

# Geospatial enabled Government Initiatives impacting Land Economy and National Development

Keynote Address

by

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# J&K Land Administration – Historic Perspective

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## History of Settlement Operations

1887 - The first regular settlement operation started in erstwhile State of Jammu & Kashmir

1889 – Sir Walter Lawrence starts settlement operations in entire State

1893 – 10,709 Village Cadastral Maps were completed

1905 – “Bandobast Qanooni” – First Settlement completed in J&K

## Major Land Reforms

Big landed Estates Abolition Act, 1950

Consolidation of Holdings Act, 1962

Agrarian Reforms Act, 1976

## J&K Land Administration – Scenario by Mid 80s

The Reforms undertaken in Jammu and Kashmir were among the most progressive in the world and by mid 1980, more than a million people had benefitted through the reforms

| S.No | Year         | No. of Tillers  | Land Transferred in Acres | No. of beneficiaries |
|------|--------------|-----------------|---------------------------|----------------------|
| 1    | 1951-52      | 30,418          | 92,927                    | 2,98,922             |
| 2    | 1952-53      | 50,189          | 66,755                    | 1,70,165             |
| 3    | 1953-54      | 32,260          | 36,915                    | 1,15,831             |
| 4    | 1980-85      | 3,08,000        | 1,06,000                  | 5,38,000             |
|      | <b>Total</b> | <b>4,20,867</b> | <b>3,02,301</b>           | <b>11,22,918</b>     |

As per Census, 1981, the Population of J&K was about 6 million, so the reforms had benefitted, 1 in every 6 souls

## Modernisation of Land Administration – The Beginning

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- I. The security situation in the valley from 1989 – 90 shifted the focus from development and administration.
- II. It was not until mid 2010s that substantial steps began to be taken for modernising the land administration in the valley
- III. Modernisation of Land Administration has made several progressive strides since, but the process began formally in April, 2016 with **Digital India Land Records Modernisation Programme**
- IV. The program aims to place all the information available in respect of a piece of land at one place and make them easily accessible to the public through Integrated Land Information Management System (ILIMS).

# Digital India Land Record Modernisation Programme in Jammu and Kashmir

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## **Components of DILRMP**

Computerization of land records

Survey/resurvey and updating of the survey & settlement records

Computerization of Registration

Modern Record Rooms/land records at tehsil/taluk/circle/block level

Training & capacity building, IEC and evaluation studies

Core GIS

Consent-based integration of Aadhaar number with the land record database

Computerization of Revenue Courts

Integration of Revenue Courts with land records

Programme Management Unit

## Scanning of Revenue Records / Cadastral Maps

- 799.49 lac (pages) of Revenue Documents have been scanned to date
- Revenue Maps of 6246 villages have been scanned

## Digitization of Cadastral Maps

- Cadastral maps of 6222 villages have been completely digitized
- Of these, 5892 villages have been georeferenced

## Digitization of updated Jamabandis

- Data Entry of Jamabandi in 6593 villages has been completed
- The Digitized Jamabandis have been transliterated into 22 languages and are available for the public on LRIS

## Challenges – Digitization and Geo-Referencing of Cadastral Maps

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Training and Capacity building as Digitization was conducted in house in 18 districts

Stringent Accuracy Requirements – Digitized map has to be a true replica of the original

Storage of Digitized Map – Geo Database of open standard

Lack of Skilled Manpower, training for in house geo referencing

Interdepartmental and Multi agency coordination

Time bound completion without compromising on quality

## Challenges – Digitization of Jamabandi

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Poor Internet Connectivity  
and Offline Softwares /  
Mobile Apps for Data  
Entry of Jamabandi

Digitization of Jamabandi

Recording Jamabandi in  
English besides Urdu

Developing APIs for cross  
platform integration

Field force simultaneously  
occupied in service  
delivery and digitisation

Digitization and service delivery

Infrastructure issues –  
availability of Data Centre

Multi level Multi feature  
dashboard



## Survey/resurvey and updating of the survey & settlement records

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While initially, it had been decided to use High Resolution Satellite Imagery & Ground Survey Technique for conducting Survey and Resurvey work, it was decided to employ Continuously Operating Reference Stations (CORS) Network Technology

CORS involves continuous capturing of Geo Positioning data from all of the major international navigations satellite constellation systems by the CORS base stations set up on the ground which then send necessary correction data regarding exact latitude and longitude to the Real Time Kinetic Rovers carried on ground by the surveyors who place it on various important points on the boundary of a land parcel to ascertain the dimension of the polygon, based on which the CORS station calculates the area and a Revenue Map with accurate geo coordinates is generated.

## Computerization of Registration – Salient features

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Electronic Stamps

Online Payment of  
Registration Fee

Integration with Digi  
Locker to provide  
Registered Document

Aadhar Authentication  
of Registering parties

Integration with RAS for  
Citizen Feedback

Notification of  
Registration under  
PSGA, 2011

Uniform Checklist of  
Documents for various  
articles / instruments

Integration with PAN  
database

Integration with Single  
Window Clearance  
System

## Training & Capacity Building

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While initially computerization of land records was being carried out through vendors, the process is now being undertaken in – house by the Revenue Staff. As such, training and capacity building of the ground staff was necessary and several training sessions were held across the 20 districts



## Apki Zameen Apki Nigraani

The scanned digitized data of land records have been uploaded on Apki Zameen Apki Nigraani - Web Portal and are accessible to the public

“Land Records Information System” (LRIS) is web based multi-tiered, scalable, reliable, and secure network enterprise application. The LRIS is Integrated, Geographical Information System (GIS) based decision support system to cater 24/7 services to JaKLaRMA agency user, state public user, special agency external user for analysis, evaluation and information of revenue records and its ancillary details like Records of Rights, Jamabandi, Girdawari, Mutation and many more.

### Documents available on Apki Zameen Apki Nigraani

| Document Type   | Total Documents |
|---|-----------------|
| Jamabandis  | 1,52,56,330     |
| Mutation  | 1,89,84,115     |
| Girdawari   | 1,46,11,632     |
| Other Documents (Field Book, Khatoni, Misal Haqiyat, Roz Nmacha, Levi Register, Naksha and Chowkidar etc) | 3,32,88,518     |
| Total Documents uploaded  | 8,21,40,595     |
| Total Mussavi uploaded  | 55,212          |

# Citizen Centric Initiatives - Apki Zameen Apki Nigraani

landrecords.jk.gov.in/Dashboard/Home

## Land Records Information System

Help Guest (Data Viewer)

- Land Records(Scanned)**  
Document Search, View, Print, Download, History, Movement
- Link Mobile & Aadhaar Number**  
Link Mobile & Aadhaar Number to Land Records
- View Map**  
Parcel Map Search, View, Print (Available for Jammu & Srinagar Districts only)
- Feedback / Grievance**  
User Feedback & Resolution
- Digitized Jamabandi**  
View Jamabandi in 22 Languages
- Dashboard**  
Dashboard

Visitors: 1 1 7 3 6 2 6 3

Information provided online is updated and an advised visit is

# Citizen Centric Initiatives - Land Passbook

## Land Passbooks

- The land passbook contains details regarding khasra number, land type, land owner, cultivator, gender, etc., for all parcels of land owned by the land owner
- The passbook is a legal document and can be used for institutional credit
- The land passbook is trilingual and has a unique ID and QR code as an additional security feature.
- 32,28,661** Land Passbooks have been generated and distributed, covering 90% of the land owners in UT of J&K.

### Land Passbook (Trilingual) Format



Name of Landowner :  
 Percentage :  
 Mobile No :  
 Aadhaar No :  
 Revenue Village :  
 Tehsil :  
 District :  
 Date of generation of Passbook :

Abdul-Majid  
 Gul Muhammad  
 Patti  
 Bari-Bushahigal  
 Seeha  
 05-04-2022

Passbook No. JK-JM9043810001



1. Land Passbook shall not be used unless it is issued by the Revenue Department, Jammu and Kashmir, and shall not be used for any other purpose.  
 2. As per Rule 3(11) of the Jammu and Kashmir Land Revenue Act, 1956, it shall be the responsibility of every Land Passbook holder to ensure the accuracy of the information contained in the Land Passbook. If any change occurs in the land records, the holder shall report the same to the Revenue Department, Jammu and Kashmir, within the prescribed time.  
 3. As per rule 4(2) of the Jammu and Kashmir Land Revenue Act, 1956, the holder of the Land Passbook shall not be liable for any loss or damage to the land records of the Government of Jammu and Kashmir, if the holder has taken all the necessary precautions to protect the same.

भूमि का विवरण

Passbook No. JK-JM9043810001  
 Name : Abdul-Majid

| क्रमांक | नंबर खेवट | नंबर खाता | नंबर खसरा | यू एल पिन     | स्वामित्व प्रकार | रकबा बकियद किसम |      |           | नाम मालिक मेह अहवाल  | टिप्पणी |
|---------|-----------|-----------|-----------|---------------|------------------|-----------------|------|-----------|--|---------|
|         |           |           |           |               |                  | कनाल            | मरला | किसम जमीन |  |         |
| 1       | 217       | 952       | 191 मिन   | BAJG17D7S2NQH | सह-साझेदार       | 18              | 3    | मेह अहवाल | अहवाल-मरला 9 कनाल 1 मरला 136 मरवा फुट , अहवाल-रबीद 9 कनाल 1 मरला 136 मरवा फुट किसान गुल मोहम्मद गुल मुहम्मद साकीनन्दन बहिसा बाबा |         |

زمین کی تفصیلات

Passbook No. JK-JM9043810001  
 Name : Abdul-Majid

| نمبر خهوت | نمبر کھاتہ | نمبر کھسرا | یو ایل پی این | صاحبیت کی قسم | رقبہ بقیہ |     |          | نام مالک مو اہوال  | تفصیلات |
|-----------|------------|------------|---------------|---------------|-----------|-----|----------|--|---------|
|           |            |            |               |               | کانال     | مرا | قسم زمین |  |         |
| 1         | 217        | 952        | 191 مین       | سہ-شاہدہ      | 18        | 3   | سہ-شاہدہ | مہا اہوال-مرا 9 کانال 1 مہا اہوال 136 مربع فٹ , مہا اہوال-ربید 9 کانال 1 مہا اہوال 136 مربع فٹ |         |

Details of Land Parcel

Passbook No. JK-JM9043810001  
 Name : Abdul-Majid

| S No. | Number Khewat | Number Khat a | Number Khasra | ULPIN         | Ownership Type (Self-Co-sharer) | Raqba Bakiyad Kisam |       |              | Naam Malik Meh Ahwal   | Remark |
|-------|---------------|---------------|---------------|---------------|---------------------------------|---------------------|-------|--------------|--|--------|
|       |               |               |               |               |                                 | Kanal               | Marla | Kisam Zameen |  |        |
| 1     | 217           | 952           | 191 Min       | BAJG17D7S2NQH | Co-sharer                       | 18                  | 3     | Share Ahwal  | Abdul-Majid 9 Kanal 1 Marla 136 Square Feet , Abdul-Rashid 9 Kanal 1 Marla 136 Square Feet Shareen Gul Muhammad Gulam Bahissa Sakinandan Bahissa Barabar |        |

# Citizen Centric Initiatives - Online Services

30 services are provided online

Online Services notified under  
PSGA

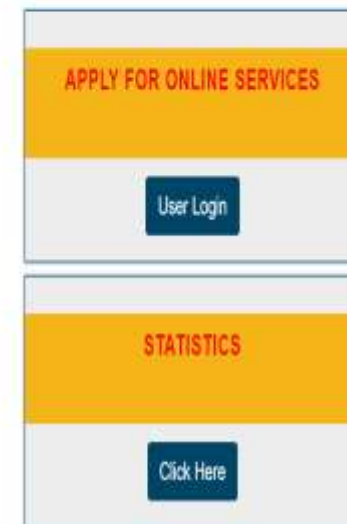
Document checklist and timeline  
widely available

QR Code authentication of online  
generated documents

Integration with Digi Locker

Auto Appeals System

- Fard
- Attestation of Mutation
- Demarcation of Land
- Extract of Girdawari
- Extract of Jamabandi
- Change of Land Use
- Income Certificate
- Legal Heir Certificate
- Property Certificates



## Other Interventions leveraging Geospatial Technology

### “Survey of Villages and Mapping With Improvised Technology In Village Abadi Areas” (SVAMITVA)

Drone Survey of Rural  
Abadi Deh Areas

Preparation of GIS based  
maps on 1:500 scale

Ground truthing and  
calling objections

Generation of Property  
Cards

#### Implementation Challenges

1. Compared to the rest of the country, the flying season is rather short and proper planning is necessary for time-bound flying
2. Inter-departmental and inter-organisational coordination critical on account of sensitive security issues involved
3. Specialised high altitude drones required in some areas
4. Capturing rural abadi deh villages close to the LoC
5. Awareness generation among masses about the need and benefits of the scheme
6. Facilitating institutional credit on the basis of property cards
7. Settling property disputes to determine ownership

**More than 10K  
property cards  
distributed**

**1700 villages  
surveyed**



# Other Interventions leveraging Geospatial Technology

## “Unique Land Parcel Identification Number ” (ULPIN)

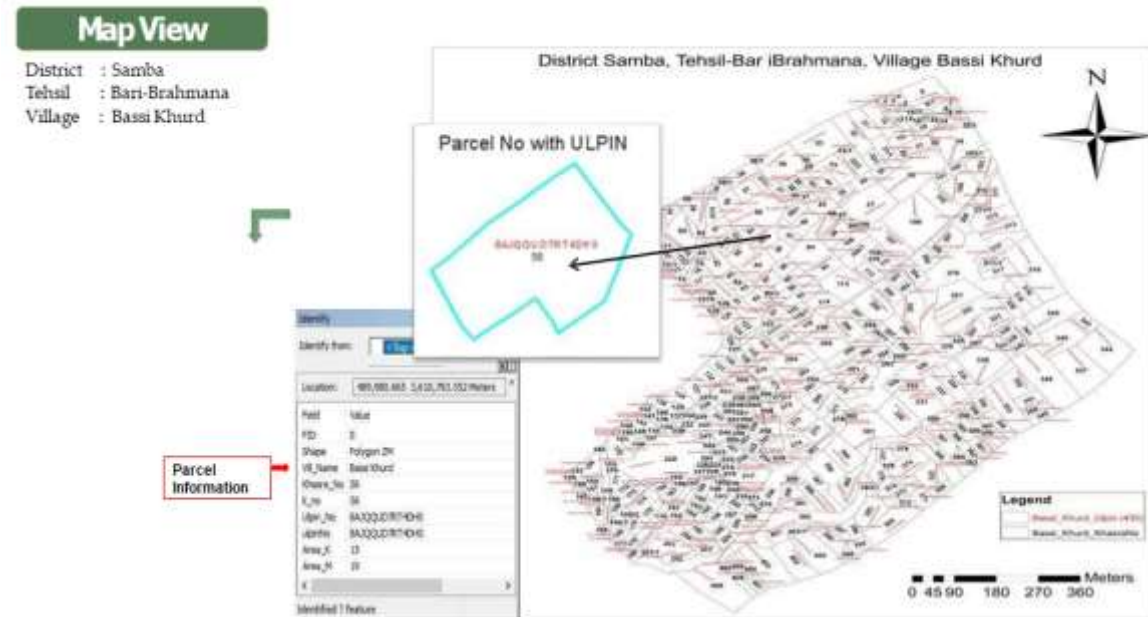
Geo Referencing of Cadastral Maps  
taken up under DILRMP

Geo-coordinates of vertices of the parcel

14 digit unique Alpha Numeric ULPIN  
assigned to the parcel

7,58,356 ULPINs  
generated so far

Map with Property Natural Identifier Unit (PNIU)



ULPINs are also generated for land parcels surveyed in SVAMITVA prior to property card generation

## Interventions so far

- Scanning of Revenue Records
- Digitization of Cadastral Maps
- Up-dation and Digitization of Jamabandis
- Transliteration of Jamabandis
- Switchover to online Registrations

## Accomplishments

- Online availability of Revenue Record in 22 languages
- Time bound online delivery of services in a transparent manner
- Secure, transparent and reliable registration process

## Way Forward

- Up-dation of Revenue Records based on survey through CORS networks providing geo referenced coordinates of all land parcels
- Real time up-dation of Revenue Records by linking online services portal (mutations) with LRIS
- Auto Mutation and real time up-dation of Revenue Record triggered by Registration of a document by linking NGDRS, LRIS and Online services portal
- Home based e – registrations
- Infrastructure augmentation and capacity building, equipping the workforce
- Will allow for scientific, accurate, economic future settlement operations