda.pulse.gop.pk>
Scan QR code to verify document authenticity

Owner's Information (Total Number of Owners: 1) مالک کی معلومات

Sr.	Name	Father/Husband Name	CNIC	Area as per share (K-M-Ft)	Picture
1	Zahid	Rashid	3420258793841	1 - 0 - 0'	

Showing 1 to 1 of 1 entries




Leaflet | © Pulse [View on map](#)

مالک کی معلومات

as per

This is a digitally generated document and does not require signature!

- Parcel Based system
- Digitally Verifiable
- Linked with Cadastral map
- Unified ownership document
- One stop shop
- Universal software application

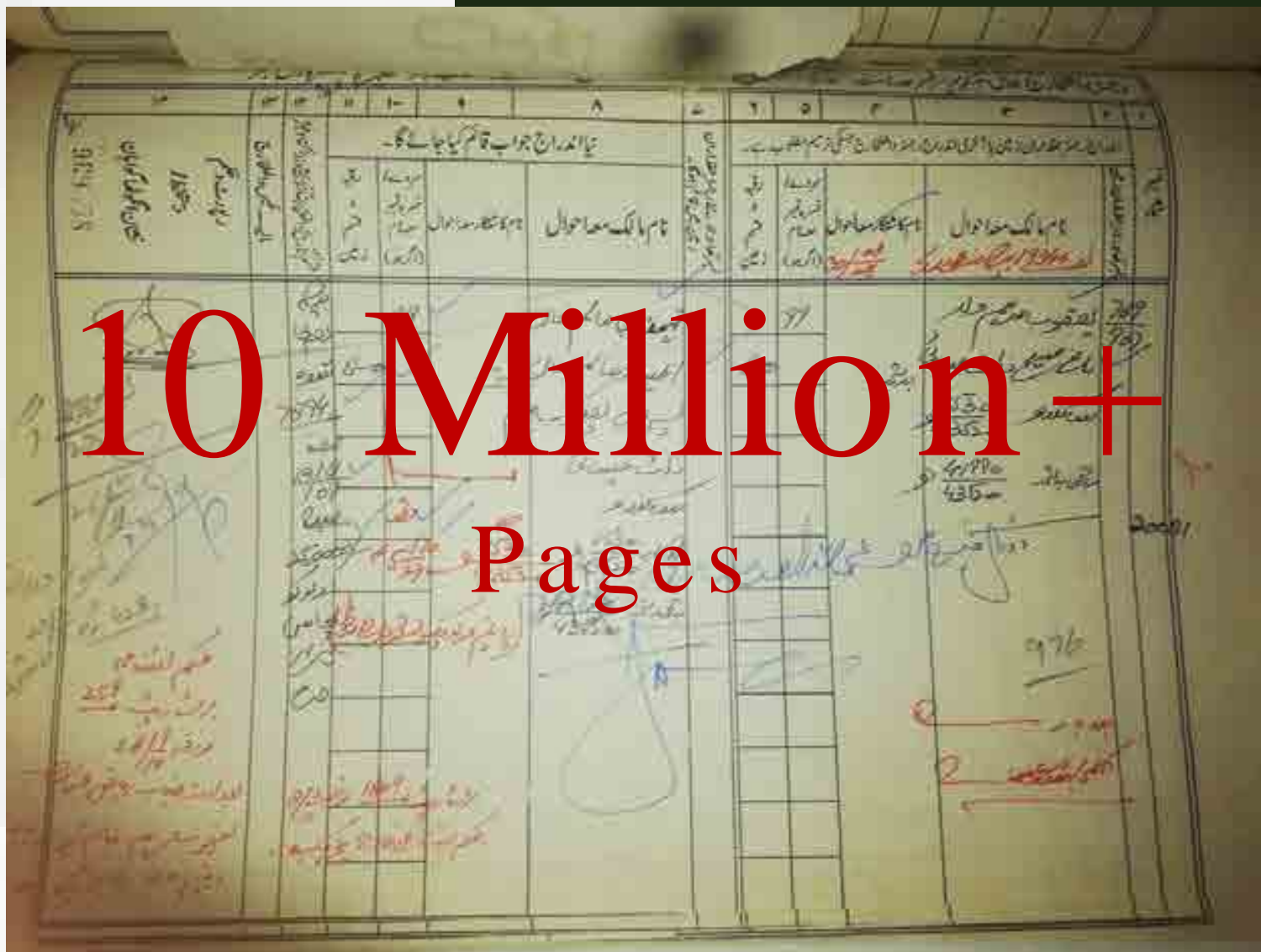


Completeness of remaining Revenue Textual Record

Digitization Statistics

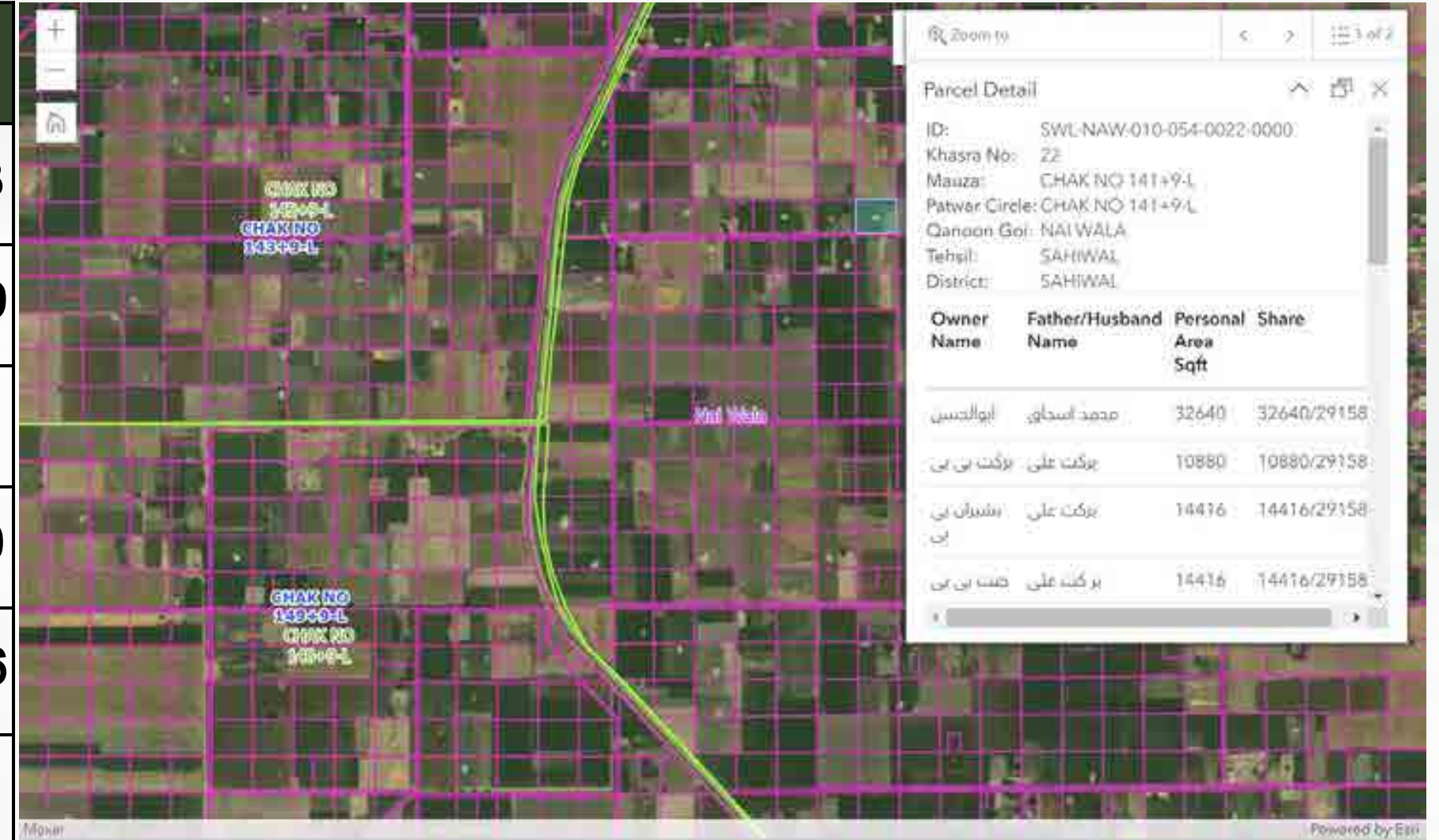
5,949

Revenue Estates



PREPARATION OF DIGITAL CADASTRE

Sr. No.	Authority	Parcels
1	Sahiwal District	1,236,183
2	Lodhran District	1,012,139
3	Hafizabad District	1,000,876
4	Cooperative Housing Authority Punjab	151,950
5	Punjab Housing and Town Planning Agency	155,216
6	Lahore Development Authority	145,592
7	Faisalabad Development Authority	44,255
8	Rawalpindi Development Authority	2,095
9	Multan Development Authority	20,279
10	Gujranwala Development Authority	50,702
11	Private Housing Societies	471,277



4,290,564

PARCEL DIGITIZED

1,642

MAUZAS DIGITIZED

800+

SOCIETIES DIGITIZED

UNIFIED SYSTEM ACROSS ALL AGENCIES

PULSE team developed in-house software for the digitization of data and maps for:

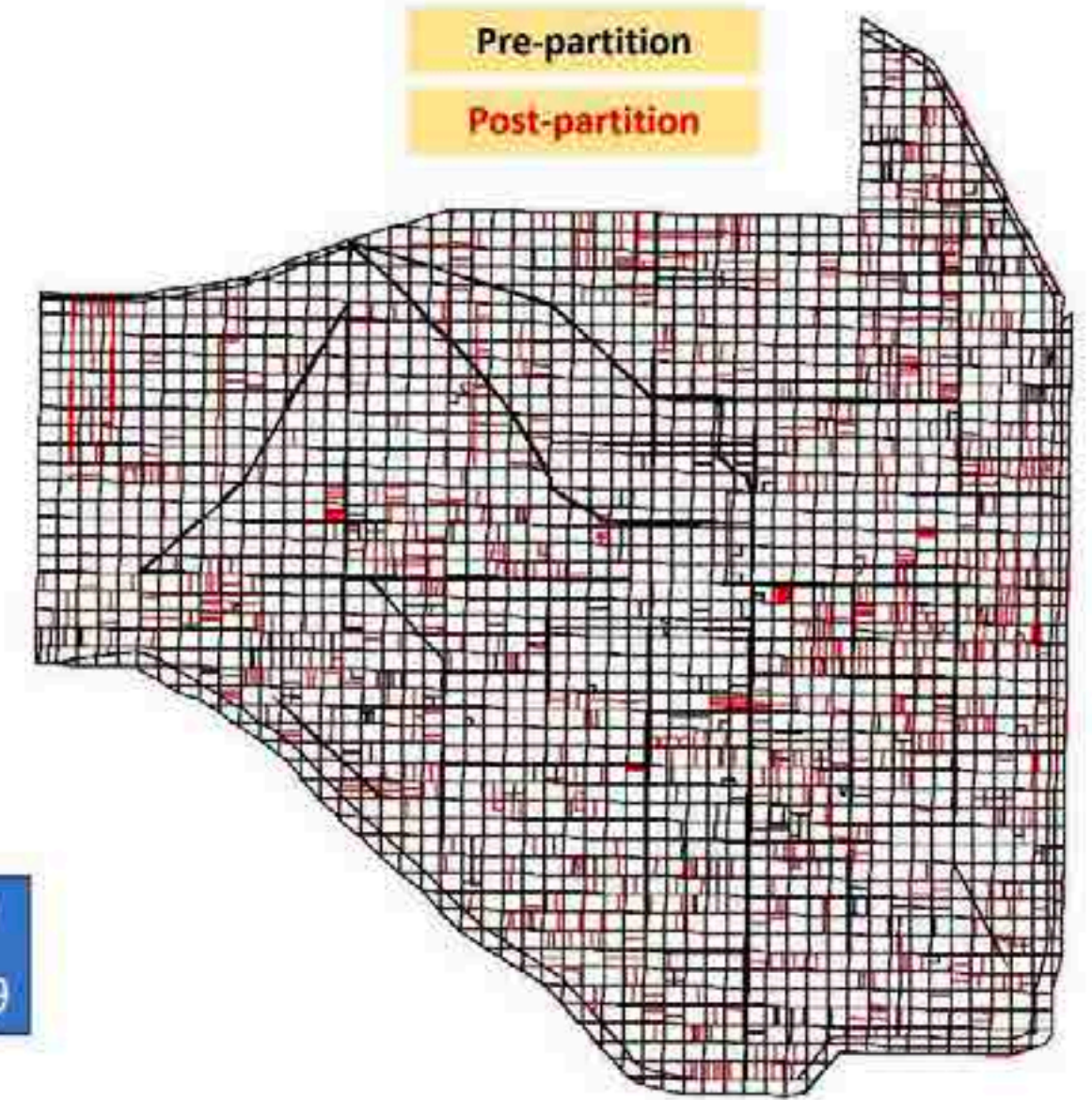
- Cooperative Societies
- Punjab Housing and Town Planning Agency (PHATA)
- Kachi Abadi Schemes
- Development Authorities
- Private Housing Societies



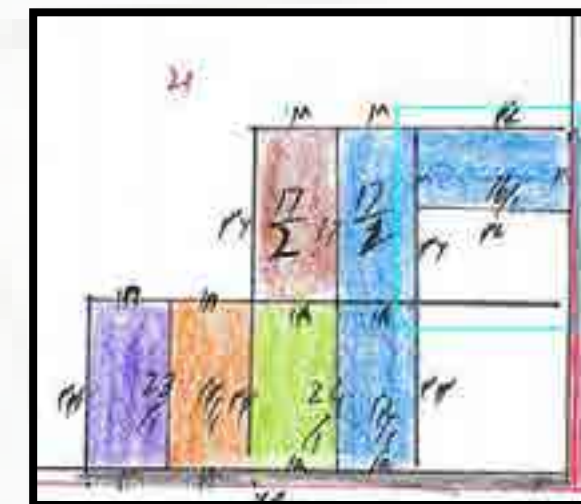
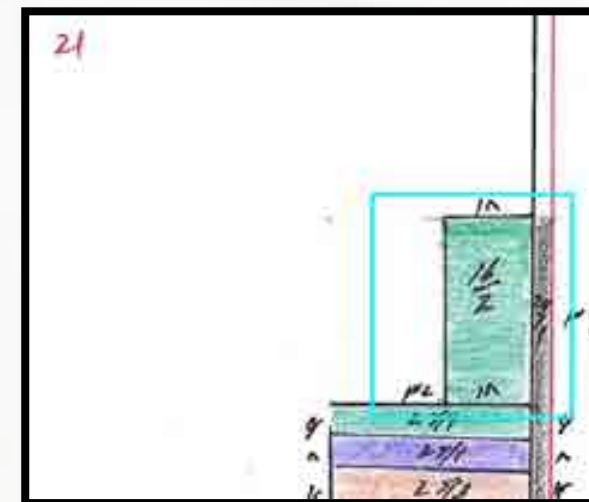
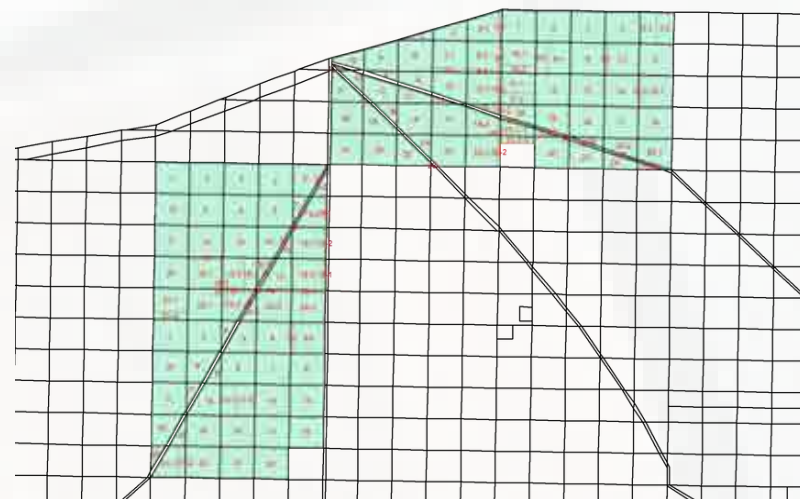
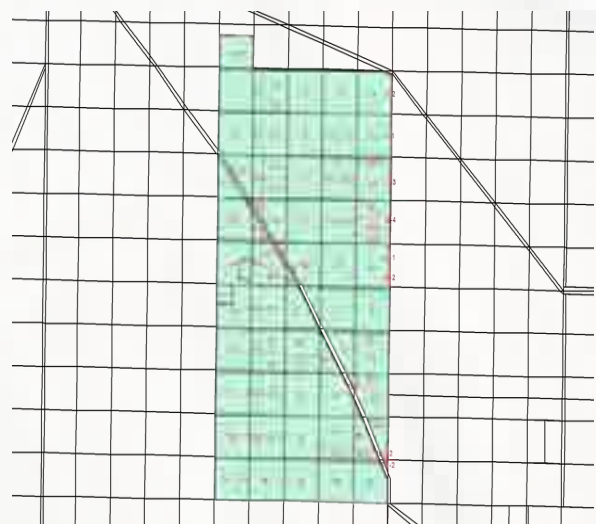
MASS-LEVEL PARTITIONING ACTIVITY

- Started across Punjab
- 50 million+ parcels to be targeted
- Special software and support
- Mutation fee waived off by Govt.
- Incentives for field formation

Overview



- Total Khasra (Pre): 2,317
- Engaged Khasras (pre-partition): 1,559
- Engaged Khasras (post-partition): 2,639
- Total Khasra (Post): 3,397



APPLICATION FOR THE FACILITATION OF PARTITIONING ACTIVITY

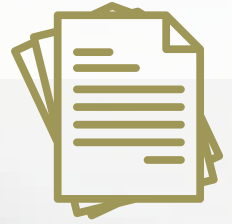
- Developed to facilitate the on -going partitioning process in fields.
- Integrated with PLRA data for real time data.
- Digitally Naqshah Jeem with due validations and less chances of errors.

The screenshot displays a software interface for land partitioning. At the top, there are several data cards showing summary statistics in Urdu. Below these, a large table lists individual land parcels with handwritten details. The table has columns for 'رقبہ زمین' (Land Area), 'تاریخ' (Date), 'رقبہ زمین' (Land Area), 'رقبہ زمین' (Land Area), and 'رقبہ زمین' (Land Area). The data is organized into sections, with some rows highlighted in green and others in purple. At the bottom right, there are three logos: the Government of Punjab, the Punjab Land Revenue Authority (PLRA), and the Punjab Land Revenue Authority (PLRA).

رقبہ زمین	تاریخ	رقبہ زمین	رقبہ زمین	رقبہ زمین
0-4-0	27/3	رقبہ زمین	0-0-0	27
0-5-0	17/03	رقبہ زمین	0-0-0	17
0-10-0	27/2	رقبہ زمین	0-0-0	
0-10-0	17/03	رقبہ زمین	0-0-0	



ROD (REGISTRIES OF DEED) PORTAL



13,567,572

Available Registries on ROD Portal



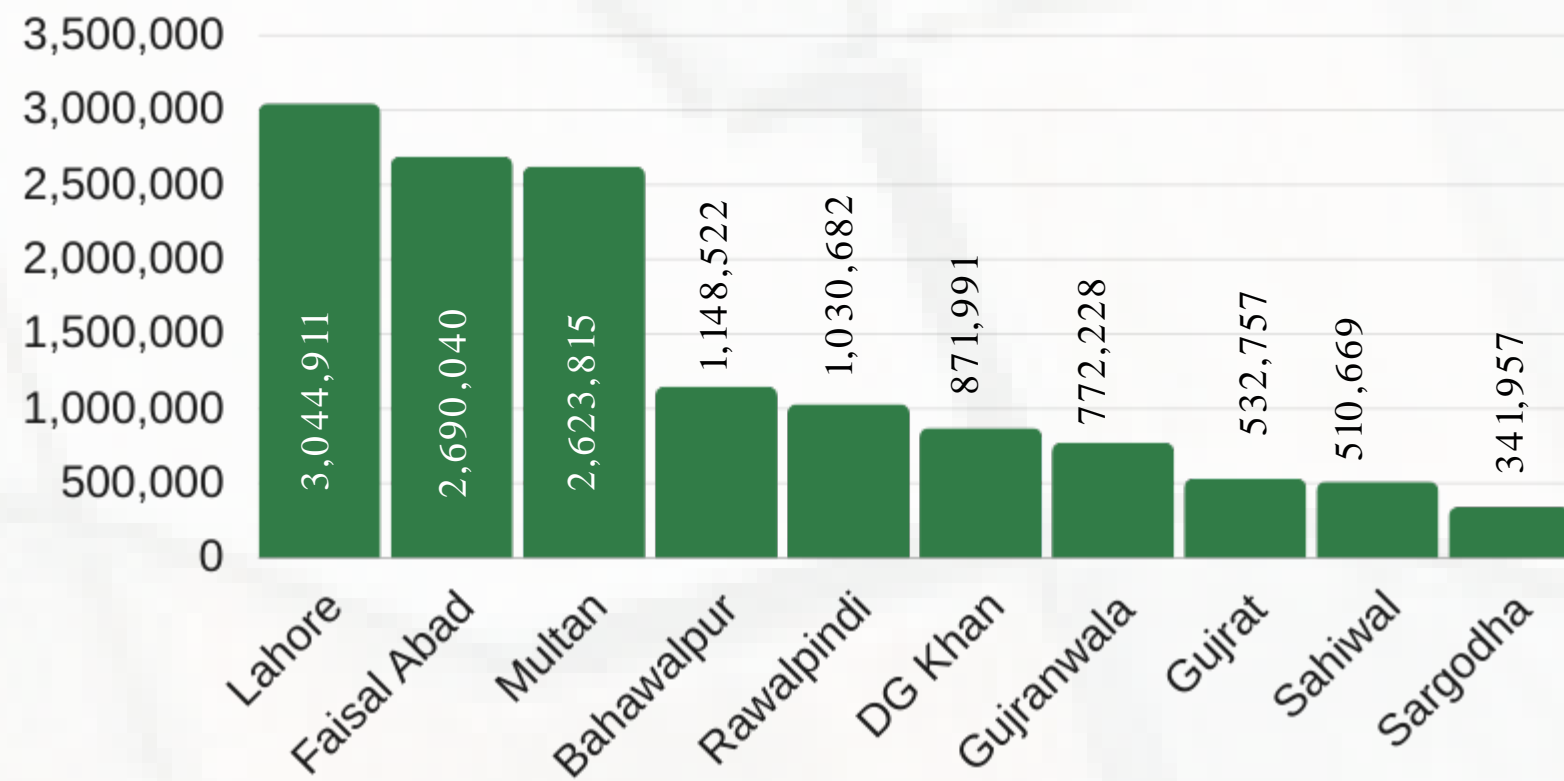
3,634

Users Registered on ROD Portal



150 TB

Data Verification and Quality Assurance



Division wise Registries count



Geodetic Control Network - PULSE

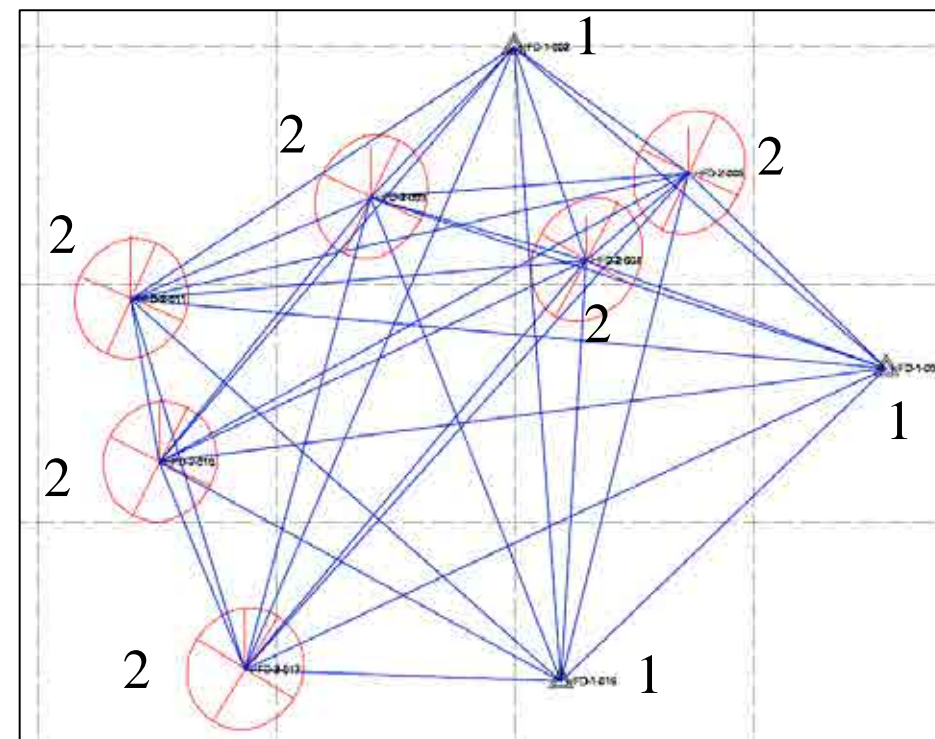
Brief

Total Area of the Punjab	205,344 km ²
Total Monuments	1994
No. of Monuments Installed	1994
No. of Level-1 Monuments	142 @ 20 to 25 Kms
No. of Level-2 Monuments	1852 @ 10 to 12 Kms

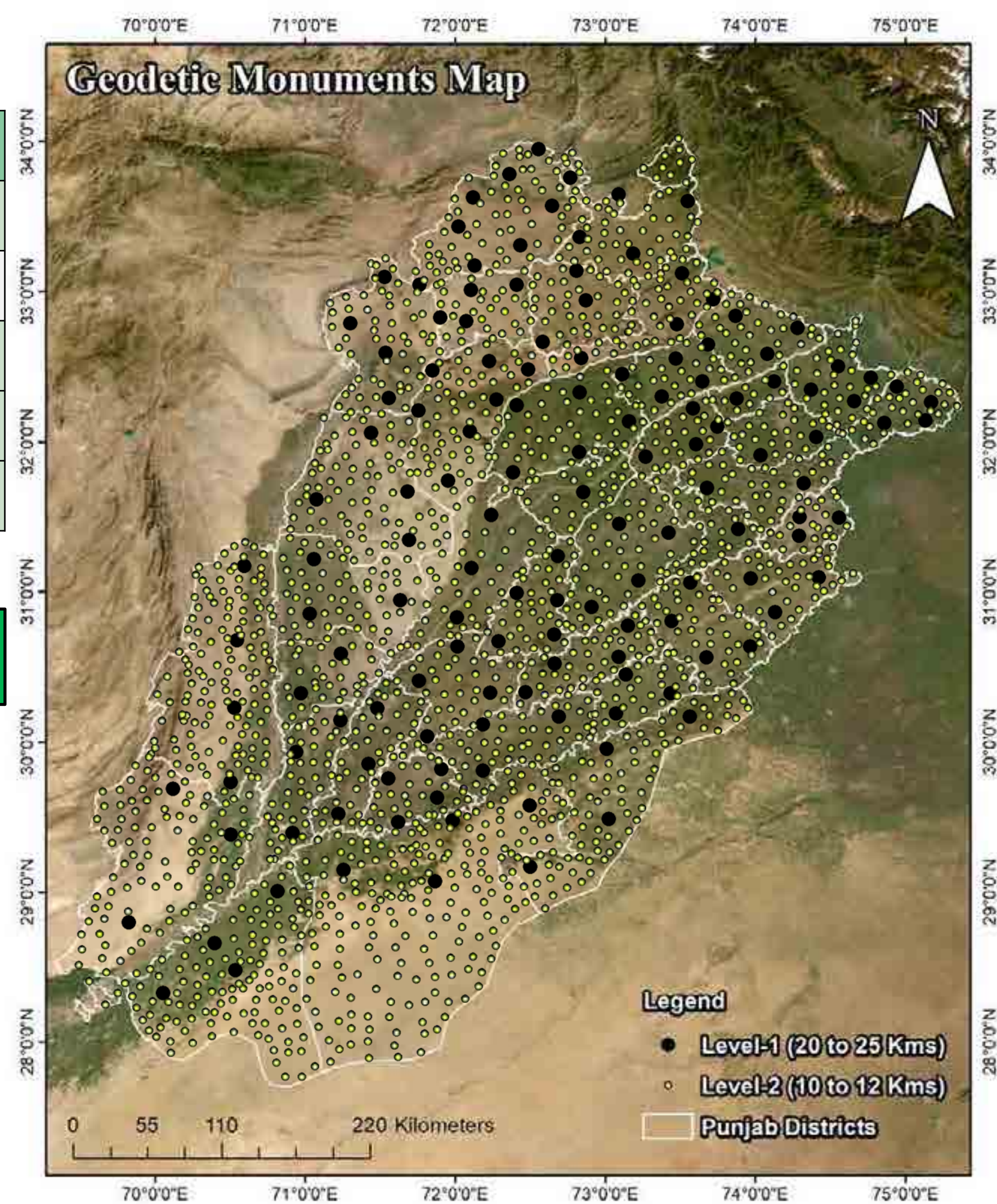
Observation Scheme



Level-1 Monument

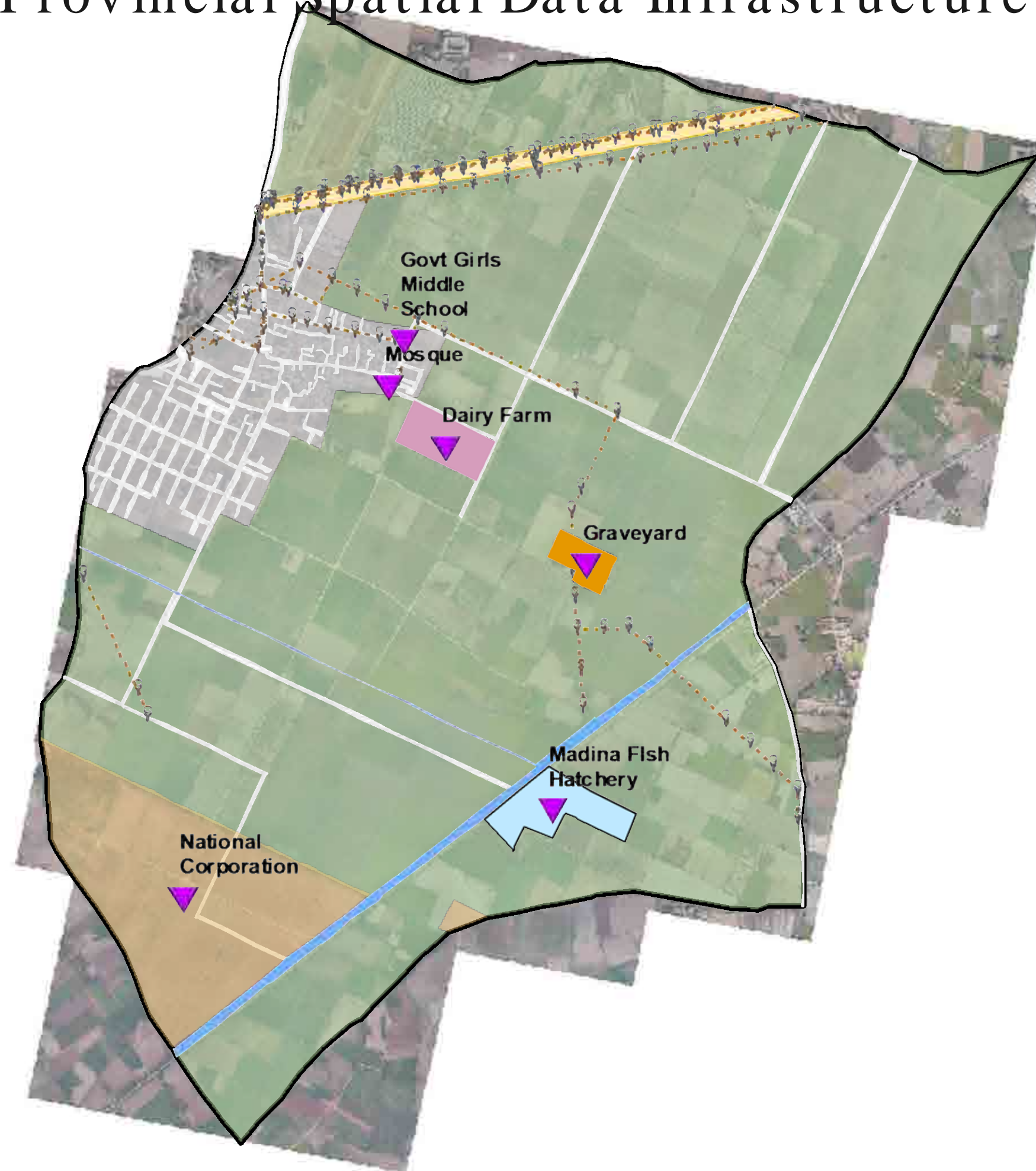


Observation scheme during one session



Provincial Spatial Data Infrastructure

- 1. Pathways
- 2. Highways
- 3. Schools
- 4. Commercial
- 5. Hospitals
- 6. Clinics
- 7. 1122 offices
- 8. Parks
- 9. Masjids
- 10. Colleges
- 11. Universities
- 12. Government offices
- 13. Police Station
- 14. Private Societies
- 15. Cooperative Societies
- 16. Graveyard
- 17. Religious Buildings
- 18. Water bodies
- 19. State Land
- 20. Ponds
- 21. Industries
- 22. Forest
- 23. Auqaf Buildings
- 24. Excise Zones
- 25. Development Authorities
- 26. Bus Stands
- 27. Powerlines
- 28. WASA
- 29. Sui gas
- 30. Railways
- 31. Bridges



- Fish Farm (24-17-0)
- School (8-4-0)
- Mosque(1-10-0)
- Dairy Farm (22-2-0)
- Graveyard (23-0-0)
- National Corporation(423-14-0)
- Electric Poles & Cables
- Water Channels(61-5-0)
- Roads & Streets(81-2-0)
- Built-Up(452-16-0)
- Agriculture Land (5044-14-0)
- Boundary (6,140-8-0)
- Drown Image

Kachi Abadies/Slums Mapping

Kachi Abadis (KAs) Mapping in Punjab also initiated:

Android Based Survey for Precise Mapping in Kachi Abadis

Cadastral Mapping in Kachi Abadis

Digitization of Records in Kachi Abadis

Special Law for the possession



Systematic Registration in Built up Areas

Total Parcels Surveyed through Mobile Application

191,187



MOBILE APP FOR PARCEL SURVEY

The image displays five overlapping mobile app screens illustrating the user interface for a parcel survey application. The screens are as follows:

- Screen 1 (Login):** Titled "Cadastral Survey", it features a "Welcome" message and a sign-in prompt: "Sign in with your CNIC and password". It includes input fields for "CNIC" and "Password", a "Forgot Password" link, and a blue "LOGIN" button.
- Screen 2 (Home):** Titled "Cadastral Survey", it displays a welcome message for "Habbash Mahmood" and "Assigned Mauza: Qilla Pakka". It contains four main action buttons: "START SURVEY", "SAVED RECORDS", "DOWNLOAD DATA", and "LOGOUT".
- Screen 3 (Map):** Titled "Cadastral Survey", it shows a map of "Qilla Pakka (Map)" with a "Parcel Count: 506" and a green dot indicating the current location. A camera icon is visible for location tracking.
- Screen 4 (Parcel Status):** Titled "Parcel ID: 551", it shows "Parcel Status" options: "Same", "Split" (selected), and "Merge". It also includes a "Sub-parcels" section and a "DISCREPANCY" camera icon.
- Screen 5 (Owner List):** Titled "Parcel ID: 551", it displays an "Owner List" with a search bar and a list of owners with their details and checkboxes for selection. The list includes:
 - Owner: آریبہ دختر غلام مصطفی (Arifa Dagher Ghulam Mustafa), CNIC: NA, Person Area (SQF): 30/102544
 - Owner: افتخار احمد ولد محمد صديق (Aftakhar Ahmad Wadd Muhammad Sadiq), CNIC: 3540256918413, Person Area (SQF): 490/102544
 - Owner: افضل ولد عبدالغفار (Aftab Wadd Abdulfarhan), CNIC: 3310470471125, Person Area (SQF): 19/1508
 - Owner: اقبال ولد عبدالغفار (Iqbal Wadd Abdulfarhan), CNIC: 3240220199469, Person Area (SQF): 19/1508
 - Owner: خالد محمود ولد عبدالوکیل (Khalid Mahmood Wadd Abdulkamil), CNIC: 3540258928717, Person Area (SQF): 816/102544
 - Owner: خدیجہ دختر غلام مصطفی (Hadijah Dagher Ghulam Mustafa), CNIC: NA, Person Area (SQF): 30/102544
- Screen 6 (Land Details):** Titled "Parcel ID: 551", it shows "Land Details" with various selection options:
 - Land type: Structured/Constructed (selected), Plot/Open Land
 - Land owned by: Private Individual(s) (selected), State Land, Other
 - Property type: Residential (dropdown menu)
 - Interview Status: Information not available (selected), Information available, Property Locked

Stakeholders workshops



Stakeholders Consultation Workshops under PULSE



Community Engagement Sessions-Male



Community Engagement Sessions-Male



Community Engagement Sessions-Female



Community Engagement Sessions-Female



Youth Engagement Sessions

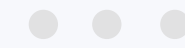


Youth Engagement Sessions





CHALLENGES



Limited market to undertake this gigantic project



Un-availability of vulnerable software



Urdu language land record



Conversion from conventional system



Creation of new settlement maps



Quality Assurance & Survey of huge urban data



Inconsistencies in the revenue record



Strong resistance from potential stakeholders

THANK YOU

