

National Council of Applied Economic Research

Study on Evaluation of Quality of Land Records

Submitted to
Department of Land Resources (DOLR)
Ministry of Rural Development, Government of India

March 2025

NCAER
65

NATIONAL COUNCIL OF APPLIED ECONOMIC RESEARCH
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(Special thanks to KRS Urs for helping in coordinating with Rajasthan Land
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Acknowledgements

The successful completion of the study has been possible only due to the support received from a host of well-wishers who also helped with the exercise! Firstly, we would like to express our gratitude to Department of Land Resources (DOLR), MoRD, GOI for their financial support to this study. We would like to place on record our deep appreciation to the DOLR team Mr Kareem and Mr Ravi Garg for their continued interest and involvement in the study. The most important task in the study was to interact with the Land Records and Revenue department officials in the sample States and UTs of Punjab, Chandigarh, Delhi and Rajasthan. Our heartfelt thanks to all the State and UT revenue department officials who not only interacted with us and provided their valuable insights but also helped in the selection of the sample villages for the conduct of the census survey in their respective States and UTs. Their support in arranging the interactions with the tehsildars and patwaris in the sample districts and tehsils is highly acknowledged. We would like to mention thanks to all the patwaris, tehsils and gram panchayats of the selected sample places who interacted with the study team and helped us in understanding the ground realities on the digitisation status of the land records in their jurisdictions.

We are also thankful to the NCAER networking agencies: ISARD (Mr Ajeet Prasad and team) and Probe and Search (Mr Navin and team) for the conduct and timely completion of the survey. The efforts of NCAER supervisors: Mr Yogesh and Mr Shiv Bhan Singh are highly appreciated who had supervised the field work and were continuously with the survey team throughout the survey period. One of the main challenges in this work was in regard to the translation of questionnaires from English to Hindi. We would like to extend our sincere thanks to Ms Poonam Dhawan and Ms Sadhna Singh, who helped us with the translation work. The team also acknowledges the support of Mr Akhil Bhatnagar for CAPI conversion of the questionnaires and timely addressal of the server and CAPI issues during the field work.

The successful completion of the work would have not been possible without the invaluable support and guidance of our Senior Advisors Mr Deepak Sanan and Dr G.C Manna, who guided us at various stages of our work. Their constant advice and extremely valuable comments and suggestions added immense value to the report. We are particularly grateful to Prof Bornali Bhandari, Senior Advisor, for her continuous support and guidance throughout this journey. Our special thanks to Mr K. S Urs, Associate Fellow at NCAER who helped us in coordinating with Rajasthan Land Records Department for the collection of the State level data. We are particularly grateful to Dr Poonam Gupta, Director-General, and Dr Anil Kumar Sharma, Professor and Secretary, for their continued support and encouragement at various stages of the study.

Our heartfelt thanks to Poonam Dhawan and Praveen Sachdeva for the secretarial and technical/IT support and for efficiently managing the project activities. Last but not the least, sincere thanks to the young research team including *Nishika Pal, Somdev Singh Deora, Ahana Saha and Abhishek Jindal* for their collective efforts without whom it was not possible to bring the report in its present stage. We take full responsibility for all the mistakes that may remain in the report, and all those who assisted us are in no way responsible for these.

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List of Abbreviations

BDO	Block Development Officer
CAPI	Computer Assisted Personal Interviews
CBDT	Central Board of Direct Taxation
CLR	Computerisation of Land Records
CM	Cadastral Map
DI-LRMP	Digital India-Land Records Modernisation Programme
DoLR	Department of Land Resources
E-GRAS	Electronic-Government Revenue Accounting System
EoDB	Ease of Doing Business
GIGW	Guidelines for Indian Government Websites
GIS	Geographical Information System
GoI	Government of India
MeitY	Ministry of Electronics and Information Technology
MIS	Management Information System
MRR	Modern Record Room
NCAER	National Council of Applied Economic Research
NGDRS	National Generic Document Registration System
NIC	National Informatics Centre
NLRMP	National Land Records Modernisation Programme
N-LRSI	NCAER- Land Records and Services Index
PPS	Probability Proportional to Size
RCCMS	Revenue Court Case Management System
RoRs	Records of Rights
SRA & ULR	Strengthening of Revenue Administration and Updating of Land Records
SROs	Sub-Registrar Office
SWAMITVA	Survey of Villages and Mapping with Improved Technology in Village Areas
ULI	Unified Lending Interface
ULPIN	Unique Land Parcel Identification Number
UT	Union Territory

Key Terminologies

1. **Household:** If one or multiple families share one kitchen than that is ONE household. If there are separate kitchen for families living under one roof, then they will be treated as different households.
2. **Land Parcel-** A piece of land owned under private ownership or government.
3. **Khasra Number** - It is a number given to a piece of land owned by anyone, so that it can be located and identified easily.
4. **Khata number** - It shows the details of all the land parcel owned by a person.
5. **Land owner-** Person who owns the land either in single or joint ownership.
6. **Land ownership type-** The land parcel/plot may be owned by a single owner or by multiple owners. (called joint ownership).
7. **Single ownership:** If a land parcel is owned by one person.
8. **Joint ownership-** If a land parcel is owned by more than one person. The joint ownership could be with spouse, other family members or members outside family.
9. **Possession-** Person who is using/living in the land parcel has the possession of the land. Owner can also have the possession or someone else can also have the possession e.g. tenants.
10. **RoR (Record of Rights)-** It is a single piece of document that contains all the necessary details of a land parcel including ownership, land use and encumbrance. RoRs contains the details about the name of the land owner, share of the land they own, encumbrance details, if any.
11. **Textual records-** These are also called Records of Rights (RORs). These records are in the written form about the land details.
12. **Spatial records-** Details of land given in a map form either scanned, mosaic and vectorised formats is called spatial records or Cadastral Maps (CMs) or Bhu-naksha. Scanned format is where just the scanned picture is uploaded on the website in the pdf or image form. A mosaic map is a map made up of different images which are displayed depending on availability and zoom level. The mosaic map can have one or more overlapping layers, so, if you zoom in or zoom out, one or another layer will be shown. Vectorised format shows clear details of the land like boundaries and measurements and there are different clickable options, it is not in the form of a pdf or image.
13. **Encumbrance-** Any loan/mortgage/dispute/ restriction on use related to the land parcel / plot is counted as an encumbrance on the land.
14. **Lien-** A lien is a legal right to a someone's property that is used as collateral to back a loan.

15. **Mortgage-** Loan taken against the land. Land is collateral.
16. **Mutation** - When a land parcel is transferred from one person to another, the process of change in ownership name is called MUTATION.
17. **ULPIN-** It is a 14-digit identification number accorded to a land parcel based on the longitude and latitude coordinates of the land parcel and depends on detailed surveys and geo-referenced cadastral maps. ULPIN is a Single, Authoritative Source of Truth for information on any parcel of land or property to provide Integrated Land Services to the citizens as well as all stakeholders.
18. **Girdawari-** Girdawari is an annual crop inspection conducted by the revenue officials in the villages. It is also known as the 'Khasra Girdawari,' and it is an important part of the land revenue administration system. The purpose of the Girdawari is to verify and update the land records, including the ownership details, crop details, and revenue assessment. During the Girdawari, the Patwari, who is the village revenue official, inspects the land in the presence of the landowners and other concerned parties, such as the tenant farmers and sharecroppers.

Executive Summary

The National Land Records Modernisation Programme (NLRMP) was launched in 2008 as a centrally sponsored scheme, relaunched as the Digital India Land Records Modernisation Programme in 2016 with 100% centrally funded scheme. The scheme, now extended till 2025-26, aims to develop a modern, comprehensive and transparent land record management system with the integration of all relevant data bases. While substantial progress has been achieved in the basic components of the programme viz, there are still areas of concern where progress has not matched with the targets.

According to DILRMP-MIS, 95.6 per cent of India's villages now have digitised RoRs, with 15 States / UTs having achieved 100 per cent digitisation of their textual land records. In addition to this, 95.7 per cent of SROs (657) have been computerised till date at all-India level. In the case of cadastral maps, the digitisation rate achieved is only 60 per cent till date. Less than 55 per cent of these Cadastral Maps are Geo-referenced while the linkage between cadastral maps and RORs is reported as less than 75 per cent.

Digitized land records offer several potential benefits to society. Digitisation will minimize the level of human error, and will help in integrating land records with different data bases to reflect real time changes that can avoid land related disputes to a great extent. It is estimated that at macro level, the government's initiative to digitize land records and registrations could improve India's GDP by up to 1.5 per cent. On the other hand, non-availability of updated, accurate, transparent and comprehensive land records, can increase the transaction costs and the incidence of land disputes. The available literature shows that 66 per cent of all civil cases in India are related to land/property disputes.

In many cases, land (and property) records are maintained across different departments and agencies, and may, therefore, contain inconsistencies or may not have been updated to reflect the current picture (Mishra and Suhag, 2017). In this context, it becomes important to understand the issues and perspectives of both the land owners and those responsible for making available land records and related services i.e. government revenue department officials. This kind of exercise can help in understanding the ground level realities of the land records, how well they are reflected in the digitized record and the utility of this record as perceived by users.

To fill this gap, this study has been taken up by the NCAER, with support from DoLR, Ministry of Rural Development, GOI, with the objective of providing information on the quality of the land records through physical verification on the ground. Broadly, the study aims to evaluate state wise gaps in achievement and desired outcomes of the DILRMP scheme. Specifically, the study will look at the following objectives:

- a) To identify the gaps in terms of progress of digitization of textual records, digitization of spatial records, computerization of registration process and integration between these components and gaps in systems talking to each other;
- b) To find out the extent to which RORs and Maps are being updated;
- c) To identify the status of mutation / subdivisions resulting due to inheritance – extent of problem due to people not applying for mutation / subdivisions;

- d) To understand the status of process of rectification in digitized records in terms of people applying for rectification and consequent rectifications carried out.

The study is expected bring greater understanding on how well the land records reflect the ground realities. The findings will not only reflect the areas where land owners are facing challenges in accessing the digitised copies of their land records but will also highlight the gaps in terms of outdated and inaccurate information on land record copies. Further, the awareness level of land owners in rural areas on digitisation of their textual and spatial records and linkage of registration with RoRs to expedite mutations, will also be reflected through this study. We are hopeful that the findings will help in nuancing the policies and implementation processes that could help in addressing the challenges and gaps towards achieving the desired outcomes of the programme by 2025-26.

To fulfil the objective of capturing the on-ground status of digitisation efforts, this study includes the census survey of all land parcels of two villages in each of 4 States and UTs in India i.e. Chandigarh, Delhi, Punjab and Rajasthan. Information for each and every land parcel was sought from the landowners. Additionally, responses were secured from patwaris about 10 other villages (in each State / UT) to provide a perspective of the on-ground scenario and progress that has made under DILRMP. Information was also sought from the revenue departments of the respective states regarding progress and experience in the digitisation of land records.

Overall, the sample comprised 1,342 land parcel owners in the eight selected villages, patwaris responsible for 40 sample villages, relevant Tehsildars and Gram panchayats apart from state level data canvassed from the State / UT revenue departments. The information was gathered using structured questionnaires separately for land owners, patwari and state revenue offices. The field survey was conducted from 28th September 2024 to 20th October 2024. State level information was supplemented by looking at the data reported on the DoLR website.

The key findings of the study are summarised here.

1. While a majority of the land owners are aware of and have seen the textual land records, the awareness on availability of digital copies of land records is lower. Even in cases, where land owners are aware about the existence of digital copies, access by directly downloading from the web is extremely limited.
2. Except for Rajasthan, where three-fourth of the surveyed land owners are aware of and have seen the spatial land records, in all other surveyed States and UTs, most landowners have either not seen their spatial land records or if they acquired copies it is of copies prepared from a physical record.
3. By and large there is satisfaction among landowners that the details of ownership, possession, use, area and encumbrances (only loan/ lien/ mortgage) are correctly reflected in the textual copies of their land records. In cases, of spatial land records, majority are satisfied with the recording of basic parameters and land area.
4. Across all four surveyed States and UTs, the RORs largely do not show ULPIN of land parcels and Aadhaar numbers of landowners are not reflected. Further,

majority of the land owners as well as patwaris lack awareness of the scheme to generate ULPIN and reflect in RoRs.

5. While Delhi and Rajasthan appear to have made progress in linking RoRs with the registration process, Punjab and Chandigarh are lagging in this area. Despite significant achievements in digitizing registration process, there are still areas of concern that require action by States to improve the experience and outputs: provision for capturing party signature using digital pen and pad during registration, online payment of registration fees, upload facility of identification documents, facility for online verification of payment/ scrutiny of requisite details and completion of registration process with digital signature and facility for immediate delivery of digitally signed registered documents.
6. Except for the Loan/ Lien/ Mortgages, none of the other encumbrances such as Revenue Court Proceedings (except reportedly in Punjab but this needs verification), Civil Court Proceedings, imposition of town planning restriction on land use or sub division and imposition of any other restrictions/ conditions in relation to land parcels are reflected in the land records.
7. All four States and UTs are making progress in reducing the time gap between occurrence of event and a mutation as indicated by the survey. In cases of delays, the major reasons mentioned are: non-receipt of intimation to enter mutation, non-availability of the revenue officer to attest mutation, and delay due to issues within dept and from public. Most of this can be addressed if the integration of for with registration and birth and death registers is made effective to enable auto trigger of the mutation process.
8. Lack of knowledge on records rectification procedures among land owners was reported extensively in the survey.
9. Lack of proper data on status of land records at State level. The reason being lack of coordination between various State departments making it difficult to compile the entire data at one place, thereby restricting the ability of states / UTs to analyse their progress and gaps over time.
10. In the surveyed States and UTs, certain level of inconsistencies are reported between DOLR website data and what the survey brought out i.e. ground realities. These kind of variations in data sets across State /UT level indicates lack of careful monitoring and coordination, communication and sharing of updated data among various state departments including patwaris / tehsildars who operates at the ground level.

Based on the overall findings of the report, various suggestions are put forward to be implemented at State/ UT level. First, to reflect the correct picture of land records at ground level, there is an urgent need for improving coordination among various departments and integrating various databases for the timely updation of the records. Although, land owners are largely satisfied with the land records as a reflection of the ground realities on ownership and possession details, land use pattern, location and area, there is a need to improve the reflection of non-agriculture land use details in the land records. For this, appropriate templates, instructions and training are needed to record such details with better clarity.

During the field work, not only the lack of awareness among the land owners and patwaris is observed, but people also lack the knowledge on whom to reach out in case of errors in land records. This calls for collaborative efforts from various stakeholder in conduct of regular awareness campaigns for both land owners and patwaris regarding accessing digital copies of the land records, rectification procedures and cost involved at the village level and other land issues. This is important since even a small 2% to 3% occurrence of errors (as would appear from this survey) when multiplied over millions of landowners translates into a very large number of situations that have the potential to generate dispute and litigation.

The survey also brought out the need for addressing issues in term of capacity building of revenue department field staff, adoption of latest technologies and software to expedite the linkage between ROR and registration process, speed up mutation process, link RoR with birth and death registers and link RoR with Aadhaar number of landowners and generate ULPIN for land parcels. In cases, where spatial records have been digitized, efforts should be made to convert them from just scanned copies to vectorised forms to reflect line lengths to enable match between RoRs and cadastral maps. Provisions should be made for citizens to apply online for correction of their RoRs.

Going forward, a regular assessment of the progress being made by States and UTs on various aspects of digitisation offers a great opportunity to improve implementation. Regular conduct of such an exercise will not only help the Government of India secure improved quality in the performance of its scheme, but also help States and UT to update their databases.

Chapter 1. Introduction

1.1. Background

Till the 1990s land records were primarily maintained in paper form in India, with manual processes dominating the management and tracking of property ownership, transfers, and transactions. These physical records were usually stored in cloth 'bastas', filed in racks or cabinets in record rooms, leading to large archives of paper documents. Current land records, property deeds, ownership documents, and transaction records, were maintained as physical files in the concerned government offices. Record keepers manually indexed the land records based on parameters such as owner names, property locations, or transaction types, making it time-consuming to search for records. Due to non-availability of updated, accurate, transparent and comprehensive land records, transaction costs and the incidence of land disputes were high.

The available literature shows that 66 per cent of all civil cases in India are related to land/property disputes. The average pendency of a land acquisition dispute, from creation of the dispute to resolution by the Supreme Court, is 20 years. Around 34 per cent of the disputes involved irregularities in completion of the procedure for acquisition. Legal disputes over land are also created by evidentiary barriers for establishing rights over land in the absence of documentary proof (Wahi, 2019). In Delhi alone, approximately 14 per cent of property litigation originates from and is related to property records (Damle & Gulati, 2021). The real estate sector, constituting about 11 per cent of India's GDP, is characterised by an extremely inefficient property market and is a commonly-used means of parking unaccounted-for money (CBDT, 2012). In order to reduce land related litigation, much of which could perhaps be avoided by more accurate, up to date and comprehensive land records, digitization is recognised as a first step. The Standing Committee on Finance (2015) also suggested that the challenge of generation of black money through *benami* transactions could be addressed by digitisation of land records and their regular updation. Recent surveys have found that land and property departments in a number of States/UTs are the focus of bribes and corruption (India Corruption Survey, 2019). Enhancing progress in making available land for large-scale investment opportunities as well as its use as a productive asset by the poor in a dispute-free environment is critically dependent on access to accurate and up-to-date land and property records.

The digitization of land records has a potential to address several longstanding issues in land management. Completing the digitalization of land records will not only decrease the extensive backlog of land dispute cases in courts but also significantly improve the country's ease of doing business ranking. It is estimated that the government's initiative to digitize land records and registrations is expected to improve India's GDP by about 1.5% (Mint article, Feb 2024¹). Improved land records and services in India will help in eliminating redundant labour and human error even while it makes it easy to update the records.

¹ Puja Das, Land record digitalization to boost India's GDP by 1.5%: Giriraj Singh, Published in Livemint, 8 Feb 2024. <https://www.livemint.com/news/india/land-record-digitalization-to-boost-indias-gdp-by-1-5-giriraj-singh-11707400326397.html>

Some of the benefits that can accrue through the digitization of land records are enumerated below:

- i. **Improved Efficiency and Speed:** Manual systems require physical verification and multiple levels of clearance, which is time-consuming and often leads to long delays. Digital systems streamline the processes for land registration, mutation, and transfer, making it faster and more efficient.
- ii. **Reduction in Litigation:** Land-related disputes account for a large proportion of pending court cases in India, which take both time and cost to resolve. A comprehensive and transparent land record management system can reduce such disputes by providing all requisite information for prospective transactions in property.
- iii. **Improve Transparency:** Manual record-keeping systems are susceptible to manipulation and corruption, making it difficult for citizens to access accurate information. Digitization enhances transparency, reducing opportunities for fraudulent activities.
- iv. **Ensure Equity:** Digitised land record system by providing analysable data can support the implementation of land reforms that aim to redistribute land among the landless and marginalized sections of society. It can also empower women and other vulnerable groups by recognizing their land rights and enhancing their access to land-related services.
- v. **Reduction in Corruption:** In a manual setup, intermediaries or officials can manipulate records for personal gain. Digital systems help reduce these intermediaries by giving people direct access to records. This also minimizes the opportunities for bribes and under-the-table deals.
- vi. **Limited Access to Credit:** Unclear or outdated land records made it challenging for landowners to use their property as collateral for loans. With digitized and verifiable records which can be integrated with other data bases, financial institutions can more readily extend credit to landowners.

Therefore, considering the immense benefits of digitised land records and the centrality of land in accelerating economic progress, it becomes even more imperative for India to have a modern, comprehensive and transparent land record management system.

1.2. Government initiatives towards land record digitization

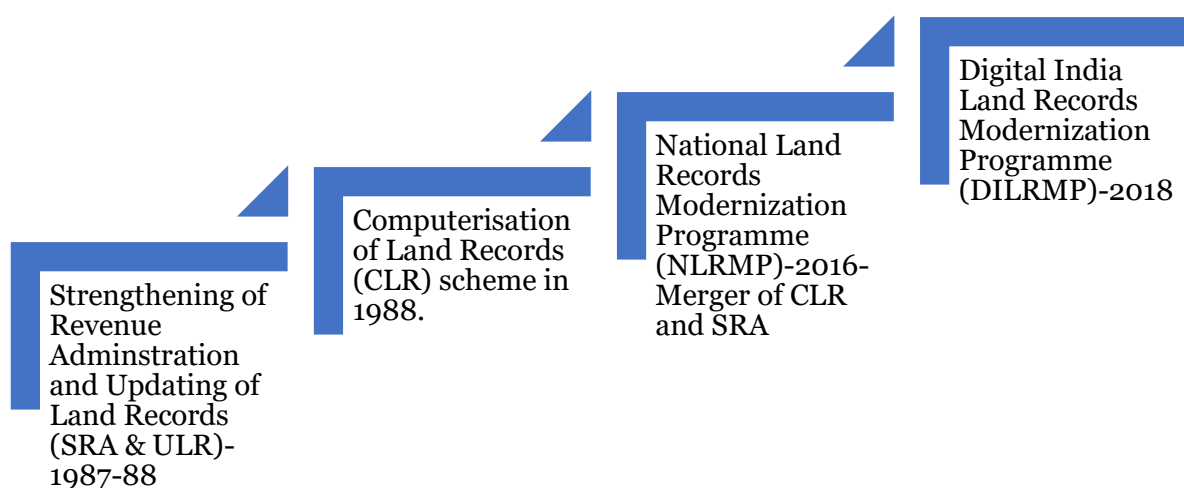
This section discusses various initiatives taken by government toward the digitization of land records in India.

1.2.1. Programmes implemented for land records digitization

Recognising the need for accurate and up-to-date land records, the Government of India first introduced programmes focusing on computerisation of the land records in

the 1980s. These included: (i) Strengthening of Revenue Administration and Updating of Land Records (SRA and ULR), and (ii) Computerisation of Land Records (CLR), which were started in 1987-88 and 1988-89, respectively. In 2008, merging these two programmes, the Department of Land Resources in the Ministry of Rural Development launched the flagship National Land Records Modernisation Programme (NLRMP). The immediate objective of the programme was to establish a modern, efficient land records management system in the country with real-time updation of land records. The ultimate aim of the programme was to create a system of conclusive titling for ensuring conclusive proof of ownership of a property. The programme components included funding for digitisation of textual and spatial records as well as registration systems. The programme was brought under the ambit of the 'Digital India' programmes in 2016 and has since been re-designated as the 'Digital India Land Records Modernisation Programme (DI-LRMP)'. *Figure 1.1* presents the Government of India's efforts at promoting computerisation of land records (NCAER, 2017).

Figure 1.1. Government's Initiatives in computerization of land records



Source: Department of Land Resources, Ministry of Rural Development, GoI

The Indian government has been actively working on digitizing land records through several initiatives aimed at improving transparency, reducing land disputes, and simplifying land administration. The main scheme driving this effort is the Digital India Land Records Modernization Programme (DILRMP) launched in April 2016. The objective of the DILRMP is to develop a modern, comprehensive and transparent land record management system with the aim to develop an Integrated Land Information Management System which will inter alia: (i) improve real-time information on land; (ii) optimize use of land resources; (iii) benefit both landowners & prospectors; (iv) assist in policy & planning; (v) reduce land disputes; (vi) check fraudulent / benami transactions (vii) obviate need of physical visits to Revenue/Registration offices (viii) enable sharing of information with various organizations/agencies. As per the year-end review 2023 of the Department of Land Resources (Ministry of Rural Development), the government extended the DILRMP until 2025-26, adding new features like Aadhaar-based integration with land records and computerization of revenue courts.

Key components of the DILRMP include: computerization of Land Records that involves digitizing land ownership documents (Record of Rights) and cadastral maps; integration of Registration and Land Records under which the registration process has shifted to an e-Registration system to streamline property transactions, enhancing efficiency and transparency; assigning Unique Land Parcel Identification Number (ULPIN), a 14-digit identification number to each land parcel for accurate tracking and to minimize fraud; and integrating land records with revenue courts to manage and resolve land disputes more effectively.

1.2.2. Recent policy action towards digitization

Recent initiatives of the Government of India to enhance digitization of land and property records are as follows:

Unique Land Parcel Identification Number (ULPIN), 2021: Also known as "Bhu-Aadhaar", it is the assigning of an unique 14-digit number (alphanumeric code) to each land parcel based on geo-coordinates. This initiative aims to streamline real estate transactions, resolve property disputes, and improve disaster management efforts. In one year, almost 9 crore land parcels have been assigned to Bhu Aadhar and rolled out in 29 States.

SVAMITVA, 2020: SVAMITVA (Survey of Villages and Mapping with Improved Technology in Village Areas) scheme aims to issue legal ownership cards to rural property owners by mapping land parcels in the previously unsurveyed inhabited areas of villages, by using drones. This initiative is expected to facilitate the people to access loans and resolve property disputes more efficiently. As of October 2024, the scheme has covered over 1.2 lakh villages, with property cards distributed to millions of beneficiaries.

National Generic Document Registration System (NGDRS), 2017: To expedite the use of technology to improve the registration of documents, Government of India assisted the development of an appropriate software: the NGDRS. This programme covers all necessary processes involved in deed and document registration in the country. It enables online entry, payments, appointments, and document searches while permitting states to customise the software to meet any specific requirements. It integrates the registration process with land records, promoting transparency and reducing the time required for property registrations. As of October 2024, 18 States and Union Territories have adopted NGDRS, with 12 others sharing data with the national portal, leading to more streamlined and efficient property registration processes.

Linkage of e-Courts and Land Records / Registration Data base: The Ministry of Rural Development is also working on linking digitized records with e-courts and banks to check fraudulent land transactions and prevent disputes. Linking land records with the e-Courts system aims to provide authentic land information to the judiciary, aiding in faster case resolution and reducing land disputes. In association with the Department of Justice, pilot testing for linking of e-Courts with land record and registration data bases has been undertaken successfully in three states-Haryana, Maharashtra and Uttar Pradesh. Necessary clearances for such integration have been received from 26 States and Union Territories.

Revenue Court Case Management System (RCCMS): At the national level, the Department of Land Resources (DoLR), with technical support from the National Informatics Centre (NIC), is developing a comprehensive RCCMS under the (DILRMP). This initiative aims to integrate revenue court cases with land records databases, providing a centralized platform for case management, monitoring of cases handled by revenue courts and public access across India. These courts address disputes related to land revenue, agricultural land boundaries, and tenancy issues. The RCCMS enhances transparency, efficiency, and accessibility in handling such cases.

Bhoomi Samman Certification: The Bhoomi Samman Certification is an initiative by the Government of India to recognize and reward states and districts that have excelled in modernizing land records under the DILRMP. This certification aims to promote transparency, efficiency, and accessibility in land administration across the country. The certification process involves grading districts based on their performance in six core components of DILRMP:

- 1) Computerization of Record of Rights (RoRs)
- 2) Digitization of Cadastral Maps/FMBs
- 3) Linkage of RoR with Cadastral Maps
- 4) Computerization of Registration
- 5) Integration of Registration with Land Records
- 6) Modern Record Rooms

Based on above components, all districts are graded for their performance reflected in MIS of DILRMP as per the percentage pattern for completion rate (Platinum: 99 per cent and above completion; Gold: 95 per cent to 99 per cent, and Silver: 90 per cent to 95 per cent) and a ranking list is being generated component-wise accordingly. As of December 4, 2023, 161 districts across 14 states, including Assam, Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tripura, Tamil Nadu, West Bengal, and Uttar Pradesh, have achieved Platinum Grading by completing 99 per cent or more in the specified components.

The Bhoomi Samman Certification serves as a benchmark for assessing the progress of land record modernization in India. It encourages regions to adopt best practices, utilize modern technology, and ensure that land records are accurate, up-to-date, and easily accessible to the public. This initiative plays a crucial role in reducing land disputes, enhancing property rights, and supporting economic development through improved land governance.

Transliteration of Land Records: To overcome language barriers in accessing land records, states are encouraged to standardize land records through transliteration to enhance accessibility and interoperability. The program is transliterating land documents into any of the 22 languages listed in Schedule VIII of the Indian Constitution. This initiative is already in use in 17 States and Union Territories. National Informatics Centre (NIC) has developed transliteration tools for Indian languages to assist in the digitization and accessibility of land records.

New announcements made in 2024

Following programs have been announced recently in 2024 towards land reforms.

Integration of DILRMP with Financial Systems: In August, 2024, Reserve Bank of India announced the launch of the Unified Lending Interface (ULI), a technology platform designed to facilitate ‘frictionless’ credit (Economic Times article, Feb 23, 2024²). RBI claims that it will enable a seamless and consent-based flow of digital information—including PAN and Aadhaar records, previous lending history, income, credit records, and land records—from multiple data service providers to lenders. The ULI will employ standardised APIs for easy integration, ensuring digital access to diverse information sources, including land records digitised through initiatives like Bhu Naksha. It is expected that with many states having digitised land records, the land details can be checked digitally, using satellite data to map the area, using Digilocker and Aadhaar to verify credentials of the applicant and can process loans instantly.

Scheme for digitising urban land records- The recent budget speech on July 23, 2024 states that the land records in urban areas will be digitized with GIS mapping (article in Geospatial World, July 2024³). An IT based system for property record and tax administration will be established. This initiative will improve the financial position of urban local bodies. The use of GIS for property tax collection also offer opportunities for the GIS industry. These will improve the income of cities which can be used to improve the quality of infrastructure in cities and to provide better living conditions to the citizens. It is expected that the government may allot Rs 1,035 crores to digitize urban records while planning to complete the process by 2026.

All above initiatives collectively contribute to the objective of creating a more transparent, efficient, and accessible land record management system in India, addressing longstanding challenges and empowering property owners nationwide.

1.3. Progress of States and UTs in Land Record Digitisation

This section presents both financial and physical progress by States and UTs in digitization of the land records.

1.3.1. Financial Progress

Since the inception of the CLR scheme in 1988-89, the Ministry had by March 31, 2008, released a total amount of Rs 586.61 crores for digitisation efforts in the area of land and property records. The utilisation of funds by the States/UTs during this

² Pratik Bhakta, ET article on RBI is pushing UPI-like credit platform for farmers, MSMEs, Feb 23, 2024. https://economictimes.indiatimes.com/tech/technology/rbi-is-pushing-upi-like-credit-platform-for-farmers-msmes/articleshow/107921927.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

³ <https://geospatialworld.net/prime/business-and-industry-trends/land-records-digitised-budget/>

period was reported to be is Rs 536.41 crores, or approximately 91 per cent of the total funds released.

After the launch of NLRMP in 2008-09, the Department of Land Resources released a total amount of Rs 1167.4 crores up to 2015-16. This amount was targeted to cover 457 districts, and an amount of Rs 525.3 crores or 45 per cent of the total was reported to have been utilised by the States/UTs.

Digital India Land Records Modernization Programme was revamped and converted into a Central Sector Scheme with effect from 1st April, 2016 with 100% funding by the Centre. Since the inception of the scheme in 2008-09, an amount of Rs.2360.7 crore (including miscellaneous funds) has been released (as on 31st March, 2024) for covering various components of the DILRMP in 693 districts as per Ministry of Rural Development, Annual report 2023-24.

Recently, the DILRMP has been extended by Ministry of Finance from 2021-22 to 2025-26 with an outlay of Rs. 875 crores and with the addition of two new components viz. Computerization of all Revenue Courts in the country & their integration with land records and consent based linking of Aadhaar number with Records of Rights (RoR) as per Guidelines of DILRMP (2021-2026), Department of Land Resources, MoRD, GOI. For the Budget 2024-25, the total allocation made for the Land Records Modernisation Programme is Rs 141 crore, 13 per cent higher than the revised 2023-24 budget of Rs 121 crores but lower than 2022-23 budget allocation of Rs 239 crores (Demands for Grants of the Department of Land Resources, 2024-25; PRS). Apart from three years between 2017-18 to 2019-20, fund utilisation under the scheme has remained above 90 per cent. In 2021-22 and 2022-23, the actual expenditure even exceeded the budget estimates.

1.3.2. Physical Progress

Substantial progress has been achieved in the basic components of the programme viz. Computerization of Record of Rights (RoRs), Digitization of cadastral maps; Computerization of Registration, Connectivity between Sub-Registrar Offices and Tehsils, Integration of Registration and Land Records, etc. The All-India progress of digitisation of various components are given in Table 1.1.

The state-wise computerisation of land records is given in Annexure Table 1.1A and 1.2A.

Table 1.1. Physical Progress on digitization of land records- All India

Indicators	Numbers	% of Digitisation
<i>Textual Land Records</i>		
Total RORs	36,94,82,818	-
Total No. of Villages	6,55,333	-
CLR Completed	6,26,210	95.6
Mutation Computerized	5,63,273	86.0

Issuance of digitally signed ROR	4,44,768	67.9
ROR Linkage with Aadhaar in villages completed	38,752	5.9
ROR Linkage with Aadhaar in villages (Ongoing)	31,580	4.8
ROR Distribution through CSC, Kisok, Online, etc	6,17,707	94.3
<i>Spatial Land records</i>		
No. of Cadastral Maps/FMBs/Tippans	3,72,67,326	-
Digitised maps	2,23,11,154	59.9
Spatial Data verified for villages	4,94,595	75.5
Cadastral Maps Geo-referenced for villages	3,55,895	54.3
Cadastral Maps linked to RoR for villages	4,71,824	72.0
Real time updation of RoR and Maps for villages	2,34,249	35.7
Bhu-Naksha used for Cadastral Maps for villages	4,38,372	66.9
<i>Other components</i>		
Modern record room sanctioned	4645	-
Digitisation of Modern record room	3534	76.08
SROs sanctioned	5462	-
SROs computerised	5229	95.73
Integration of SROs with Land records	4837	88.56

Source: DOLR, MoRD, GoI, dated Nov 16, 2024, <http://dilrmp.gov.in>

Table 1.1 highlights following key achievements at All India level:

- Computerization of Record of Rights (RoRs) have been completed in 6.26 lakh villages out of 6.55 lakh villages (95.6 per cent) as on Nov 16, 2024 as per MIS of Digital India Land Records Modernization Programme (DILRMP).
- The Computerization of RoRs has been completed (99 per cent and above) in 29 States/UTs Except for Manipur, Meghalaya, Mizoram, Nagaland, Ladakh, Arunachal Pradesh and Assam.
- About 59.87 per cent of the Cadastral Maps / FMBs have been digitized (2,23,11,154 maps out of total 3,72,67,326 maps). In 24 States/ UTs, digitisation rate is above 90 per cent;
- Computerization of Registration completed in more than 95 per cent (5,229 Sub-Registrar Offices out of total 5,462 SROs) and
- Integration of SROs with Land Records completed in more than 88.56 per cent in 23 States/UTs (4,837 SROs out of total 5,462 SROs).

Initiatives on Evaluation of Physical progress: To track the progress of digitisation efforts of the States and UTs, the Government has commissioned evaluation cum impact assessment studies under DILRMP in various years. The first evaluations was conducted in the year 2010-11 in 7 States/UTs by Centre for Rural Studies, LBSNAA, Mussoorie, followed by impact evaluations in the year 2017-18 in 8 States/UTs, in the year 2018-19 in 8 States/UTs and 8 States in the year 2019-20 to know the outcomes of the implementation of the programme in the country as a whole. (For details refer Annexure-III referred in Part (c) of Lok Sabha Starred Question No.130 dated 07.12.2021⁴).

Recently, to track the supply side efforts of the government, the National Council of Applied Economic Research (NCAER) also undertook a study focusing on the digitization of land records in India. A performance evaluation index was developed at state level known as the NCAER Land Records and Services Index (N-LRSI) and tabulated for 2 years, NLRSI-1 and NLRSI-2, to evaluate the digitisation efforts. For details, refer Box 1.

Box 1.1. Development of N-LRSI Index for States Ranking and Tracking Progress

NCAER conducted research where the supply-side efforts of state governments were analysed, using digitized online copies of the land records for all 36 States and UTs. The study was conducted in two phases: Phase I- 2019-20 and Phase II- 2020-21.

Objectives: The study assessed the extent of digitisation of land records and the quality of these land records in the States and UTs of India.

Methodology: N-LRSI 2021 has been constructed to award a maximum of 100 points to measure the performance of each State/UT by allocating: a) a 60 per cent weightage to the extent of digitisation of land records and the registration process; and b) a 40 per cent weightage to the extent to which the record possesses features that are likely to reflect the improved quality of land records with timely updating of ownership, the extent of joint ownership, actual land use, area, and noting of encumbrances. N-LRSI 2 also presented a new Index on the accessibility of records computed on the basis of a set of indicators provided in the Guidelines for Indian Government Websites 2.0 (GIGW 2.0), prepared by the Ministry of Electronics and Information Technology (MeitY).

Findings: Madhya Pradesh, Odisha, Maharashtra, Chhattisgarh, and Tamil Nadu emerged as the top States in the N-LRSI 2021.

For details Visit NCAER Land Portal at <https://www.ncaer.org/NLRSI/index1.html>

1.4. Challenges and gaps in digitization of land records

Despite significant efforts and progress by States/UTs in digitizing land records, various challenges and gaps have been noticed:

⁴ <https://sansad.in/getFile/loksabhaquestions/annex/177/AS130.pdf?source=pqals>

- 1) **State level variations:** Land is a state subject and the implementation of DILRMP is in state hands. Progress under the DILRMP has shown wide variation due to various political, administrative, legal, or technical constraints. There is a lack of universal adoption and implementation of DILRMP amongst states.
- 2) **Inadequate resources and capacity:** The DILRMP require adequate financial, human, and technical resources and capacity to carry out the massive task of modernizing the land records system in the country. However, there is a shortage of funds, staff, equipment, and infrastructure at various levels of implementation. There is also a need for training and capacity building of the concerned officials and functionaries on the use of modern technology and tools for land record management.
- 3) **Limited Integration of Data:** Land records are often fragmented across departments, such as revenue, registration, and forest departments. Integrating these records into a unified database is challenging and requires coordination across departments. Integrating land ownership records with registration records is necessary for a seamless system, but differences in data standards and lack of proper indexing create hurdles.
- 4) **Lack of awareness and participation among stakeholders:** The DILRMP requires the active involvement and participation of various stakeholders such as landowners, buyers, sellers, tenants, intermediaries, etc., who are directly affected by the changes in the land records system. However, there is a lack of awareness and sensitization among them about the requirements and benefits of DILRMP.

Collaborative efforts are required to address these challenges in order to achieve the digitisation targets of the government.

1.5. Rationale for the study

Undoubtedly digitisation will minimize the level of human error, client services will improve and potential disputes avoided when data bases are integrated and changes are reflected in real time. Clients will be able to access their records on an anywhere anytime basis and use as per their need. However, digitizing the existing land record is just a beginning. It must be accompanied by awareness and efforts to enhance the quality of the record by ensuring an accurate reflection of the on-ground situation. In many cases, land (and property) records are maintained across different departments and agencies, and may, therefore, contain inconsistencies or may not have been updated to reflect the current picture (Mishra and Suhag, 2017). In this context, it becomes important to understand the issues and perspectives of both clients of land records (primarily land owners) and those responsible for making available land records and related services (government revenue department officials such as tehsildars and patwaris). Such an exercise can help in understanding the ground level realities of the land records, how well they are reflected in the digitized record and the utility of this record as perceived by users.

This study aims to evaluate state wise gaps in the achievements and desired outcomes of the DILRMP scheme. The specific objectives of the study are given here as follows:

- a) To identify the gaps in terms of progress of digitization of textual records, digitization of spatial records, computerization of registration process and integration between these components and gaps in systems talking to each other;
- b) To find out the extent to which RORs and Maps are being updated;
- c) To identify the status of mutation / subdivisions resulting due to inheritance – extent of problem due to people not applying for mutation / subdivisions;
- d) To understand the status of process of rectification in digitized records in terms of people applying for rectification and consequent rectifications carried out.

This study will help in capturing the on-ground situation of digitisation efforts. This study includes the census survey of two villages in each of 4 States and UTs in India i.e. Chandigarh, Delhi, Punjab and Rajasthan. Information for each and every land parcel was sought from the landowners. Patwaris (land record keeper of each village) also participated in this survey to provide a perspective of the on-ground scenario and progress that has been happening after the DILRMP scheme at the level of grassroots officials. Information was also canvassed from the revenue departments of the respective states progress and experience regarding the digitisation of land records.

The findings aim to provide information on the quality of the land records through physical verification on the ground. The study is expected to assess extent to which the record is a real time mirror of the on-ground situation for all land parcels in at least two villages per sample state. This is will bring greater understanding on how well the land records reflect the ground realities in terms of ownership details, possession, land use, land area, extent and recording of encumbrances. The findings will not only reflect the areas where land owners are facing challenges in accessing the digitised copies of their land records but will also highlight the gaps in terms of outdated and inaccurate information on land record copies. Further, the awareness level of land owners in rural areas on digitisation of their textual and spatial copies, online procedures of registration and mutation will also be reflected through this study. We are hopeful that the findings will help in nuancing policies that could enhance the awareness level among land owners in accessing the digital copies of their land records and could help in addressing the challenges and gaps towards achieving the desired outcomes of the programme by 2025-26.

Chapter 2. Research Methodology

This chapter discusses the methodological process adopted in fulfilling the objectives of the study.

2.1 Sampling Design

As discussed in Chapter 1, the key objective of the study is to evaluate the quality of the land records in rural areas to understand how well the ground realities are updated and reflected in the digitized copies of the land records. To understand the gaps between the ground realities and digital copies, it is necessary to carry out an investigation in the field. This usually requires arriving at a representative research framework and sampling design. The details of the design adopted in this study are discussed in this chapter.

2.1.1. Coverage

To have a deeper understanding on the extent of digitization of both textual and spatial copies of the land records and to identify the areas where gaps exist in terms of ownership details, possession, registration, mutation, land use, extent / area and encumbrances, different sets of stakeholders were required to be interviewed in this study. NCAER was entrusted the task of covering 4 States and UTs: Chandigarh, Delhi, Punjab and Rajasthan. It was expected that a census of all land owners in 2 villages in each of these four would be conducted in order to yield meaningful data.

The various stakeholders interviewed in this study are:

1. ***Land parcel owners in the village:*** The survey of the land owners in the selected sample villages took the form of interviews of the owner of the land parcel/plot in the sample village and not of households inhabiting the village. The landowner census was conducted by covering all land parcels in the village. The land parcels in the sample villages were categorised into two: land parcels owned by private entities (mostly individual owners) and land parcels owned by government (and in the possession of various departments).
 - i. ***Private land owners:*** Under this category, only one person for a specific land parcel was covered for the interview. The reason being that the objective of the study was to understand the digitization details of the land records and gaps in relation to the ground realities. Even if a land parcel has multiple owners, the status of the land records of a specific land parcel would not vary by owner. This may not necessarily be the case for different land parcels. If one person has multiple land parcels in his/her name, then separate interviews will be conducted for separate land parcels since their status could vary. However, the respondent who is answering the questions may be same or different as per his/her knowledge about the textual and spatial copies of the land parcel/plot. If the land owner is a minor (i.e. below 18 years of age) then the parent/ guardian would be interviewed. If a person lives in the selected village but owns land in another village then he/she will not be interviewed since the survey is for land parcels located in the sample village.

ii. *Government departments:* In addition to the private land owners, there were parcels in the sample villages that were owned by government and in the possession of different entities / departments such as gram panchayats, revenue department, civil engineering department, urban development / housing department, etc. For such land parcels, separate discussions were held with the respective department for all the land parcels owned by them in aggregate at the village level.

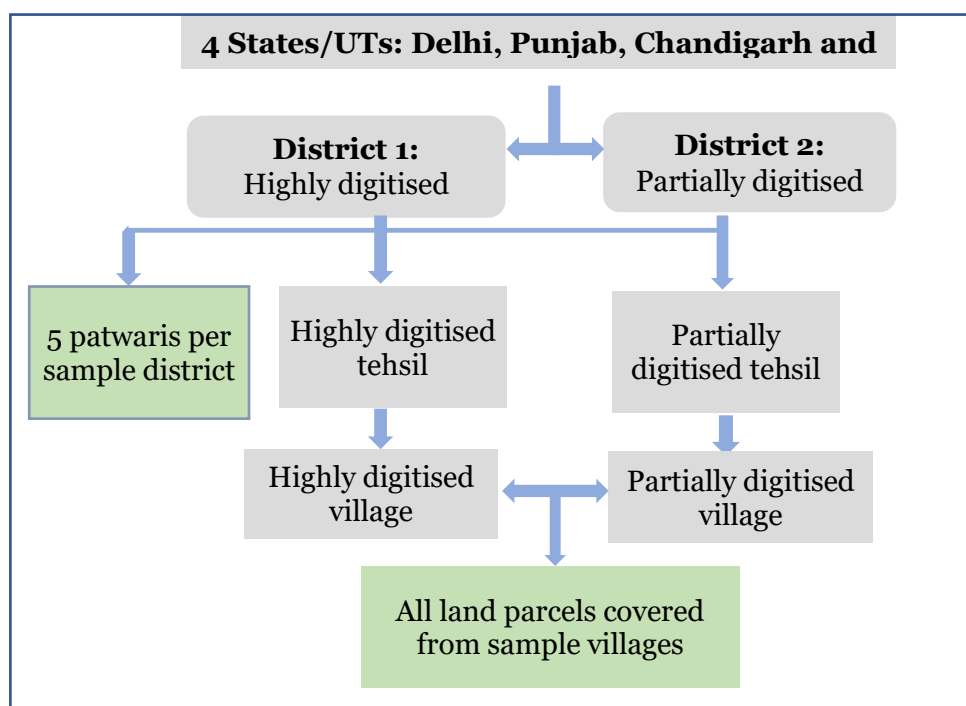
2. Patwaris: In addition to the survey of land parcel owners in the selected sample villages, patwaris responsible for five different villages were to be interviewed from each sample district in order to obtain a broader picture about other villages in the district. In effect, patwaris responsible for 10 villages per sample State/ UT were to be interviewed. Patwari interviews were considered important to understand the digitization status of other villages in the district where census of land owners could not be conducted due to time and cost constraints.

3. State revenue departments: To understand the digitization status of the land records, registration process and to identify gaps in the digitization process of the land records at the level of the whole State or UT, discussions were to be held with responsible officials of the respective revenue department of the States and UTs.

2.1.2 Sampling Design and Framework

The sampling framework for the study is given in Box 2.1.

Box 2.1: Sampling Framework



While 4 States and UTs and two villages per sample State/ UT was the target set by DOLR, Ministry of Rural Development for the study, the mode of selecting districts and villages was not specified. However, it was expected that the State government

would be consulted in finalising the study area. An attempt was made at a scientific approach to select representative sampling units from the allotted States and UTs. For this, a three-stage sampling framework was designed wherein at the first stage districts were selected, at the second stage tehsils and finally sample villages. For this, the key criteria used was digitization rate for the land records.

The focus of the sampling framework is to select 8 villages in total, 2 from each state/UT. The villages have been selected in a manner that enables representing the level of digitization of land records. For this, a two-category division was made based on the level of computerization of the land records (CLR%): High level of digitization and Low level of digitization. Two villages were selected from each state in such a manner that each represents one of these categories. For the survey of land parcels, the following process was undertaken:

1. *Stage I: Selection of 2 districts per State/UT-* For this, all districts in States/ UTs were ranked by percentage of computerisation of land records (CLR%) (DOLR data) and weighted mean for the level of CLR% was computed for all the districts in a state. Weights were assigned based on the number of villages in each district. Two districts were selected, one from those above the mean (high CLR%) and another from those lying below the mean (low CLR%). The criteria for the district selection was appropriate representation to its category in that its CLR% was close to the mean of the category and it had sufficient number of total villages to enable a wide choice in village selection.
2. *Stage II: Selection of 1 tehsil in each of the 8 selected district-* From each of the 8 selected districts, one tehsil was selected. Again, the criteria was that the tehsil is representative in terms of CLR% of the various tehsils in the district and it had sufficient number of total villages to enable a wide choice in village selection. For example, if the selected district is in the category of Low CLR%, then from among its tehsils that which is close to the mean in terms of the percentage of computerisation of the record and which has a large number of villages, was selected.
3. *Stage III: Selection of 1 village in each of the 8 selected tehsils-* Keeping in view time and cost constraints, the sample village in each sample tehsil was chosen by adopting a cut-off of a maximum 250 land parcel numbers in the village. In some instances, a village with higher number of land parcel numbers had to be selected due to lack of available alternatives. The final list of sample villages was drawn up in consultation with the State land revenue department as well as concerned tehsildar / patwaris.

For the survey of Patwaris, 5 patwaris from each of the sample district selected in stage 1 were covered. In case of non-availability/ non-consent of 5 patwaris per district, a patwari was interviewed more than once in relation to different villages in his charge.

Using the above sampling framework, the sample places covered in the study are presented in Table 2.1.

Table 2.1. Sample places covered

State/ UTs	CLR% Category for District	Districts	Tehsils	Sample villages
Chandigarh	High	Chandigarh	Chandigarh	Attawa
		Chandigarh	Chandigarh	Butrela
Delhi	High	South-West	Kapashera	<i>Raghu Pur*</i>
	Low	North	Narela	Holambi Kalan
Punjab	High	Patiala	Patiala	<i>Kheri Ranwa*</i>
	Low	Pathankot	Pathankot	<i>Chani*</i>
Rajasthan	High	Udaipur	Kotra	Jhajar Badla
	Low	Sirohi	Pindwara	Pitumbari

Note: 1. CLR%- Computerized Land Records (in percentage);

2. *villages replaced from previous selected villages- Jainpur by Raghupur, Marupur by Kheri Ranwa and Madhopur by Chani due to logistical reasons.

2.1.3. Sample selection procedure

Using above sampling framework, the state-wise selection of sampling units is discussed in this section.

Chandigarh

The UT consists of one district (i.e. Chandigarh), one tehsil (i.e. Chandigarh), and 25 villages. The data for the state suggests 100 per cent CLR, and hence the selected villages are not categorized as high CLR% and low CLR% representative villages. The villages here were selected based on the number of khasras available in the village. As already discussed above, 250 khasras per village was adopted as the maximum cutoff criteria. Based on this, the 2 selected villages were: Buterla (286) and Attawa (252).

NCT of Delhi

District selection- The mean CLR% of all the districts of Delhi is 94.7 per cent. This means that 94.7 per cent of villages have their land records computerized. Out of the 11 districts of the state, 8 districts lie above the mean value i.e. they are highly digitized, while the remaining 3 are less digitized. Following two sample districts were chosen:

- 1) South West district (CLR%= 98.11 per cent) was chosen to represent the High CLR% category. In this group it has the maximum number of villages.
- 2) North district (CLR%= 88.33 per cent) was selected to represent the less digitized group. In this group of three districts it has the maximum number of villages.

Tehsil selection- Two tehsils were selected, one from each of the sample districts.

- 1) In South West district, Kapashera tehsil was selected out of the 3 tehsils in the district. The tehsil's CLR% is above the group mean (96.15 per cent) and it has

sufficient number of villages i.e. 26. Since Delhi as a whole is highly urbanised, Kapashera tehsil is a good representative of the high digitized group.

- 2) In North district, Narela tehsil was selected out of the 3 tehsils in the district. It has a CLR% of 96.3 per cent and 27 villages. This is well above the mean for this category but for various logistical reasons this was the most suitable tehsil amongst all the villages from the three districts of the less digitized category.

Village selection- In Narela tehsil, Holambi Kalan village with 227 khasras was selected for the complete land parcel survey. In Kapashera tehsil, Jain Pur village with 240 khasras was selected.

Punjab

District selection- The mean CLR% for the districts of the state is 97.81 per cent. Out of the 23 districts in the state, 17 districts lie above the mean i.e. they are highly digitized, while the remaining 6 are less digitized. Here, 13 districts are at least 99.4 per cent digitized, while 9 are 100 per cent digitized. Two districts were selected from each of the two categories given as follows:

- 1) Patiala district (CLR%= 100 per cent) was chosen to represent the High CLR% category. In this group, Patiala district has the 3rd highest number of villages (934) after Jalandhar and Hoshiarpur. Since Patiala has cent per cent digitization rate for land records, it would appropriately represent the highly digitized group as a whole.
- 2) Pathankot district (CLR%= 84.98 per cent) was selected to represent the less digitized group. Out of the group of 6 districts in this category, Pathankot has the least CLR% but sufficiently large number of villages (417). Pathankot was considered appropriate by the state to study the challenges of a less digitized district.

Tehsil Selection- Two tehsils were selected, one from each of the sample districts.

- 1) In Patiala district, Patiala tehsil was selected out of the group of 5. It has a CLR% of 100 per cent and maximum number of villages (367).
- 2) In Pathankot district, Pathankot tehsil was selected. It has a CLR% of 83.8 per cent and 389 villages which is the maximum in the group.

Village Selection- From Patiala tehsil, Marupur village with 252 khasra numbers was selected for the complete land parcel survey. From Pathankot tehsil, Madhopur village with 235 khasra numbers was selected.

Rajasthan

District Selection- The mean CLR% for the districts of the state is 97 per cent. Out of the 50 districts in the state, 42 districts lie above the mean i.e. they are highly digitized, while the remaining 8 are less digitized. 35 districts have a CLR% of more than 99 per cent and 18 districts have achieved 100 per cent digitization. Following two sample districts were chosen:

- 1) Udaipur district (CLR%= 100 per cent) was chosen to represent the high CLR% category with 1940 villages.

- 2) Sirohi district (CLR%= 68.8 per cent) was selected to represent the less digitized group. Though this district does not have the highest number of villages in the group but it has the lowest digitization rate with a sufficiently large number of villages (520).

Tehsil Selection- Two tehsils were selected, one from each of the sample districts.

- 1) Kotra tehsil was elected in Udaipur District as it has the highest number of villages along with a CLR rate of 100 per cent.
- 2) Pindwara Tehsil was selected in Sirohi district as it has the 2nd highest number of villages and a CLR rate of 77.9 per cent. Reodar tehsil has the maximum number of villages amongst the tehsils of the district However, its CLR is 0 per cent (possibly not recorded/updated), therefore not selected.

Village Selection- In Kotra tehsil, Jhanjhar Badla village with 227 khasra numbers was selected for the complete land parcel survey. In Pindwara tehsil, Patumbri also with 227 khasra numbers was selected.

Village replacement strategy

Although villages were selected in consultation with State departments/ tehsildars, a few villages needed replacement for various reasons when the field team reached the concerned sample village. The list of villages replaced along with the reasons for this, are given below:

- 1) Jain Pur village of Kapashera tehsil in Delhi's South West district was found to be an uninhabited village where no landowner resides and therefore, it was replaced by Ragho Pur village in same tehsil and district.
- 2) Marupur village in Patiala (Punjab) was found to be uninhabited with 25 per cent of the land owners residing in the nearby Khalash village and the remaining 75 per cent in the adjoining state of Haryana! Therefore, this village was replaced by Kheri Ranwa village in Dudhan Sadhan sub-tehsil of Patiala.
- 3) Madhopur village in Pathankot (Punjab), was found to have a majority of government owned land parcels and a predominant land use pattern of river bank/ ponds/ non-arable open spaces. Only a few land parcels were available where owners are resident. Therefore, this village was replaced by Chani village in the same tehsil.

2.1.4. Sample size covered

Following the above selection of villages, 1342 land owner interviews were conducted in 8 sample villages in the 4 States/ UTs. In addition to this, 40 patwari interviews were conducted. The status of land parcels in each village and the land parcels in relation to which interviews with landowners were conducted in this study, is given in Table 2.2. The detailed description of each of these sample villages is given in Annexure Table 2.1 A.

Table 2.2. Sample size covered

State/ UTs	Districts	Villages	Private land parcels - survey done	Govt. acquired land#	Land parcels-owners do not reside in the village*	Total land parcels	Patwari
Chandigarh	Chandigarh	Attawa	29	246	-	275	5
		Butrela	26	257	-	283	5
Delhi	North	Holambi Kalan	117	61	109	287	5
	South-West	Raghu Pur	281	91	440	812	5
Punjab	Patiala	Kheri Ranwa	280	103	3	386	5
	Pathankot	Chani village	224	76	-	300	5
Rajasthan	Udaipur	Jhajar Badla	205	23	-	228	5
	Sirohi	Pitumbar i	180	47	-	227	5
Total			1342	904	552	2798	40

Notes: #Discussions held with the respective government departments who owned land parcels in the village. *Contact numbers were not available with Patwari and villagers and therefore, could not be interviewed.

2.2. Field Work Procedure and Challenges

The procedure adopted during field work, including pilot testing and challenges faced during the conduct of the field survey, are discussed in this section.

2.2.1. Field work Procedure

The conduct of field work involved the following activities:

- *Development of the Survey Instruments:* This first stage was the development of separate questionnaires for the land parcel owners, patwaris and State/UT revenue departments.
- *Questionnaire translation:* Since the surveys were being conducted largely in states with a familiarity with Hindi, both land owner and patwari questionnaires were translated into this language for better understanding on the part of field investigators and respondents.

- *Developing CAPI questionnaires in bilingual language:* To avoid the errors in data collection procedure, efforts were made to canvass the questionnaire through android application using CAPI programming. This helped in filtering out the skip patterns in the questionnaires, thereby reducing the time of canvassing the interviews. The CAPI questionnaire also facilitated the day to day checking of the status of the survey and quality of the data.
- *Conduct of Training of Trainers:* The entire team of field investigators and field supervisors were trained by the NACER study team at NCAER headquarters, New Delhi. A two-day program was conducted to train the field staff.
- *Pilot testing of questionnaires and CAPI:* Before launching the survey, pilot testing was conducted in Hapur district, beyond Ghaziabad to test both the content of the questionnaire and working of the CAPI program. This also helped in analyzing the understanding level of the field investigators and supervisors beforehand. The pilot testing was followed by modification and finalization of the questionnaires.
- *Coordinating with State revenue dept./ tehsildars/ patwaris for sample villages finalization:* The next stage was consultation with the respective State land revenue departments, tehsildars and patwaris for finalization of the sample villages in land parcel owner survey would be carried out.
- *Study team & field team meeting with state officials for state level data:* The respective State land revenue departments were consulted by both field agencies heads and NCAER study team to firm up the information required for filling up the SRO level questionnaire.
- *Survey time period:* The survey was conducted from 28th September 2024 till 20th October 2024. However, coordinating with State land revenue departments and securing their responses to complete their questionnaire took even longer.
- *Field Coordination and Data Quality Checks:* During the entire time period of the field work, the study team was coordinating with the field investigators and supervisors to address day to day queries and resolve their issues. In addition to the field supervisors, NCAER also hired their own supervisors who stayed in the field with the investigators during entire survey period for data quality checks. Further NCAER study team also carried out in person visits to keep track of data quality.

2.2.2. Challenges faced during the field work

Following challenges affected the field work:

- Conduct of two-day camp in villages in Delhi during last week of Sept was affectedly by the busy schedules of Patwaris and tehsildars.
- Limited cooperation received from BDOs, patwaris and tehsildars in districts of Chandigarh and Delhi due to their commitments.
- Festival time during the field work affected seeking time and cooperation from the respondents and state officials.
- Gram panchayat election in Chandigarh and Punjab and PM visit to Chandigarh caused delays as concerned officials were busy.

- Few villages need to be replaced due to non-availability of land owners despite the initial selection being done in consultation with state dept. and tehsildars. This took up additional time.
- The SRO data was not readily available at State/UT headquarter level. This required parallel coordination with different offices in different cities. States took time in collecting and compiling this information. The festival time during the survey period further added to the time lag.

2.2.3. Limitations of the study

The findings of the study are constrained by the following limitations:

- Possibility of bias in responses from patwari:* In the study, the patwaris from the selected sample districts were interviewed to provide the status and progress of digitization of the land records. They were asked to give the real picture with regard to villages for which they are responsible. Since their responses relate to villages in their charge, there is a strong possibility of bias particularly in relation to the findings on matters like on ground reflection of land use, timeliness of mutations, etc., where admitting to inaccuracy or delay could be considered a reflection on their efficiency.
- Selection of representative sample not necessarily scientific:* To fulfil the objectives, the scientific approach for sample selection could not be adopted in the study. Since only two districts need to be selected for the study per state, the efforts have been made to represent both high and low digitized districts in the State/ UT. The villages have been finally selected based on the interactions with the State revenue department officials. Since the land parcel census has been conducted at village level for two villages which cannot be considered representative of the whole state, therefore, while results will give a clear picture of sample villages they cannot be generalized for entire district/ State/UT. They can only convey an indicative picture.
- Differences in data between the DoLR and the State/UT websites and Patwari responses:* In most of the indicators, the results are similar to the data reported on DOLR website by the State / UT concerned. However, there are instances of inconsistency between the data on DOLR website, state level data wherever received for this study and Patwari understanding on digitisation.
- Lack of comparability between land owners survey and DOLR data:* The findings received from census of the land owners in sample villages across 4 States and UTs could not be compared with the DOLR data due to the following reasons: the sample of two villages derived for 4 States and UTs is too small to represent the entire State/UT and the sample is not completely random in selection. Therefore, result cannot be generalized at State level. Finally, the sample villages from each State and UT have been chosen from two extreme ranking of districts with high and low digitization rate, therefore, there is a possibility of a skew at aggregate level.

2.3. Assessing the Quality of the Land Records

In order to evaluate the extent of digitisation and gaps in the quality of the land records as well as the awareness level amongst land owners, the following data has been collected:

- Socio-demographic background: Age, gender, education, occupation, caste, religion etc., of the land owner;
- Number of land parcels (khasra/s) owned by specific owner's;
- Land ownership details: Type of land ownership, area owned, number of owners on land parcels;
- Land possession details;
- Reflection of exact location in land records;
- Recording of encumbrances or restrictions/conditions attached to the property: Encumbrances/restrictions or conditions that may be attached to land were categorized in following manner: mortgages, ongoing land acquisition proceedings, town planning related restrictions on land use or buildings, proceedings in revenue courts and proceedings in civil courts.
- Awareness on the details mentioned in textual and spatial copies of land records related to ownership, possession, land use pattern, land area; land use restrictions and how well it reflects the ground realities, gaps identified etc;
- Reasons for delay in updating of records and rectification procedures followed in case of inaccuracy in land records.

Chapter 3. Status of Digitisation of Land Records in Punjab

This chapter presents the findings for the status of digitisation of land records for the state of Punjab based on the information canvassed from land owners, patwaris and State Revenue Department.

3.1. Introduction

According to DILRMP-MIS (as on November 16, 2024), there are 13,016 villages in the state of Punjab of which 97.8 per cent of the total villages have digitised RoRs and 86.1 per cent cadastral maps have been digitised. In addition to this, all Sub Registrar Offices (SROs), responsible for registering transactions related to property, have been computerised in the state.

3.2. Land Owner Perspective on Digitization of Land Records

This section discusses the socio-demographic profile of the land owners, basic details of the land parcels owned, updation of textual records, spatial records in terms of ownership, possession, land use, extent, area and encumbrances. The findings are based on an analysis of the information secured through the field survey of the owners of the 507 privately owned land parcels in the two selected villages of Kheri Ranwa in Patiala district and Chani in Pathankot district.

3.2.1. Profile of the land owners and land parcels

The socio-demographic profile of the land owners along with the basic details about the land parcels owned are discussed in this section of the chapter. *For details refer Annexure Table 3.1A and 3.2A.*

3.2.1.1. Socio-demographic profile of the land owners

The key features of the socio-demographic profile of the land owners in the two sample villages is presented in this section (refer Table 3.1A in Annexure).

1. The two-village sample shows 63.7 per cent of the land parcels are owned by the household heads themselves followed by son/daughter of household heads (20.5 per cent).
2. Majority of the land parcel owners (more than 80 per cent) across both the sample villages are currently married.
3. The two villages together show 40.0 per cent of the land owners belong to 46-60 years of age, followed by 22 per cent who are up to 45 years of age
4. The two villages reflected a clear caste / religion pattern one dominated by Sikh / general caste and the other by Hindu / SC.
5. The educational attainment status was higher in the Sikh / General caste village.
6. The SC village reflected both less gender skew in land ownership and in terms of primary vocation.
7. More than 60 per cent of the land owners in both villages together report farming activities as their primary profession.

3.2.1.2. Details of the land parcels owned

The basic details of the land parcels owned by land owners are discussed in this section (refer Table 3.2A in Annexure).

- An overwhelming number of the private land owners surveyed (87.8 per cent) own more than four land parcels. This trend is similar in both the villages.
- About 86 per cent of land parcel owners have obtained the land parcels through inheritance. The balance 14 per cent have purchased it from private individuals. The position is quite similar in both villages.
- The average size of landholding is 0.87 acres (1.13 acres in Kheri Ranwa and 0.63 acres in Chani). The commonly used units of land measurement are Bigha, Kanal and Marla.

3.2.2. Knowledge of Textual Land Records

Land owners in the selected villages were asked whether they have seen the textual land records of their holding. If yes, when and in what form? Thereafter questions sought to know how well the record reflects the ground realities in terms of ownership details, possession, land use, area, extent and encumbrances. The answers to these questions have been discussed in this section of the chapter (for details refer Table 3.1, 3.2 and 3.3).

3.2.2.1. Copies of textual land Records

The survey shows that all the land owners in both villages in Punjab have seen their textual land records at some stage (refer Table 3.1). In 27 per cent of the cases, these land record copies are more than 5 years old. In another 20.3 per cent these were stated to be 6 months-1-year-old and only in 25.2 per cent were they relatively recent at 1-6 months old. In Kheri Ranwa village, majority mentioned that land record copies are within 1 year old, whereas in Chani village, the copies were older for the majority i.e. 1 to 5 years or even older than that.

Digital copies of textual land records: Despite the fact that 97.8 per cent of the RoRs are digitized as per DOLR and are available also online for download (as on Nov 16, 2024), only 58 percent of the land owners in the two sample villages have digital copies with them. Of these, only 7.3 per cent have obtained a digital copy from the concerned website, while about 50.5 per cent have obtained it from the office of the revenue department. As many as 41.2 per cent have a paper copy of the land record as taken from the revenue office (refer Table 3.1). Village-wise, the proportion of land owners which have obtained digital copies is much higher in Kheri Ranwa village compared to Chani village. In Kheri Ranwa, 66 per cent have obtained digital copies of their land parcels from different sources, while this proportion is just 48.7 per cent in Chani village.

Records linked with ULPIN and Aadhar number: The responses on recording ULPIN and Aadhaar in land records reflects lack of awareness among land owners. The survey shows that 78 per cent did not know whether an ULPIN is supposed to be mentioned in land records. The proportion was 83.6 per cent in relation to any provision for recording of Aadhaar in the record. Almost all those who were aware of these

provisions (20 percent in the case of ULPIN and 15 percent in the case of Aadhar) stated that these were not actually shown in the land records. One reason could be negligible progress on linking RoR with Aadhaar at State level. As per DoLR, less than less than one per cent of the RoRs have been linked to Aadhaar for the State as on Nov 16, 2024. For details refer Table 3.1.

Table 3.1. Details of Textual land record copy

Indicators	Sub-heads	% distribution of land owners		
		Kheri Ranwa	Chani	Total
Textual land records seen by land owners	Yes	100.0	100.0	100.0
	No	0.0	0.0	0.0
How old is the land record copy	Upto one month	16.4	13.4	15.0
	1-6 months	36.7	11.6	25.2
	6 months- I year	28.7	10.3	20.3
	1-5 years	3.6	23.7	12.8
	> 5 years	14.5	40.9	26.6
	No response	0.0	0.0	0.0
Type of land record copy	Paper copy obtained from revenue office	34.2	49.6	41.2
	Digital copy obtained from office	52.0	48.7	50.5
	Digital copy obtained from e service centre	0.4	0.0	0.2
	Digital copy obtained from website	13.5	0.0	7.3
	Other, specify	0.0	1.7	0.8
	No response	0.4	0.0	0.2
Is ULPIN reflected in land record copy	Yes	3.3	0.9	2.2
	No	22.9	15.9	19.7
	Don't know	73.8	83.2	78.1
	No response	0.4	0.0	0.2
Whether Aadhaar reflected in land record copy	Yes	2.2	0.9	1.6
	No	20.7	7.8	14.8
	Don't know	77.1	91.4	83.6
	No response	0.4	0.0	0.2
Total		100.0	100.0	100.0

Source: NACER's Land Study Survey, 2024

3.2.2.2. Ownership details in textual land Records

Ownership details, the extent to which the textual land records are updated and reflect the on-ground situation is discussed in this section (For details refer Table 3.2).

Ownership Type: The survey shows that 75 per cent of the land parcels in the two villages have more than one owner jointly owning the land. Only 25 per cent are under single ownership. Significant variation in ownership type is reflected at village level. In Kheri Ranwa single ownership was 32 per cent while in Chani village it was only 16.8 per cent.

Reflection of name in record: Overall 99 per cent of land parcel owners said that the land record reflects the ownership accurately. The pattern was similar across both villages.

3.2.2.3. Area details in textual land Records

It is seen that 99.2 per cent of land parcel owners in aggregate from both villages stated that the record of land area in textual records was accurate (refer Table 3.2).

3.2.2.4. Possession details of textual land Records

Overall, virtually all land owners (74.8 per cent) attested that actual possession and the ownership reflected in the land records were co- terminus. In the joint ownership category, 97.9 per cent of the land parcel owners mentioned that the names of all co-owners who possess the land parcel are correctly mentioned in the record. For village level distribution refer Table 3.2.

3.2.2.5. Land use details of textual land Records

In 95.7 per cent of land parcels, the land use pattern is agricultural and in another 4.3 per cent it is other than agricultural. The proportion of non-agricultural land use is slightly higher at 6.5 per cent in Chani village (refer Table 3.2).

Within agricultural land use pattern, 99.8 per cent of the land parcels are irrigated. In case of non-agricultural land use, 40.9 per cent of the land parcels have built-up area, 22.7 per cent have courtyard/path/road/garden/lawn, and remaining 36.4 per cent have other uses. Among those who have mentioned built-up areas, in a majority of cases these are homes.

On Ground situation vs. land records

About 98.6 per cent of land parcel owners have mentioned the land use details are correctly reflected in the land records as it appears on-ground. The situation in both the villages is nearly the same. Among those who mentioned non-agricultural land use with built-up areas, only 55.6 per cent mentioned that built-up area details are correctly recorded in the land records in consonance with the on-ground situation, 11.1 per cent said it is not reflected correctly, and 33.3 per cent did not know (refer Table 3.2). When asked as to why they think land use details are not shown properly in land records, land owners have stated the lack of a separate column for recording the built-

up status as the major reason. However, no one has taken any action to get the records corrected.

Table 3.2. Recording of ground realities in textual land records

Indicators	Sub-heads	% distribution of land owners		
		Kheri Ranwa	Chaini	Total
A. Recording of ownership details				
Type of ownership	Single	32.0	16.8	25.0
	Joint/ Multiple	68.0	83.2	75.0
	No Response	0.0	0.0	0.0
Does the record reflect ownership by name	Yes	99.3	98.7	99.0
	No	0.0	0.0	0.0
	Don't know	0.7	1.3	1.0
	Not seen records	0.0	0.0	0.0
	Total	275	232	507
B. Recording of land area details				
Correct recording of land area in textual records	Yes	99.3	99.1	99.2
	No	0.0	0.9	0.4
	No Response	0.7	0.0	0.4
	Total	275	232	507
C. Recording of possession details				
Possession of land parcel	In sole possession	32.0	15.5	24.5
	In joint possession with other co-owners	68.0	82.8	74.8
	In the possession of short-term sharecroppers	0.0	0.4	0.2
	In the possession of longer-term tenants	0.0	0.0	0.0
	In some other person/s' possession	0.0	1.3	0.6
	Don't know	0.0	0.0	0.0
	Total	275	232	507
For joint ownership, whether the names of all co-owners	Yes	98.9	96.9	97.9
	No	0.0	2.1	1.1

having land possession of the land parcel correctly shown in land records	Don't know/ No Response	1.1	1.0	1.1
	Total	187	192	379
<i>D. Recording of land use details</i>				
What is the use to which this land parcel in your ownership has been put?	Agricultural-	97.5	93.5	95.7
	Non-agricultural	2.5	6.5	4.3
	Total	275	232	507
If agricultural, type of land use	Irrigated crop	99.6	100	99.8
	Rainfed crop	0	0	0.0
	No Response	0.37	0	0.2
	Agricultural Total	268	217	485
If non-agricultural, type of land use	Built-up	28.6	46.7	40.9
	Courtyard, path, road, garden, lawn	0.0	33.3	22.7
	Other, specify	71.4	20.0	36.4
	No response	0.0	0.0	0.0
	Non-Agri Total	7	15	22
Recording of land use details in the land records as it appears on-ground	Yes	98.9	98.3	98.6
	No	0.0	0.4	0.2
	Don't Know	0.7	1.3	1.0
	No response	0.4	0.0	0.2
	Total	275	232	507
In case of build-up area, whether details recorded in the land records as it appears on-ground	Yes	50.0	57.1	55.6
	No	0.0	14.3	11.1
	Don't Know	50.0	28.6	33.3
	Total	2	7	9

Source: NACER's Land Study Survey, 2024

3.2.2.6. Recording of encumbrances in textual land Records

Loan/ Lien: The survey shows that about 29.4 per cent of the land parcel owners, have taken a loan using the land parcel as collateral. This proportion is 48.4 per cent in Kheri Ranwa village and much lower at 6.9 per cent in Chani village. Among those who have taken loans using land parcels as collateral, 99.3 per cent mentioned that this has been shown in the land records (refer Table 3.3). In 99.2 per cent from Kheri Ranwa, and 93.3 per cent from Chani who have taken a loan, the loan entry was reported to have been done by a bank. In three-fourth of the cases, land owners reported being consulted before this entry was done. However, at village level large variation was seen

in this regard. While 80.5 per cent from Kheri Ranwa say they were consulted before the loan entry was done, in Chani 66.7 per cent say they were not consulted. While 87 percent have not returned the loan as yet, among those who have returned it, 82 per cent said that the position is correctly updated in land records. All those who have returned the loan but the land records do not reflect this, have not taken any action as yet to correct the situation.

Other encumbrances: About 97 per cent of the land owners mentioned non-existence of any revenue court proceedings on their land parcel and another 4.4 per cent say they do not know. Only 0.4 per cent from Chani, say, there are revenue court proceedings relating to their landholding. These are mainly in the nature of partition proceedings.

About 94.3 per cent of the land owners mentioned non-existence of civil court proceedings on their land parcel while 1.6 per cent say there are civil court proceedings on their land parcel, the nature of which is mainly related to possession followed by land area, and the civil court case is currently at an appeal stage.

Just 0.2 per cent of land owners have mentioned that there is imposition of town planning restriction on land use or sub division, while 99.6 per cent have denied this. However, survey shows that town planning restriction on land use or sub division are not reflected in the land records.

Table 3.3. Recording of encumbrances in textual land records

Indicators	Sub-heads	% distribution of land owners		
		Kheri Ranwa	Chani	Total
Have you taken any loan using this land parcel as collateral?	Yes	48.4	6.9	29.4
	No	49.1	92.7	69.0
	Don't Know	2.2	0.4	1.4
If yes, was the Loan/ Lien/ Mortgage shown in the land records	Yes	100.0	93.8	99.3
	No	0.0	6.3	0.7
	Don't Know	0.0	0.0	0.0
	Total	133	16	149
Existence of Revenue Court Proceedings on land parcel	Yes	0.0	0.4	0.2
	No	95.3	99.6	97.2
	Don't Know	4.4	0.0	2.4
	No response	0.4	0.0	0.2
Existence of Civil Court Proceedings on land parcel	Yes	0.0	3.4	1.6
	No	95.3	93.1	94.3
	Don't Know	4.4	0.0	2.4
	No Response	0.4	3.4	1.8

Imposition of town Planning Restriction on land use or Sub division	Yes	0.4	0.0	0.2
	No	99.3	100.0	99.6
	Don't Know	0.0	0.0	0.0
	No Response	0.4	0.0	0.2
If yes, whether town planning restriction is reflected in the land record	Yes	0.0	0.0	0.0
	No	100	0.0	100
	Don't Know	0.0	0.0	0.0
	No Response	0.0	0.0	0.0
Imposition of other Restrictions/ Condition to land parcel	Yes	0.0	0.0	0.0
	No	99.6	100.0	99.8
	Don't Know	0.0	0.0	0.0
	No Response	0.4	0.0	0.2
If yes, type of other restrictions/ conditions applied to land parcel	No right to alienate for a certain time period	0.0	0.0	0.0
	Acquired under special permission for particular use	0.0	0.0	0.0
	Other specify	0.0	0.0	0.0
	No Response	0.0	0.0	0.0
Reflection of other restrictions/ conditions in the land record	Yes	0.0	0.0	0.0
	No	0.0	0.0	0.0
	Don't Know	0.0	0.0	0.0
	No Response	100.0	100.0	100.0
Total		275	232	507

Note: 0.2 per cent in Punjab have not responded to the question about taking a loan. 0.4 per cent in Kheri Ranwa, Punjab have not responded to the question about taking a loan.

Source: NACER's Land Study Survey, 2024

3.2.3. Knowledge of Spatial Land Records

Land owners in the selected villages were asked whether they have seen the spatial land records of their land parcels and if yes, how well it reflects the ground situation in terms of boundaries/ location and area / extent. The answers to these questions have been discussed in this section (for details refer Table 3.4).

Spatial record copies: The survey shows that only 9.7 per cent of land parcel owners have seen copies of the spatial land record (cadastral map) of their land parcels (refer Table 3.4). The proportion was a little more in Kheri Ranwa (14.9 per cent) than in Chani village (3.4 per cent). Among those who have seen the spatial copies, 57 per cent

had obtained copies within the preceding 6 months. In the case of another 20.4 per cent and 22.4 per cent this was 6 months-1-year and more than 5 years earlier respectively. In Punjab, although 86 per cent of the spatial copies have been reported as digitized till Nov 16, 2014 as per DOLR, however, the spatial copies of the digital record of specific land parcels are not yet available. Although DOLR website shows that most spatial maps have been digitized, the extent to which these are available online to the public is not available. Large mosaics of the cadastral map of the entire village in which specific land parcels can be pin pointed can be seen by land owners. In some cases, land owners take the photocopies or pictures of their respective parcels within the mosaic and consider these as digital copies!

Digital copies of spatial land records: Survey show that less than 10 per cent have seen the spatial copies of their land records, of which 85.7 per cent have obtained a paper copy from the revenue office. Only 14.3 per cent have obtained a digital copy that too from the office (refer Table 3.4). When asked in detail about the digital copy of the land records, the landowners show the pictures or scanned copies of their respective land parcels (taken from Patwaris) or the entire village level mosaic available on Punjab land records portal.

Records linked with ULPIN and Aadhar number: The responses on recording ULPIN and Aadhaar in land records reflects overwhelming lack of awareness among land owners. Among those who have seen spatial copies of their land records, none of them knows whether ULPIN is mentioned in land records or not. This proportion is 96 per cent for recording of Aadhaar (refer Table 3.4).

Reflection of area in record: All land owners with copies of the spatial record were satisfied with the recording of land area in the spatial records (refer Table 3.4).

Table 3.4. Details of Spatial land records

Indicators	Sub-heads	% distribution of land owners		
		Kheri Ranwa	Chani	Total
Spatial land records seen by land owners	Yes	14.9	3.4	9.7
	No	85.1	96.6	90.3
	Total	275	232	507
How old is the spatial land record	Upto one month	22.0	100.0	34.7
	1-6 months	26.8	0.0	22.4
	6 months- 1 year	24.4	0.0	20.4
	1-5 years	0.0	0.0	0.0
	> 5 years	26.8	0.0	22.4
	No response	0.0	0.0	0.0
	Total	100	100	100
Type of spatial land record	Paper copy obtained from revenue office	100.0	12.5	85.7

	Digital copy obtained from office	0.0	87.5	14.3
	Digital copy obtained from e-service centre	0.0	0.0	0.0
	Digital copy obtained from website	0.0	0.0	0.0
	Other, specify	0.0	0.0	0.0
	No response	0.0	0.0	0.0
Is ULPIN reflected in spatial land record	Yes	0.0	0.0	0.0
	No	0.0	0.0	0.0
	Don't know	100.0	100.0	100.0
	No response	0.0	0.0	0.0
	Total	41	8	49
Whether Aadhaar reflected in spatial record	Yes	0.0	0.0	0.0
	No	4.9	0.0	4.1
	Don't know	17.0	25.0	18.3
	No response	78.0	75.0	77.6
	Total	41	8	49
<i>Recording of land area details</i>				
Correct recording of land area in textual records	Yes	100.0	100.0	100.0
	No	0.0	0.0	0.0
	Don't know/ No Response	0.0	0.0	0.0
	Total	41	8	49

Source: NACER's Land Study Survey, 2024

3.3. Information from Patwaris on Digitization of Land Records

This section has analysed the responses of the Patwaris from Patiala and Pathankot districts of Punjab about their understanding of the situation with regard to the digitisation of land records. From each of these two districts 5 patwaris were interviewed in relation to the records of a total of 10 villages. From Patiala district the villages covered were Akbarpur Afgana, Shekhpur Jagir, Hasanpur Kabua, Aru Kalan and Akbarpur urf Murar Majra and from Pathankot Islampur, Dhanour, Itti, Chakpatia and Nahar ki Bhind.

3.3.1. Basic Details of Land Parcels in the Sample villages

Most land parcels in 10 sample villages are characterised by joint titles with 94.6 per cent of ownership being joint in Patiala and 91.5 per cent in Pathankot. The land use is primarily agricultural (refer Table 3.5).

Table 3.5. Per cent Distribution of Land Parcels by Ownership Type and Land use

Indicators	Sub-heads	Patiala	Pathankot	Total
% Distribution of land parcels				
Land Ownership type	Single	5.4	8.5	6.8
	Joint	94.6	91.5	93.2
	Total	100.0	100.0	100.0
	Agriculture	85.0*	89.2	76.7
Land use pattern	Non-Agriculture	15.0*	10.8	11.3
	Total	100.0	100.0	100.0

Notes- *based on total land area and not number of parcels

Source: NACER's Land Study Survey, 2024

3.3.2. Computerisation of the Textual/Spatial Land Records and Its Integration

Textual land records: Survey shows that textual records of all 10 sample villages are digitised. Of these, in 9 sample villages, legally usable digitally signed copy can only be obtained from Patwaris or Tehsil office whereas, in the remaining one village the legally useable copy can be obtained at an e-service centre. This is also consistent with the DOLR data that shows that legal digital signed copies of RoRs are not available online in Punjab. The patwari responses are also in line with the responses of land owner where majority of them are accessing digital copies through revenue office. (refer table 3.6).

Copies of spatial land records: Out of 10 sample villages in Punjab, none of them reported having digital copies of spatial records. The major reason behind non-availability of digital spatial copies is 'lack of digitization order by the government' as reported by the survey (refer table 3.6). This is what DOLR data also indicates.

Integration of Textual and Spatial copies of the Land Records: Since the spatial records are not digitised, there is no question of integration with then textual record. DOLR website shows less than 1 per cent of the spatial records linked with RoRs (as on Nov 16, 2024). In the absence of digitisation, there is no Unique Identification Number (ULPIN) or Bhu-Aadhaar number assigned for land parcels. (refer table 3.6).

Table 3.6. Computerisation of the Textual / spatial copies of the Land Records, and its integration (no of sample villages)

Indicators	Sub-heads	No. of villages
Sample villages with digitised textual records for land parcels	Yes	10
	No	-
	Total	10
Type of digital copies available to public (no of villages)	Yes, digitally signed and legally useable copies can be downloaded from the net	-
	Yes, legally useable copy can be obtained at an e-service centre	1
	Yes, legally signed copy can only be obtained from my or tehsil office	9
	Not available	-
	Total	10
Sample villages with digitised spatial records for land parcels	Yes	0
	No	10
	Total	10
Whether there is integration between textual and spatial records?	Yes	-
	No	10
Unique Land Parcel Identification Number (ULPIN) or Bhu-Aadhaar number assigned for a land parcels	Yes	-
	No	7
	Don't Know	3
Whether digital copies of the land records linked to Aadhaar?	Yes	-
	No	7
	Don't Know	3
Total		10

Source: NACER's Land Study Survey, 2024

3.3.3. Integration between land records and on-ground situation

All interviewed Patwaris stated that there has been no link between ROR and registration process or between ROR and birth and death registers. This in a way reflects the lack of awareness of Patwari on linkage between RoR and registration because State land revenue department has mentioned that every registration triggers a corresponding digital note for mutation in the RoR and SRO is able to trigger SMS

for important events during document registration, which reflects linkages between the two. The DOLR data shows that land records can be checked online by SRO, which is consistent with State level data as reported by revenue department again reflecting lack of awareness as per patwari responses.

Further, while DOLR states that auto triggered mutation facility is available in the State, patwaris are not aware of this it would seem. With regard to actual mutation, the time taken for occurrence of an event and mutation being attested in 8 sample villages was stated as within a month, while in 2 villages there had been a delay of more than a year in some cases. While in 8 sample villages, patwaris felt that mutation is always attested within specified time in, the others ascribed equal weight to three reasons for the delay in the attestation of mutations: intimation of event not received, non-availability of revenue officer and some other issues relating to the department / public.

None of the interviewed patwaris was aware if the extent (area) of land parcels shown in ROR is same as in digitized and vectorized cadastral maps since the spatial record is not digitised. They also stated that there is no difference between on-ground possession in land parcels and the ownership recorded in ROR, for any reason whatsoever (refer table 3.7).

Table 3.7. Integration between land records and on-ground situation (no of villages)

Indicators	Sub-heads	No. of villages
Link between ROR and registration process	Yes	0
	No	10
	Total	10
Link between RoR and birth and death registers	Yes	0
	No	10
	Don't know	0
	Total	10
Time gap between occurrence of event and a mutation being attested	Within two weeks	0
	within a month	8
	within 3 months	0
	within 6 months	0
	within 1 year	0
	more than 1 year	2
	No Response	0
	Total	10

Reasons for delay in attestation of mutation	Intimation not received to enter mutation	1
	Revenue officer not available to attest mutation	1
	Delay due to issues within dept and from public	1
	Usual time/no delay	7
	Total	10
Whether the extent (area) of land parcels shown in RoR is the same as in digitised and vectorised CMs	Yes	-
	No	-
	Don't know	10
	Total	10
To what extent does on ground possession in land parcels differ from the ownership recorded in RoR due to any reason	No difference	10
	Less than 5 per cent	0
	Between 5- 10 per cent	0
	Between 10- 25 per cent	0
	Total	10

Source: NACER's Land Study Survey, 2024

In all 10 sample villages, the land use of land parcels on ground is the same as shown in ROR. With regard to recording of agricultural land use in ROR, in 4 villages only nature of crop is recorded, while in other 6 villages both nature of land and crop are recorded in ROR. In the case of non-agricultural land use, in 9 villages, the land records show simple mention of use like building, road, path, pond, etc. in ROR, in the remaining one the land record copy show further details of type and use of building, (residence, cowshed, shop, factory, etc) as mentioned by the Patwari. For all sample villages covered, the built-up-area is mentioned in the land record copies (refer table 3.8).

Table 3.8. Updation of ground situation of land use in land records (no of villages)

Indicators	Sub-heads	No. of villages
Reflection of land use of land parcels in RoR	Yes	10
	No	0
	Total	10
Difference between on-ground land use and as recorded in RoR	No difference	10
	Less than 5 per cent	0

	Total	10
Way in which agricultural land use is recorded in RoR	Nature of land (irrigated, rainfed, short/long-term fallow, orchard, pasture).	0
	Nature of crop in each season (rice, wheat, pulses, vegetables, fruits, etc)	4
	Both nature of land and crop	6
	Other (specify)	0
	Total	10
Way in which non-agricultural land use is recorded in RoR	No detail only recorded as non-agricultural	0
	Simple mention of use- building, road, path, pond, etc.	9
	Details of type and use of building, (residence, cowshed, shop, factory, etc.)	1
	Details of number of floors and built up area of building	0
	Total	10
In case of non-agricultural land use, reflection of built-up area in land records	Yes	10
	No	0
	Total	10

Source: NACER's Land Study Survey, 2024

Four out of the 10 Patwaris said that location of all land parcels mentioned in RoR can always be understood by the given landmarks while five felt it was possible some of the time and one did not think that landmarks in the RoR are of much use in locating land parcels. All Patwaris were of view that the location landmarks given in the land records are quite helpful and upto date as on ground (refer table 3.9).

Table 3.9. Updation of ground situation of land location in land records (no of villages)

Indicators	Sub-heads	No of villages
Land location of land parcels shown in RoR by easily understood landmarks	Yes-always	4
	Yes- in most cases	5
	Yes- in some cases	0
	Not shown	1
	Total	10

If shown, how good are the location landmarks for actually locating land parcels on the ground?	They are outdated since they o date back to the last settlement and often do not exist	
	Quite upto date and helpful	10
	Total	10

Source: NACER's Land Study Survey, 2024

Based on patwari responses, interactions with State land revenue department and also based on web search, the digital database in Punjab reflect mortgages and revenue court cases. The copies of such affected RoRs can be downloaded by anyone. The results are consistent with DOLR which shows that land records can be checked online by revenue courts.

3.3.4. Overall status of digitization of land records and processes and suggestions.

Updating and accuracy of digitization of land records

When asked if the land record in the state is accurate, up to date and comprehensive with regard to each property, 9 out of the 10 patwaris said yes and only one mentioned that this true only to some extent.

Suggestions by Patwaris for necessary actions

According to patwaris, following actions may be prioritized for improvement in coordination among various departments: allocation of more staff, more training of field staff, requirement of more and better computer hardware and integration of databases.

3.4. Digitization of Land records and processes at State Level

In addition to the census survey of land owners and patwaris in sample villages, the state land revenue departments were also contacted to provide the data on digitization of land records and its processes for the entire state to have broader perspective. In case of Punjab, while the data from land revenue departments have been received for registration and revenue/ civil court case sections, for other sections such as textual records, spatial records, and mutation, data has been compiled from DOLR website and respective State land revenue portal based (desk research). For details refer Annexure Table 3.3A.

3.5. Government Owned Land

In Kheri Ranwa village of Patiala the total number of Khewat (land owner accounts) are 61 and total land parcels are 386 out of which 103 land parcels are owned by government and 283 are owned by private individuals. Within government owned land, most of the land parcels belong to the Gram Panchayat which has leased these to landless households belonging to SC communities for the purpose of agriculture to assist them in earning their livelihoods. In other cases, public properties such as

ponds, temple, crematoriums, community centre, schools, dharmshala and community toilets are located or have been constructed. A few land parcels are also owned by PWD and Waqf board. In Chani village of Pathankot district, out of 300 land parcels, 76 are owned by the government. All government land belongs to the gram panchayat and is used for the same purposes as in Kheri Rinwa.

The interactions with the respective gram panchayats revealed that while the textual copies of government owned land is digitised and can be easily downloaded from the State land records portal, the spatial copies are only available from the village level revenue office. In textual records, all the details are given about the government land, just like in case of private land owners such as department possessing the land, its area and location. The land use details in the record often do not match the on-ground situation. Gram panchayats lease out the land to individuals for agriculture purpose or put the land to other public uses, which does not find mention in the record.

3.6. Summary and Conclusions

In Punjab, the digitization of land records is managed by the Punjab Land Record Society (PLRS), Department of Revenue, Government of Punjab. Its head office is in the Office of the Director of Land Records in Jalandhar City, Punjab. Based on discussion with officials of the state department the two villages for the detailed survey were selected in Patiala and Pathankot districts of Punjab. In addition, to have a broader understanding, 10 patwaris were interviewed in relation to the status of 10 villages in these two districts (five in each district).

The survey findings based on the land owners for two sample villages and patwaris for the sample 10 villages indicates that (refer Annexure Table 3.4A):

1. All land owners' are aware of and have seen the textual copies of their land parcels, in many cases these are still paper copies (42%), often old and usually obtained from the revenue offices. Moreover, the digital copies do not have legal validity.
2. Copies of the spatial copies are not usually seen by landowners. Even those who have copies of the cadastral map, only possess this as scanned prints of the cadastral map of the village in which they can see only their land parcel boundaries.
3. Digitised spatial records are not yet finalised or available to the public so there is no question of integration of the textual and spatial record data bases.
4. By and large there is satisfaction among landowners that the details of ownership, possession, use, area and encumbrances are correctly reflected in the land record.
5. There are issues with correct recording of built-up areas in the textual land records as mentioned by 44 per cent of the land owners in case of non-agricultural land use.
6. The patwari responses were sought only in relation to villages which are their responsibility. As such it was unlikely that they would point out any shortcomings in the record pertaining to their charge! It would have been appropriate to seek their views in general to elicit a more accurate position on issues like land use.

7. The patwaris understanding of what they need to record as land use also varied. It reflects the need to ensure that there are standard protocols and proper training to field staff to be on the same page in these matters.

By large, the survey findings and reporting by patwaris or State departments are quite consistent with DOLR website data, but still instances of inconsistency are seen particularly in relation to integration between land records and registration process. This indicates lack of coordination and communication and sharing of updated data between various state departments including patwaris who operate at ground level.

Overall, Punjab lags behind many states with a higher level of digitisation of land records and integration of data bases. Although the level of landowner satisfaction with the record appears high this needs correlation with information on the instances of dispute and litigation. The survey also brought out areas that need addressing in term of capacity building of revenue department field staff.

Chapter 4. Status of Digitisation of Land Records in Chandigarh

This chapter presents the findings for the status of digitisation of land records for the Union Territory of Chandigarh based on the information canvassed from land owners, patwaris and the Revenue Department of the UT.

4.1 Introduction

Before digitization, Chandigarh's land records were primarily managed through physical documents, which often led to various administrative and logistical issues. Digitization has facilitated better preservation of land records, protecting them from physical damage and loss. Chandigarh has undertaken significant initiatives to digitize its land records, aiming to enhance transparency, reduce disputes, and streamline land-related transactions. The Revenue Department of Chandigarh has developed an online portal to provide public access to land records, including Jamabandi (Record of Rights), mutations, and property registration details. Users can search for land records using the owner's name, Khewat number, or Khasra number. The website shows the daily and monthly statistics of the mutations done in the state. As per Department of Land Resources (DoLR) MIS data, Chandigarh has 100 per cent digitised textual and spatial records, and 100 per cent computerisation of the SROs as on Nov 16, 2024.

4.2. Land Owner Perspective on Digitization of Land Records

This section discusses the socio-demographic profile of the land owners, basic details of the land parcels owned, updating of textual and spatial records in terms of ownership, possession, land use, extent, area and encumbrances. The findings are based on an analysis of the information secured through the field survey of the owners of the 55 privately owned land parcels in the two selected villages of Attawa and Butrela.

4.2.1. Profile of the land owners and land parcels

The socio-demographic profile of the land owners along with the basic details about the land parcels owned are discussed in this section of the chapter. *For details refer Annexure Table 4.1A and 4.2A.*

4.2.1.1. Socio-demographic profile of the land owners

The key features of the socio-demographic profile of the land owners in the two sample villages is presented in this section (refer Table 4.1A in Annexure).

- 1) More than half of the land parcels in the two sample villages were owned by the household heads. Another 18.2 per cent were owned by son/s or daughter/s.
- 2) About 44 per cent of the land owners in the sample villages were senior citizens (above 61 years), followed by another 36 per cent who are in the age group of 45- 60 years. The average age of the land owners is 57. 7 years old, slightly higher than this in Butrela village than in Attawa village.

- 3) There is considerable variation in land ownership by gender across the two sample villages. While in Butrela just 11.5 per cent of females' own land, in Attawa this proportion is 31 percent.
- 4) *More than 85 per cent* of the land parcels are owned by the Sikh community. Slightly less than 80 per cent of the land owners from the two sample villages are in the married category.
- 5) *Nearly 90 per cent* of the land parcels are owned by general category land owners, the remaining land parcels are owned by OBCs. The trend is similar in both the sample villages.
- 6) *About 58 per cent* of the land owners surveyed have attained secondary school level education, and approximately 46 per cent were self-employed in both non-farming or farming activities.

4.2.1.2. Details of the land parcels owned

The basic details of ownership of the land parcels in the two sample villages are discussed in this section (refer Annexure Table 4.2A).

- 1) Majority of land parcels (85.5 per cent) are the only land parcels owned by specific owners. Even those who own more than one land parcel, have title to at the most two land parcels. This trend is almost similar across both sample villages.
- 2) About 62 per cent of the land parcels are inherited from family, while 38 per cent have purchased from private individuals. While Butrela indicates higher proportion of inherited land parcels (81 per cent), Attawa shows higher proportion of land parcels purchased from private individual (55 per cent).
- 3) Mostly the land parcels are available in units such as Biswa, Bisa and Marla.

4.2.2. Knowledge of Textual Land Records

Land owners in the selected villages were asked whether they have seen the textual land records of their holding. If yes, when and in what form? Thereafter questions sought to know how well the record reflects the ground realities in terms of ownership details, possession, land use, area, extent and encumbrances. The answers to these questions have been discussed in this section of the chapter (for details refer Table 4.1, 4.2 and 4.3).

4.2.2.1. Copies of textual land Records

Textual copies: The survey shows that almost all the land owners in both the villages have seen the copies of textual land records, only 10.3 per cent of landowners in Attawa have never saw their textual land record (refer Table 4.1). In 54 per cent of the cases, the land record copies are more than 5 years old and in another 27 per cent copies are 1-5 years old.

Digital copies of textual land records: Despite both villages being urbanised and the fact that all RoRs in this UT are digitized as per DoLR website and are available online for download (as on Nov 16, 2024), less than 30 per cent land owners have obtained the digital copies of textual land records and a majority still have just paper form of textual land records. Even among those who have secured digital copies, the

proportion of land owners with direct access from website is just 5.5 per cent, clearly reflecting the lack of awareness among the land owners (*refer Table 4.1*).

Records linked with ULPIN and Aadhaar number: Almost all land owners in the two sample villages either don't know about the ULPIN and Aadhaar number being reflected in the RoR copy or they didn't have ULPIN/ Aadhaar number reflected in the RoR copy. Of course, lack of awareness is there among land owners but another reason is that Chandigarh-UT has not integrated land records with ULPIN and Aadhaar yet as per status on DoLR website. For village distribution, refer Table 4.1.

Table 4.1 Details of Textual land record

Indicators	Sub-heads	Buterla	Attawa	Total
% Distribution of land owners				
Textual Land records seen by land owners	Yes	100.0	89.7	94.5
	No	0.0	10.3	5.5
How old is the land record copy	Upto one month	0.0	0.0	0.0
	1-6 months	7.7	6.9	7.3
	6 months- I year	0.0	10.3	5.5
	1-5 years	19.2	34.5	27.3
	> 5 years	73.1	37.9	54.5
	No response	0.0	10.3	5.5
Type of land record copy	Paper copy obtained from revenue office	84.6	44.8	63.6
	Digital copy obtained from office	11.5	34.5	23.6
	Digital copy obtained from e-service centre	0.0	0.0	0.0
	Digital copy obtained from website	0.0	10.3	5.5
	Others	3.8	0.0	1.8
	No response	0.0	10.3	5.5
Is ULPIN reflected in land record copy	Yes	0.0	0.0	0.0
	No	46.2	41.4	43.6
	Don't know	53.8	48.3	50.9
	No response	0.0	10.3	5.5
Whether Aadhaar	Yes	0.0	3.4	1.8
	No	57.7	37.9	47.3

reflected in land record copy	Don't know	42.3	48.3	45.5
	No response	0.0	10.3	5.5
Total		100.0	100.0	100.0

Source: NACER's Land Study Survey, 2024

4.2.2.2. Ownership details of textual land Records

Ownership details, the extent to which the textual land records are updated and reflect the on-ground situation is discussed in this section (For details refer Table 4.2).

Ownership Type: Majority of the land parcels in the two sample villages have single titles (55 per cent) (refer Table 4.4).

Reflection of name in record: In 82 per cent of the land parcels, the textual land records correctly reflects the ownership by name. Only in 4 per cent of the cases, it is not shown correctly. For remaining responses, either land owners are not aware about this information or have refused. Among those who said that the textual record does not show the owners name correctly, they say that the record is not mutated to reflect inheritance; the ownership is still shown under the name of their ancestors. However, owners have not taken any action to get the records corrected.

4.2.2.3. Area details of textual land Records

It is found that 91 per cent of land parcel owners in aggregate from both villages stated that the record of land area in textual records was accurate (refer Table 4.2). At village level, variations are reported with respondents in Butrela stating 100 per cent accuracy and in Attawa only 83 per cent. On asking the reasons for incorrect textual records for area, the land owners said that the textual land records have no column for recording shares. However, no action has been taken to get the records corrected, firstly because owners did not know how to get the corrections done and secondly, they cannot afford the expenses associated with the corrections.

4.2.2.4. Possession details of textual land Records

Slightly higher than 52 per cent have sole possession of the land parcels in the sample villages while 40 per cent have joint possession. Sole possession is higher in Butrela at 65 per cent while in Attawa, it is 52 per cent. Within joint possessions, 86 per cent have mentioned that names of all co-owners having possession of the land parcel are correctly shown in land records in sample villages whereas the others have no idea about this (refer Table 4.2).

4.2.2.5. Land use details of textual land Records

Since Chandigarh has urbanised villages, all land parcels have non- agricultural land use pattern. Of this, 93 per cent of the land parcels have built-up areas (refer Table 4.2). In a majority of cases, the built-up area in both the villages is used for residential purpose. Only in a few cases in Attawa village, there is also commercial/ industrial use. A larger proportion of land owners didn't know about the extent of built-up area on their land parcels, but when asked about the floors, in 55 per cent of the cases, it was

3-4 floors construction, followed by another 21 per cent with 1-2 floors. In 13 per cent of the cases, it was just ground floor, whereas 9 per cent show more than four floors.
Ground realities vs. land records

In Buterla, 58 per cent owners said that the land use details are correctly mentioned in the textual records. In Attawa, this percentage is just 38 per cent. About 31 per cent reported that the land use details are not correctly reflected in the textual land records. The built-up area details are reportedly correctly mentioned in textual records in 47 per cent cases whereas, in case of another 31 per cent it is not reflected correctly. None of the land owners knew the reason for the incorrect built up area details in their RoRs. None of the land owners who report incorrect details have taken any action against this (refer Table 4.2).

Table 4.2. Recording of ground realities in textual land records

Indicators	Sub-heads	Buterla	Attawa	Total
% Distribution of land owners				
A. Recording of ownership details				
Type of ownership	Single	57.7	51.7	54.5
	Joint/ Multiple	42.3	48.3	45.5
	No Response	0.0	0.0	0.0
Does the record reflect ownership by name	Yes	80.8	82.8	81.8
	No	7.7	0.0	3.6
	Don't know	11.5	6.9	9.1
	Not seen records	0.0	10.3	5.5
Total		26	29	55
B. Recording of land area details				
Correct recording of land area in textual records	Yes	100.0	82.8	90.9
	No	0.0	6.9	3.6
	No Response	0.0	10.3	5.5
	Total	26	29	55
C. Recording of possession details				
Possession of land parcel	In sole possession	65.4	51.7	58.2
	In joint possession with other co-owners	30.8	48.3	40.0
	In the possession of short-term sharecroppers	0.0	0.0	0.0

	In the possession of longer-term tenants	0.0	0.0	0.0
	In some other person/s' possession	3.8	0.0	1.8
	Don't know	0.0	0.0	0.0
	Total	26	29	55
For joint ownership, whether the names of all co-owners having land possession of the land parcel correctly shown in land records	Yes	100.0	78.6	86.4
	No	0.0	0.0	0.0
	Don't know/ No Response	0.0	21.4	13.6
	Total	8	14	22
D. Recording of land use details				
What is the use to which this land parcel in your ownership has been put?	Agricultural-	0.0	0.0	0.0
	Non-agricultural	100.0	100.0	100.0
	Total	26	29	55
If agricultural, type of land use	Irrigated crop	0	0	0
	Rainfed crop	0	0	0
	No Response	0	0	0
	Agri Total	0	0	0
If non-agricultural, type of land use	Built-up	100.0	86.2	92.7
	Courtyard, path, road, garden, lawn	0.0	0.0	0.0
	Other, specify	0.0	3.4	1.8
	No response	0.0	10.3	5.5
	Non-Agri Total	26	29	55
Recording of land use details in the land records as it appears on-ground	Yes	57.7	37.9	47.3
	No	26.9	34.5	30.9
	Don't Know	15.4	17.2	16.4
	No response	0.0	10.3	5.5
	Total	26	29	55
In case of build-up area, whether details recorded in the land records as it appears on-ground	Yes	61.5	32.0	47.1
	No	23.1	40.0	31.4
	Don't Know	15.4	28.0	21.6
	Total	26	25	51

Source: NACER's Land Study Survey, 2024

4.2.2.6. Recording of encumbrances in textual land Records

Loan/ Lien: The survey shows that just 7 per cent of the land parcel owners, have taken a loan using the land parcel as collateral, while 89 per cent have not taken any loan/ lien. This trend is almost similar in both the sample villages. Among those who have taken loan/ lien using land parcel as collateral, 25 per cent mentioned that this has been shown in the land records (refer Table 4.3). In 50 per cent of the cases, it is said to be incorrect in the textual land record, whereas the remaining do not know about it. In case of errors in land records, no one has taken any action to get the record corrected.

Other encumbrances: Except for one or two land parcels, in none of the cases, the existence of following encumbrances were reported: Revenue Court Proceedings, Civil Court Proceedings, Imposition of town Planning Restriction on land use or Sub division and restrictions where the land parcel is acquired under special permission for a particular use.

For revenue proceedings and civil proceedings, the land owners were not aware whether they are reflected in their textual copy or not. However, for town planning restrictions, it is reported to have been mentioned in the RoR, but since the sample for this was minimal, therefore could not be generalized for the district or UT level (refer Table 4.3).

Table 4.3 Recording of encumbrances in textual land records

Indicators	Sub-heads	Buterla	Attawa	Total
% Distribution of land owners				
Have you taken any loan using this land parcel as collateral?	Yes	7.7	6.9	7.3
	No	88.5	89.7	89.1
	Don't Know	3.8	3.4	3.6
If yes, was the Loan/ Lien/ Mortgage shown in the land records	Yes	0.0	50.0	25.0
	No	50.0	50.0	50.0
	Don't Know	50.0	0.0	25.0
	Total	2	2	4
Existence of Revenue Court Proceedings on land parcel	Yes	0.0	3.4	1.8
	No	96.2	89.7	92.7
	Don't Know	3.8	6.9	5.5
	No response	0.0	0.0	0.0
Existence of Civil Court Proceedings on land parcel	Yes	0.0	3.4	1.8
	No	96.2	93.1	94.5
	Don't Know	3.8	3.4	3.6
	No Response	0.0	0.0	0.0

Imposition of town Planning Restriction on land use or Sub division	Yes	0.0	3.4	1.8
	No	100.0	89.7	94.5
	Don't Know	0.0	6.9	3.6
	No Response	0.0	0.0	0.0
If yes, whether town planning restriction is reflected in the land record	Yes	0.0	100	100
	No	0.0	0.0	0.0
	Don't Know	0.0	0.0	0.0
	No Response	100.0	96.6	98.2
Imposition of other Restrictions/ Condition to land parcel	Yes	0.0	3.4	1.8
	No	100.0	93.1	96.4
	Don't Know	0.0	3.4	1.8
	No Response	0.0	0.0	0.0
If yes, type of other restrictions/ conditions applied to land parcel	No right to alienate for a certain time period	0.0	0.0	0.0
	Acquired under special permission for particular use	0.0	100	100
	Other	0.0	0.0	0.0
	No Response	100.0	96.6	98.2
Reflection of other restrictions/ conditions in the land record	Yes	0.0	3.4	1.8
	No	0.0	0.0	0.0
	Don't Know	0.0	0.0	0.0
	No Response	100.0	96.6	98.2
Total		26	29	55

Source: NACER's Land Study Survey, 2024

4.2.3. Knowledge of Spatial Land Records

Land owners in the selected villages were asked whether they have seen the spatial land records of their land parcels and if yes, how well it reflects the ground situation in terms of boundaries/ location and area / extent.

As per DoLR website, Chandigarh has digitized cent per cent spatial copies of the land parcels. These are stated to be in vectorized form and can be easily downloaded from the land revenue portal of the UT. Further, DoLR website shows that these spatial copies are fully linked to RoRs (as on Nov 16, 2024). Contrary to this, our survey shows that none of the land parcel owners from the two sample villages have ever seen the spatial copies of their land records. Reasons could be low awareness among land owners about digitized spatial land records. Therefore, despite the UT making significant progress in digitizing land records, the lack of effort in informing citizens

about such initiatives has limited the benefit for landowners. Digitisation is effective only when citizens are informed about how to use and access digitized land records and its various processes.

4.3. Information from Patwaris on Digitization of Land Records

This section of the chapter presents the findings based on the responses from the Patwaris interviewed from Chandigarh district about their understanding of the situation with regard to the digitisation of land records. From the district, 2 patwaris were interviewed and therefore the aggregate responses from 2 patwaris for 10 separate villages in Chandigarh are discussed in detail here. The villages covered for the Patwari interviews are: Bar Majra, Raipur Kalan, Raipur Khurda, Mouali Jagran, Daria, Khuda Jassu, Khuda Lahora, Dhanas, Sarangpur and Khuda Alisher.

4.3.1. Basic Details of Land Parcels in Sample villages

In the 10 sample villages in Chandigarh district, maximum land parcels are jointly owned (98 per cent). Further, most of the total area under all land parcels together is used for non-agriculture purposes (*refer Table 4.4*).

Table 4.4. Per cent Distribution of Land Parcels by Ownership Type and Land use

Indicators	Sub-heads	% distribution of land owners
Land Ownership type	Single	2.0
	Joint	98.0
	Total	100.0
Land use pattern	Agriculture	24.4*
	Non-Agriculture	75.6*
Total		100.0

* per cent distribution based on total land area and not number of parcels

Source: NACER's Land Study Survey, 2024

4.3.2. Computerisation of the Textual/Spatial Land Records and their Integration (no of villages)

Copies of textual land records: All 10 sample villages have fully digitized textual land records, which are legally signed as well. Anyone who wants to access the digitally signed legally usable copies of textual land records can obtain it from either patwari office or tehsil office (*refer Table 4.5*). This is quite consistent with data on DoLR website which shows that the legal digital signed copies of land records in Chandigarh-UT are not available online. Patwaris also mentioned that for all sample villages, the digitized textual copies are available for all 9,707 land parcels that exists in those villages in total.

Digitization of spatial record: All 10 sample villages covered in Chandigarh, have digital spatial copies of the land parcels. This is what DOLR data also indicates. For 5 sample villages, the digital spatial copies are legally signed and publicly available from either patwari office or tehsil office. For other five sample villages, patwari has mentioned that legally usable spatial copies are not available due to some technical issues (refer Table 4.5).

Integration of Textual and Spatial Land Records: In 5 villages, the digitized textual and spatial records are integrated, while in remaining 5 villages it is not. This is not consistent with DOLR website data which shows that in all 25 villages in Chandigarh UT, the spatial records are linked with RoRs (as on Nov 16, 2024). None of the sample villages is reported to have land records linked to Unique Land Parcel Identification Number (ULPIN) or Aadhaar number (refer Table 4.5).

Table 4.5. Computerisation of the Textual / spatial copies of the Land Records, and its integration (no of sample villages)

Indicators	Sub-heads	No of villages
Sample villages with digitised textual records for land parcels	Yes	10
	No	0
	Total	10
If digitised, type of digital copies available to public for textual records	Yes, digitally signed and legally useable copies can be downloaded from the net	0
	Yes, legally useable copy can be obtained at an e-service centre	0
	Yes, legally signed copy can only be obtained from patwari or tehsil office	10
	Not available	0
	Total	10
Sample villages with digitised spatial records for land parcels	Yes	10
	No	0
	Total	10
If digitised, type of digital copies available to public for spatial records	Yes, digitally signed and legally useable copies can be downloaded from the net	0
	Yes, legally useable copy can be obtained at an e-service centre	0
	Yes, legally signed copy can only be obtained from my or tehsil office	5
	Not available	5
	Total	10
	Scanned	0

If digital copies available, type of digitisation of spatial copies	Scanned and Vectorised	0
	Other (specify)	0
	Don't know	10
	Total	10
Integration between textual and spatial records	Yes	5
	No	5
	Total	10
Unique Land Parcel Identification Number (ULPIN) or Bhu-Aadhaar number assigned for a land parcels	Yes	0
	No	6
	Don't Know	4
	Total	10
Digital copies of the land records linked to Aadhaar	Yes	0
	No	10
	Don't Know	0
	Total	10

Source: NACER's Land Study Survey, 2024

4.3.3. Integration between land records and on-ground situation

None of the sample villages reported linkage of the land records with the registration process and the death and birth registers to trigger inheritance mutations (*refer Table 4.6*). DOLR website data shows that land records can be checked online by SRO and that the facility of auto triggered mutation is available in the UT. The patwari for 5 out of 10 villages said that the time taken by the authorities from the start of the mutation process till it is actually attested is less than 6 months. No response was received from the patwari for the other 5 sample villages. The reasons reported for the delays in mutation process are: non-availability of the revenue officer at the time of the attestation, internal issues of the department and issues with the public (*refer Table 4.6*).

All sample villages show same land area in RoR as shown in digitised and vectorised CMs as per Patwari interviews. No difference is found in on-ground possession details of the land parcel and the ownership details as recorded in RoR copy (*refer Table 4.6*).

Table 4.6. Integration between land records and on-ground situation (No of sample villages)

Indicators	Sub-heads	No of villages
Link between ROR and registration process	Yes	0
	No	10
	Total	10
Link between RoR and birth and death registers	Yes	0
	No	10
	Don't know	0
	Total	10
Time gap between occurrence of event and a mutation being attested	Within two weeks	0
	within a month	0
	within 3 months	0
	within 6 months	5
	within 1 year	0
	more than 1 year	0
	No Response	5
	Total	10
Reasons for delay in attestation of mutation.	Intimation not received to enter mutation	0
	Revenue officer not available to attest mutation	5
	Delay due to issues within dept and from public	5
	Usual time/no delay	0
	Total	10
The extent (area) of land parcels shown in RoR same as in digitised and vectorised CMs	Yes	10
	No	0
	Don't know	0
	Total	10
Difference between on-ground possession in land parcels and ownership recorded in RoR	No difference	10
	Less than 5 per cent	0
	Between 5- 10 per cent	0
	Between 10- 25 per cent	0
	Total	10

Source: NACER's Land Study Survey, 2024

4.3.4. Recording of land use details

Land use details is reflected in all the land parcels in sample villages and the information is 100 per cent correct. There is no difference in the on-ground situation and the RoR copy. In 9 villages, for agricultural land use, the details regarding the nature of the land i.e. irrigated, rainfed, short term fallow, long term fallow, orchard, pasture, etc. is mentioned in the RoR. Details about the crop is not given. And in the non-agricultural land parcels, in the records of one village only non- agricultural land is written, whereas in the rest of the villages (9) use of the land i.e. building, road, path, pond, etc is mentioned in the RoR. In 6 villages, build up area is reflected in the non-agricultural land records. In the remaining 4 villages, build up area is not reflected because either there are no clear instructions on the subject to the authority or as the patwari reported, it is not the usual practice in those villages (*refer Table 4.7*).

Landmark or location of land parcels is not shown in any land record in any of the 10 sample villages (*refer Table 4.7*).

Table 4.7 Updation of ground situation of land use in land records (no of sample villages)

Indicators	Sub-heads	No of villages
Reflection of land use of land parcels in RoR	Yes	10
	No	0
	Total	10
Difference between on-ground land use and as recorded in RoR	No difference	10
	Less than 5 per cent	0
	Total	10
Way in which agricultural land use is recorded in RoR	Nature of land- irrigated, rainfed, short term fallow, long term fallow, orchard, pasture, etc	9
	Nature of crop in each season- rice, wheat, mustard, pulses, vegetables, etc. or mango, guava, grape, apple etc	0
	Both nature of land and crop	0
	Other (specify)	1
	Total	10
Way in which non-agricultural land use is recorded in RoR	No detail only recorded as non-agricultural	1
	Simple mention of use like building, road, path, pond, etc	9
	Further details of type and use of building, (residence, cowshed, shop, factory, etc)	0

	Further details of number of floors and built up area of building	0
	Total	10
For non-agricultural land use, is built-up area reflected in land record copies?	Yes	6
	No	4
	Total	10

Source: NACER's Land Study Survey, 2024

Based on patwari responses, and also based on Chandigarh revenue portal, the digital database in Chandigarh are integrated to reflect mortgages, land acquisition, revenue records, civil records, any special restrictions on land ownership or sale or change of use belonging to other departments or institutions. The RoRs can be viewed and downloaded online by both revenue and civil courts and RoR mentions the details of ongoing court cases and mortgages in the last column. This is not consistent with DOLR website data, which states that banks are authorised as of now to create/clear 'Mortgage' charge in RoR, that land records cannot be checked online by revenue and civil courts.

4.3.5. Overall status of digitization of land records and processes and suggestions

Updation and accuracy of digitization of land records

Patwari responses about the availability of an accurate, up to date and comprehensive record of each property show that only 5 sample villages were found to some extent to have an accurate, up to date and comprehensive record of each property. Whereas for another 5 sample villages, records do not show accurate and updated information.

Suggestions by Patwaris for necessary actions

According to patwaris, following actions may be prioritized for improvement in coordination among various departments: better integration of the databases, provision for better computer hardware, coordination between the different departments and more staff.

4.4. Digitization of Land records and processes at State/UT Level

In addition to the census survey of land owners and patwaris in sample villages, the state land revenue departments were also contacted to provide the data on digitization of land records and its processes for the entire state to have broader perspective. As a small UT, the complete Chandigarh area comes under the jurisdiction of a single Tehsildar. Since the Chandigarh land revenue departments has not yet provided the required data yet, therefore it has been compiled from the DoLR website and respective land revenue portal based for whatever indicators as were available. For details, refer Annexure Table 4.3A.

4.5. Government owned land

The distribution of government owned land parcels in the samples villages is as follows:

- 1) In Butrela, there are a total of 283 Land Parcels of which 257 land parcels have been acquired by the LAO (Land Acquisition Officer) of Chandigarh Administration in different period probably from 1965 to 1978 and over a period of time handed over to the Civil Engineering Department of Chandigarh Administration for the development of Capital Projects.
- 2) In Attawa village, there are all total of 261 Land Parcels of which 246 land parcels have been acquired by the LAO (Land Acquisition Officer) of Chandigarh Administration in different period probably from 1965 to 1978 and over a period of time handed over to the Civil Engineering Department of Chandigarh Administration for the development of Capital Projects.
- 3) All the government acquired land parcels have been handed over to the Civil Engineering Department of Chandigarh Administration for the development of Capital projects. In this process it may be noted that the land parcels numbers as acquired by the LAO for the Capital Projects have been terminated at the LAO level and only the total area of all acquired land parcels have been transferred to the Civil Engineering Department of Chandigarh Administration for the development of Capital Projects. Hence, it is not possible to identify the land parcels numbers at the level of the Civil Engineering Department.

Based on the discussion with the respective government departments, it is found that for rural land parcels that were owned by government, the digital textual and spatial copies are available and can be downloaded from the State/ UT land records portal as well. However, in most of the cases, since it has been acquired for the Civil Engineering Department of Chandigarh Administration, details are available with urban bodies which also show the land use pattern e.g. construction of building etc. This record clearly shows the department possessing a particular parcel with land use and area. However, in case of land parcels in rural villages, the land use pattern as given in the land records and what is actually on-ground shows huge variations since they are not updated and the land parcels have converted to non-agriculture purposes since long.

4.6. Summary and Conclusions

The land in Chandigarh villages comprises small amounts of private held numbers and a preponderant majority acquired by government. Based on survey, we got to know that all the government acquired land parcels have been handed over to the Civil Engineering Department of Chandigarh Administration for the development of the Capital projects. In this process it may be noted that the individual land parcels numbers as acquired by the LAO for the Capital Projects were terminated in the LAO record and the total area of all acquired land parcels was transferred to the Civil Engineering Department of Chandigarh Administration for the development of Capital Projects. These were then allocated for various uses and a separate system of recording these changes is maintained in the Department's records. Hence, it is not

possible to identify the land parcels numbers at the level of the Civil Engineering Department. The land record of the revenue department continues to show the original land parcel numbers and has not been updated by incorporating the record maintained by the Civil engineering Department of the acquired land.

Chandigarh is now a completely urbanised city with very few rural areas. The entire city is under the administration of the Chandigarh Municipal Corporation. The ground situation of the original rural areas has changed dramatically over the years with the agricultural land now being used mostly for commercial purpose or residential purpose. A rough estimates is that 80 percent of the total agricultural land as still shown in the land record is now being used for non-agricultural purposes without any legal conversion. Interaction with the land owners and with other lease holders showed that about 95 percent of them have either no knowledge about this or are not bothered about whether this is reflected accurately.

The process of updating land records in Chandigarh (as in all neighbouring states) is that once a mutation occurs (whether inheritance or transfer by sale, etc.) this is reflected in the remarks column of the RoR (jamabandi). Every five years all these mutations become the basis for creating new accounts (khatas / khewats) for the new owners (and for deleting old ones as required) and generating a new jamabandi which will no longer have the mutations listed in the remarks column. It has been observed from the ground situation that the jamabandis have not been updated for 40 years. All mutations are being recorded in the remarks column only and it is in this form that the record has been digitised and is being updated. In effect, many of the land owners have sold their lands to other individuals, but the purchasers' names are not been reflected in the land records in the 'owners' column and only figure in the remarks column. Similarly, most of the land owners mentioned in the land records whose lands have not been sold have passed away years ago and the lands have been mutated in favour of their legal heirs. These legal heirs stated that they have seen their name updated in the Patwari record but not been reflected in the digital copies (which means that even the updating of mutations is not being done in the remarks column of the digital record even though it is being done in the paper record).

While in some instances the findings correspond with data exhibited on the DoLR website, in most matters, the on-ground situation is very different. In the updating of ownership, recording of encumbrances, linking of spatial and textual records, linking land records with registration, mutation process, etc. the position is very different from the that reported. Clearly while the legacy record has been digitised, improving its quality to reflect an up-to-date and comprehensive position has received only perfunctory attention.

The interaction with the patwaris and other departmental officials brought out that the land records (textual and spatial) are not fully digitised but only partially; the flow of information from the sub-registrar office to the NIC server is not automated through data base integration. All the information updated in the server is done manually i.e. after receiving the hard copies of the data from the Sub-registrar office, the NIC personnel feed those data in the server. Hence, whatever data they have received from the ground level has been reflected in the digital record. If there is a delay then this remains pending.

The survey shows that majority of the land owners in rural Chandigarh own single land parcels which they have acquired as inheritance from family. Despite educated population, only 30 percent have copies of the digitised textual records while the rest still possess only manually generated paper copies of the textual record. No one has seen the spatial copies of their land records. This reflects lack of awareness of digitisation and spatial records among land owners in Chandigarh. While the majority feel the ownership, possession, land area, and land use details are correctly reflected in their land records, even those who have discovered inaccuracies have not made an attempt at seeking correction. Often owners did not know how to get the corrections done and even if they did, they felt they would not be able to afford the expenses associated with the process. For details refer Annexure Table 4.4A.

The findings of this study do bring out the need to raise awareness about digitisation. Even more important, they point to the need to go beyond the digitisation of legacy data. There is a need to integrate data bases and systems to actually provide upto date and comprehensive records that have utility to users. There is also need for new SoPs for the revenue department to update land use and record building dimensions and size accurately. The findings also highlight the need for attention to accurately reflect the actual status in reporting on the DoLR website.

Chapter 5. Status of Digitisation of Land Records in Delhi

This chapter presents the findings for the status of digitisation of land records for the NCT of Delhi based on the information canvassed from land owners, patwaris and the Revenue Department of the NCT.

5.1. Introduction

According to DILRMP-MIS (as on October 14, 2024), there are 207 villages in the NCT of Delhi of which 94.7 per cent villages have digitised RoRs and all cadastral maps have been digitised. In addition to this, 32 percent of the cadastral maps in Delhi are linked to RORs and all SROs (22) have been computerised.

5.2. Land Owner Perspective on Digitization of Land Records

This section discusses the socio-demographic profile of the land owners, basic details of the land parcels owned, updation of textual and spatial records in terms of ownership, possession, land use, extent, area and encumbrances. The findings are based on an analysis of the information secured through the field survey of the owners of 399 privately owned land parcels in the two selected villages of Holambi Kalan in North district and Raghupur in South-west district.

5.2.1. Profile of the land owners and land parcels

The socio-demographic profile of the land owners along with the basic details about the land parcels owned are discussed in this section of the chapter. *For details refer Annexure Table 5.1A and 5.2A.*

5.2.1.1. Socio-demographic profile of the land owners

The key features of the socio-demographic profile of the land owners in the two sample villages is presented in this section (refer Table 5.1A in Annexure).

1. *Majority of the land owners (74.7 per cent) in the two sample villages of Delhi are household heads. The trend is similar across both the villages.*
2. *The average age of the land owners in sample villages in Delhi is 50.5 years. While in Raghupur, 58.3 per cent of the land owners are younger i.e. upto 45 years old, in Holambi Kalan, 43.2 per cent are between 46-60 years old. A little over 90 per cent land parcels are owned by males.*
3. *All land owners interviewed in Delhi belonged to Hindu religion in both villages. While, In Holambi Kalan, 98.3 per cent of the land parcels are owned by general category, in Raghupur, it is a mix of General and OBC category.*
4. *Nearly 50 per cent of the land owners have received upto senior secondary level education and 16.5 per cent are graduate & above. In Raghupur, the proportion of land owners with higher educational attainment is more than that in Holambi Kalan.*
5. *Majorly of the land owners (87 per cent) in the sample villages are self-employed.*

5.2.1.2. Details of the land parcels owned

The basic details of the land parcels owned by land owners are discussed in this section (refer Table 5.2A in Annexure).

- 1) Around 81 per cent of the landowners from the two sample villages have more than 4 land parcels in their names.
- 2) Overall more than 90 per cent of the land parcel ownership has been gained through inheritance from family. This proportion is slightly higher in Raghupur since in Holambi Kalan, 11.9 per cent of the ownership of land parcels has accrued through purchase.
- 3) The land parcels in sample villages of Delhi are available in units such as bigha, biswa, gaj, square yard, and acre.

5.2.2. Knowledge of Textual Land Records

Land owners in the selected villages were asked whether they have seen the textual land records of their holding. If yes, when and in what form? Thereafter questions sought to know how well the record reflects the ground realities in terms of ownership details, possession, land use, area, extent and encumbrances. The answers to these questions have been discussed in this section of the chapter (for details refer Table 5.1, 5.2 and 5.3).

5.2.2.1. Copies of textual land Records

The survey shows that all land owners from both the villages have seen their textual land records (refer Table 5.1). In Raghupur, in 81 per cent of the cases, the textual land record copies were upto 1 year old. On the other hand, in Holambi Kalan, 67 percent hold land record copies that are more than one year old.

Digital copies of textual land records: The interesting point to note is that more than 73 per cent of the land owners were found to have digital copies of their textual land records. Among those who have digital copies, majority have obtained it from revenue office (refer Table 5.1). For Raghupur, 84.3 per cent of the land record copies are digital copies obtained from the office. In contrast, in Holambi Kalan, still 52.5 per cent have paper copy from the revenue office. The proportion of those who downloaded it directly from portal is minimal at 2 per cent.

Records linked with ULPIN and Aadhar number: In a majority of the cases, the land record copies does not reflect ULPIN and Aadhaar number (refer Table 5.1). However, there is certain proportion of land owners who have said that their land records are linked to ULPIN (27 per cent) and Aadhaar (upto 10 per cent) at an aggregate for two sample villages with much higher proportion in Holambi Kalan than in Raghupur. These findings vary with DOLR data that show none of the RoR in Delhi are linked to Aadhaar.

Table 5.1. Details of Textual land record copy

Indicators	Sub-heads	Raghupur	Holambi Kalan	Total
% Distribution of land owners				
Textual Land records seen by land owners	Yes	100.0	100.0	100.0
	No	-	-	-
How old is the land record copy	Upto one month	13.9	0.8	10.0
	1-6 months	55.2	2.5	39.6
	6 months- 1 year	12.1	28.8	17.0
	1-5 years	11.0	33.9	17.8
	> 5 years	7.8	33.9	15.5
	No response	-	-	0.0
Type of land record copy	Paper copy obtained from revenue office	15.7	52.5	26.6
	Digital copy obtained from office	84.3	40.7	71.4
	Digital copy obtained from e service centre	-	-	-
	Digital copy obtained from website	-	6.8	2.0
	Other, specify	-	-	-
	No response	0.4	0.8	0.5
Is ULPIN reflected in land record copy	Yes	19.2	44.9	26.8
	No	81.1	41.5	69.4
	Don't know	-	14.4	4.3
	No response	-	0.0	0.0
Whether Aadhaar reflected in land record copy	Yes	0.4	31.4	9.5
	No	99.6	61.0	88.2
	Don't know	0.4	8.5	2.8
	No response	-	-	-
Total		281	118	399

Source: NACER's Land Study Survey, 2024

5.2.2.2. Ownership details of textual land Records

Ownership details, the extent to which the textual land records are updated and reflect the on-ground situation is discussed in this section (For details refer Table 5.2).

Ownership Type: About 89.5 per cent of the land parcels have multiple titleholders, while 10.5 per cent have single owners. In Raghupur, 100 per cent of the land parcels are under joint ownership and in Holambi Kalan, it is a mix of joint (64.4 per cent) and single land ownership (35.6 per cent).

Reflection of name in record: Overall 96 per cent of land parcel owners say that the record correctly reflects the names of owners. For Raghupur, 100 per cent of the records were stated to be accurate while in Holambi Kalan, this proportion is 86.4 per cent. Overall, 4 percent of the land owners have reported that the textual record does not reflect ownership correctly. The main reason being that the record is still in their ancestor's name and mutation has not been effected. Except for one land owner who reported the issue to the patwari, none of the other land owners took any action to get their record corrected. They stated that they were not aware of which action to take.

5.2.2.3. Area details of textual land Records

All land parcel owners in both the villages stated that the land records mention the correct land area for the land parcels. (refer Table 5.2).

5.2.2.4. Possession details of textual land Records

Around 63 per cent of the land parcels are in joint possession of the co-owners and another 35 per cent are under single owner possession (refer Table 5.2). For Raghupur, while 74.7 per cent are in joint possession with co-owners, in Holambi Kalan, 58.5 are in sole possession. For the land parcels which are under joint ownership, correct names of all owners are mentioned in 94 per cent of the records. About 5 percent of the land owners are reported to have issues with the possession details noted in their textual copies but no action has been taken to correct the records because they were not sure of the action to be taken.

5.2.2.5. Land use details of textual land Records

Around 77.2 per cent of the land parcels at an aggregate in both sample villages are recorded as agricultural in the RORs, and 22.8 per cent as non-agricultural (refer Table 5.2). For Raghupur, 98.2 per cent is agricultural, for Holambi Kalan, 72.9 is reported as non-agricultural. While all land parcels under agriculture land use are classified as 'irrigated crop', for non-agricultural land use, multiple details are given. Within non-agriculture land use, 83.5 per cent mentioned built-up areas and 16.5 per cent mentioned courtyard, path, road, garden, and lawn. Within built up land use pattern, 97.3 per cent land records show "residential" status, and 2.7 per cent show institutional status (school, office, etc.).

Ground realities vs. land records

For about 92.5 per cent of the land parcels in both sample villages, the land use recorded in RoR is same as on-ground situation, whereas remaining land owners did not reveal this information (refer Table 5.2). In case of built-up area, correct details

are recorded in 55.3 per cent of the land parcels. None of the owners stating that there is an error in the land use shown have taken any action for the correction of land use in the records.

Table 5.2. Recording of ground realities in textual land records

Indicators	Sub-heads	Raghupur	Holambi Kalan	Total
% Distribution of land owners				
A. Recording of ownership details				
Type of ownership	Single	-	35.6	10.5
	Joint/ Multiple	100.0	64.4	89.5
	No Response	-	-	-
Does the record reflect ownership by name	Yes	100.0	86.4	96.0
	No	-	12.7	3.8
	Don't know	-	0.8	0.3
	Not seen records	-	-	-
	Total	281	118	399
B. Recording of land area details				
Correct recording of land area in textual records	Yes	100.0	100.0	100.0
	No	-	-	-
	No Response	-	-	-
C. Recording of possession details				
Possession of land parcel	In sole possession	24.9	58.5	34.8
	In joint possession with other co-owners	74.7	35.6	63.2
	In the possession of short-term sharecroppers	0.4	-	0.3
	In the possession of longer-term tenants	-	-	-
	In some other person/s' possession	-	5.9	1.8
	Don't know	-	-	-
	Total	281	118	399
For joint ownership, names of all co-owners	Yes	99.5	66.7	94.0
	No	-	31.0	5.2

having land possession of the land parcel correctly shown in land records	Don't know/ No Response	0.5	2.4	0.8
	Total	210	42	252
<i>D. Recording of land use details</i>				
Type of land use	Agricultural	98.2	27.1	77.2
	Non-agricultural	1.8	72.9	22.8
	Total	281	118	399
If agricultural, type of land use	Irrigated crop	100.0	100.0	100.0
	Rainfed crop	-	-	-
	No Response	-	-	-
	Agricultural Total	276	32	308
If non-agricultural, type of land use	Built-up	20.0	87.2	83.5
	Courtyard, path, road, garden, lawn	80.0	12.8	16.5
	Other, specify	-	-	-
	No response	-	-	-
	Non-Agri Total	5	86	91
Recording of land use details in the land records as it appears on-ground	Yes	100.0	74.6	92.5
	No	0.4	26.3	8.0
	Don't Know	-	-	-
	No response	-	-	-
	Total	281	118	399
In case of build-up area, details recorded in the land records as it appears on-ground	Yes	0.0	56.0	55.3
	No	100.0	44.0	44.7
	Don't Know	-	-	0.0
	Total	1	75	76

Source: NACER's Land Study Survey, 2024

5.2.2.6. Recording of encumbrances in textual land Records

Loan/ Lien: More than 99 per cent of the land parcels have not been used as collateral to take a loan. Only 0.5 per cent have taken loans using land as collateral. The trend is same for both the sample villages. For the land parcels which were used to take loans, the loan/mortgage was correctly shown in the land records. In all these cases the loan/lien/mortgage was entered by the bank. The land owners were consulted before the entry was made. Refer table 5.3 for the following observations.

Other encumbrances: Around 99 per cent of the land parcels were stated to be free from any revenue court proceedings, civil court proceedings, and any town Planning Restriction on land use or Sub division, while remaining 0.25 per cent do not know about the same. Both State portal and DOLR website show that none of these encumbrances are recorded in RoRs. In line with DOLR findings, the land owners also mentioned that other than mortgages, none of other encumbrances are recorded in RoRs, except for town Planning Restriction on land use or sub division wherever imposed.

Table 5.3. Recording of encumbrances in textual land records

Indicators	Sub-heads	Raghupur	Holambi Kalan	Total
% Distribution of land owners				
Have you taken any loan using this land parcel as collateral?	Yes	-	1.7	0.5
	No	100.0	97.5	99.2
	Don't Know	-	-	-
If yes, was the Loan/ Lien/ Mortgage shown in the land records	Yes	-	0.8	0.3
	No	-	100.0	100.0
	Don't Know	-	-	-
Existence of Revenue Court Proceedings on land parcel	Yes	0.4	-	0.3
	No	99.6	98.3	99.2
	Don't Know	0.4	-	0.3
	No response	-	2.5	0.8
Existence of Civil Court Proceedings on land parcel	Yes	-	-	-
	No	99.6	97.5	99.0
	Don't Know	0.4	0.0	0.3
	No Response	-	2.5	0.8
Imposition of town Planning Restriction on land use or Sub division	Yes	0.7	-	0.5
	No	99.3	98.3	99.0
	Don't Know	0.4	-	0.3
	No Response	-	2.5	0.8
If yes, whether town planning restriction is reflected in the land record	Yes	100	-	100.0
	No	-	-	-
	Don't Know	-	-	-
	No Response	-	-	-
	Yes	-	-	-
	No	100.4	99.2	100.0

Imposition of other Restrictions/ Condition to land parcel	Don't Know	-	0.0	-
	No Response	-	1.7	0.5
Total		281	118	399

Note. *no response for 0.8 per cent from Holambi Kalan

Source: NACER's Land Study Survey, 2024

5.2.3. Knowledge of Spatial Land Records

Land owners in the selected villages were asked whether they have seen the spatial land records of their land parcels and if yes, how well it reflects the ground situation in terms of boundaries/ location and area / extent. The answers to these questions have been discussed in this section (for details refer Table 5.4).

Spatial copies: Since none of the land owners of Raghupur village in Kapashera tehsil have seen the spatial copies of their land records, hence the aggregate observations are only based on the responses received from Holambi Kalan village in Narela tehsil. Copies of the spatial land record have been seen by 25 percent of the land owners in Holambi Kalan. Among those who have seen their spatial land records, in 80 percent of the cases, these copies were upto one year old.

Digital copies of spatial land records: Although in Delhi, DoLR website shows that all spatial records across all villages have been digitised as on Nov 16, 2024, our survey shows that majority (93 per cent) of the land owners in Holambi Kalan village with these records have obtained paper copies of spatial records from the revenue office. Less than 7 per cent have digital copies also obtained from the revenue office.

Records linked with ULPIN and Aadhar number: The responses on recording ULPIN and Aadhaar in land records reflects an overwhelming lack of awareness among land owners on these matters. Among those who have copies of their spatial land records, a majority did not know whether ULPIN is mentioned in land records and in no case was it shown in their copy of the record.

Reflection of area and land use pattern in record: All land parcel owners who have seen spatial and textual land records, said that the land area shown is correct as per the on-ground situation.

Table 5.4. Details of Spatial land record copy

Indicators	Sub-heads	Raghupur	Holambi Kalan	Total
% Distribution of land owners				
Spatial Land records seen by land owners	Yes	-	25.4	7.5
	No	100.0	74.6	92.5
	Total	281	118	399
How old is the land record copy	Upto one month	NA	3.3	3.3
	1-6 months	NA	10.0	10.0

	6 months- 1 year	NA	66.7	66.7
	1-5 years	NA	10.0	10.0
	> 5 years	NA	10.0	10.0
	No response	NA	-	-
Type of land record copy	Paper copy obtained from revenue office	NA	93.3	93.3
	Digital copy obtained from office	NA	6.7	6.7
	Digital copy obtained from e service centre	NA	-	-
	Digital copy obtained from website	NA	-	-
Is ULPIN reflected in land record copy	Yes	NA	-	-
	No	NA	26.7	26.7
	Don't know	NA	66.7	66.7
	No response	NA	6.7	6.7
Whether Aadhaar reflected in land record copy	Yes	NA	-	-
	No	NA	26.7	26.7
	Don't know	NA	70.0	70.0
	No response	NA	3.3	3.3
	Total	NA	30	30
Recording of land area details				
Correct recording of land area in textual records	Yes	NA	100.0	100.0
	No	NA	-	-
	Don't know/ No Response	NA	-	-
	Total	NA	30	30
Reflection of land use pattern				
Reflection of land use details in the land records as it appears on-ground	Yes	NA	90.0	90.0
	No	NA	3.3	3.3
	Don't know/ No Response	NA	6.7	6.7
	Total	NA	30	30

Note: NA- Not applicable as in Raghupur village no one has seen a copy of their spatial land record.

Source: NACER's Land Study Survey, 2024

5.3. Information from Patwaris on Digitization of Land Records

This section has analysed the responses of the Patwaris from North and South west districts of Delhi about their understanding of the situation with regard to the digitisation of land records. From each of these two districts 5 patwaris were interviewed in relation to the records of a total of 10 villages. The total land parcels in both the sample villages together were 5,038.

5.3.1. Basic Details of Land Parcels in Sample villages

Of the total land parcels in the sample villages, 63.5 per cent are recorded as single ownership, 83.2 per cent of the land parcels are shown to be in agricultural use, while 16.8 per cent are under non-agricultural use (refer Table 5.5).

Table 5.5. Per cent Distribution of Land Parcels by Ownership Type and Land use

Indicators	Sub-Head	South-West	North	Total
% Distribution of sample villages				
Land Ownership type	Single	60.5	68.5	63.5
	Joint	39.5	31.5	36.5
	Total	100.0	100.0	100.0
Land use pattern	Agriculture	81.9	85.2	83.2
	Non-Agriculture	18.1	14.8	16.8
Total		100.0	100.0	100.0

Source: NACER's Land Study Survey, 2024

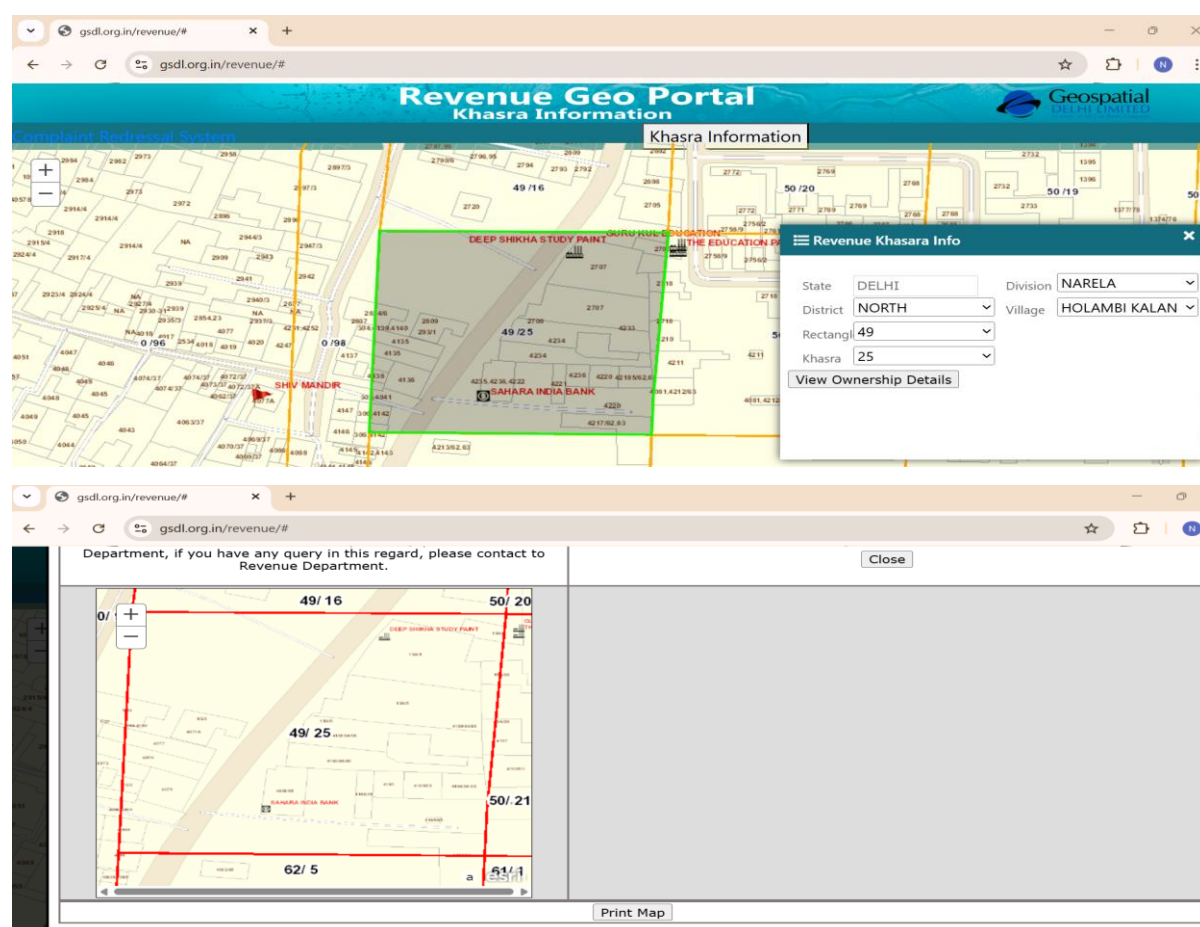
5.3.2. Computerisation of the Textual/Spatial Land Records and Their Integration

Copies of Textual land records: All sample villages reported on by the patwaris have digitized copies of textual records (refer Table 5.6). This is also the position on DoLR website. In all sample villages, the legally usable digital copy is available to the public; in 2 villages it can be obtained from the internet, whereas in the balance 8 villages it can be obtained from either the patwari or the tehsildar office. This finding is not the status on DOLR website which states that neither digitally signed copy is available online nor can a digitally signed copy be used for a legal purpose in Delhi. The difference in patwari responses and DOLR website reflects lack of flow of information and also lack of coordination.

Copies of Spatial land records: For details refer Table 5.6. The digitized spatial record copies are available for 7 out of the 10 sample villages. The reason why 3 villages do not have the digitized spatial record copies available to the public, was stated to be a lack of notification in this regard. For the villages where the spatial copies are digitized and are available to public, the legally usable copies can be obtained either from the

internet, e-service centre or patwari/tehsil office for 5 villages, but only the revenue offices for the remaining 2 villages. However, vectorized copies are available only for 1 village while for 3 other villages only scanned copies are reported to be available. There seems to be a lack of understanding about what constitutes digitisation of spatial record because overall in 7 villages digitised copies are said to be available which is only possible if at least scanning has taken place.

Other than the state portal, there is another GIS portal found during the desk research where Delhi maps are available (<https://gsdl.org.in/revenue/>). In this portal, one can select any khasra number and can see the boundaries of the khasra but without any measurement details. Details of owners or land area or land use are also not mentioned in the map. Therefore, maps seem to be mosaic in nature rather than vectorised. Refer to the pictures below:



Integration of Textual and Spatial copies of the Land Records: All the sample villages reportedly have an integration between the textual records and spatial record (refer Table 5.11). In this regard, DoLR website states that about one-third of the villages in Delhi have integration between RoRs and CMs. ULPIN or Bhu-Aadhaar has been assigned in 4 villages, while none of the land records in the sample villages are linked to the Aadhaar of the owner of the land parcel.

Table 5.6. Computerisation of the Textual/ Spatial Land Records and their integration (no of villages)

Indicators	Sub-heads	No of villages
Sample villages with digitised textual records	Yes	10
	No	-
	Total	10
If digitised, type of digital copies available to public	Yes, digitally signed and legally useable copies can be downloaded from the net	2
	Yes, legally useable copy can be obtained at an e-service centre	-
	Yes, legally signed copy can only be obtained from patwari or tehsil office	8
	Not available	-
	Total	10
Sample villages with digitised spatial records	Yes	7
	No	3
	Total	10
If digitised, type of digital copies available to public	Yes, digitally signed and legally useable copies can be downloaded from the net	2
	Yes, legally useable copy can be obtained at an e-service centre	2
	Yes, legally signed copy can only be obtained from patwari or tehsil office	1
	Not available	2
	Total	7
If digital copies available, type of digitisation of spatial copies	Scanned	3
	Scanned and Vectorised	1
	Don't know	3
	Total	7
Whether there is integration between textual and spatial records?	Yes	10
	No	-
	Total	10
Unique Land Parcel Identification Number	Yes	4
	No	6

(ULPIN) or Bhu-Aadhaar number assigned for a land parcels?	Don't Know	-
	Total	10
Whether digital copies of the land records are linked to Aadhaar?	Yes	-
	No	10
	Don't Know	-
	Total	10

Source: NACER's Land Study Survey, 2024

5.3.3. Integration between land records and on-ground situation

There is apparently a link between the ROR and birth & death registers for 9 villages. There is also a link between ROR and the registration process in all the sample villages (refer Table 5.7). In 5 villages, SROs send an email/SMS to the revenue office on the occurrence of a registration and in the remaining mutation is attested on the same day. While DoLR website states that auto triggered mutation facility is available in Delhi, this seems to be the case only in half the villages. The patwaris state that the time between event of sale, death, etc. and mutation is within a month for 9 villages, and within three months for the remaining village. In cases where it gets delayed, it is because intimation is not received to enter mutation and revenue officer not available to attest mutation. This would appear to show that the reported linkage between birth and death register and ROR is not effective.

The ROR's reflect same extent of the land parcel as the cadastral maps for 7 villages out of 10. In 9 villages, the ROR reflect the correct on-ground possession of the land parcels. In the remaining one village, it shows a variation of 10-25 per cent. When asked about the reason for the same, it was informed that possession of any person other than owner/s is not allowed to be shown in the land records as per instructions.

Table 5.7. Integration between land records and on-ground situation (no of villages)

Indicators	Sub-heads	No of villages
Link between ROR and registration process	Yes	10
	No	-
	Total	10
Link between RoR and birth and death registers	Yes	9
	No	-
	Don't know	1
	Total	10
	Within two weeks	2
	within a month	7

Time gap between occurrence of event of sale, death, etc. and a mutation being attested	within 3 months	1
	Total	10
Reasons for delay in attestation of mutation	Intimation not received to enter mutation	8
	Revenue officer not available to attest mutation	2
	Delay due to issues within dept and from public	-
	Usual time/no delay	-
	Total	10
Extent of land parcels shown in ROR is the same as in digitised and vectorised CMs	Yes	7
	No	-
	Don't know	3
	Total	10
Difference between on-ground possession in land parcels from the ownership recorded in RoR	No difference	9
	Less than 5 per cent	-
	Between 5- 10 per cent	-
	Between 10- 25 per cent	1
	Total	10

Source: NACER's Land Study Survey, 2024

Land use is recorded in 9 out of 10 villages. When asked about the reason for not recording in the remaining one, it was informed that there is no instruction about the same. In 8 out of these 9 villages, no difference is reported in land use as shown in RoR and existing on-ground. In one sample village there is a difference which is less than 5 per cent. For details refer Table 5.8.

Non-agriculture use is also recorded. In 2 villages, no further detail is given, in 4 villages simple mention of non-agriculture land use like building, pond etc is mentioned, and in 3 villages further details on type of building, number of floors and built-up area are recorded. In effect, built up area is mentioned in 9 of the sample villages. The remaining one, is the village for which there is no instruction for recording land use.

Table 5.8. Updation of ground situation of land use in land records (no of villages)

Indicators	Sub-heads	No of villages
Is land use of land parcels shown in ROR	Yes	9
	No	1

	Total	10
Difference between on ground land use and the land use recorded in RoR	No difference	8
	Less than 5 per cent	1
	Total	9
Way in which agricultural land use is recorded in RoR	Nature of land- irrigated, rainfed, short term fallow, long term fallow, orchard, pasture, etc	1
	Nature of crop in each season- rice, wheat, mustard, pulses, vegetables, etc. or mango, guava, grape, apple etc	4
	Both nature of land and crop	4
	Other	-
	Total	9
Way in which non-agricultural land use is recorded in RoR	No detail only recorded as non-agricultural	2
	Simple mention of use like building, road, path, pond, etc	4
	Further details of type and use of building, (residence, cowshed, shop, factory, etc)	1
	Further details of number of floors and built-up area of building	2
	Total	9
In case of non-agricultural land use, way in which built-up area reflected in land record copies	Yes	9
	No	1
	Total	10

Source: NACER's Land Study Survey, 2024

The location of all the land parcels are shown in ROR by easily understood landmarks for all the surveyed villages (refer Table 5.9). For 9 out of 10 sample villages the locational landmarks as mentioned in RORs were up to date.

Table 5.9. Updation of ground situation of land location in land records (noof villages)

Indicators	Sub-heads	No of villages
Location of all land parcels shown in RoR - easily understood landmarks	Yes-always	80.0
	Yes- in most cases	20.0
	Yes- in some cases	-

	Not shown	-
	Total	100.0
if shown, how good are the location landmarks for actually locating land parcels on the ground?	Outdated, date back to the last settlement and don't exist	10.0
	Quite up to date and helpful	90.0
	Total	100.0

Source: NACER's Land Study Survey, 2024

The patwari responses indicate a linking of following databases with the land records: mortgage database, spatial plans, revenue records, civil records, and information on any special restrictions on land ownership or sale or change of use belonging to other departments or institutions. This not the case as per the status on DoLR website. This is a reflection of either a misunderstanding of what constitute linkage of data bases any the patwari level or lack of coordination and flow of information between various departments.

5.3.4. Overall status of digitization of land records and processes and suggestions.

Updation and accuracy of digitization of land records

The patwaris are of the opinion that in almost all sample villages the land record are accurate, up to date and comprehensive with regard to all properties.

Suggestions by Patwaris for necessary actions

The key suggestion provided by patwaris for improving the quality of land records are: improved coordination among various departments, more training of field staff, employing more staff, employing more and better computer hardware, more awareness campaigns among the landowners and integration between the data bases.

5.4. Digitization of Land records and processes at State/UT Level

In addition to the census survey of land owners and patwaris in sample villages, the state land revenue departments were also contacted to provide the data on digitization of land records and its processes for the entire state to have a broader perspective. In case of Delhi, since the State land revenue department has refused to provide the data, the same has been compiled from that shown on the DoLR website and the State land revenue portal. For details refer Annexure Table 5.3A.

5.5. Government Owned Land

Out of total 287 land parcels in Holambi Kalan villages that come under Narela tehsil of North district, 61 land parcels are owned by the government. All of these 61 Khasra numbers belong to Delhi Development Authority (DDA). In Raghupur village that come under Kapashera tehsil in South-west district, out of 912 land parcels, 91 are public property. Out of these 91 land parcels, 17 have been put to uses like hospital,

school, temple, samudaya kendra, panchayat ghar, play grounds, post office, cremation ground, Jal Praday Sansthan, ponds etc. Of the balance, 14 land parcels are either vacant/ banjar land while the rest come under roads/ pavements.

The interviews for the government owned land parcels were conducted with the BDOs and administrative officers of the respective State districts. Following are the key findings:

1. The respective government department who possess land parcels in the sample villages have the textual copies of the khasras in their record but as far as spatial maps are concerned, these are available only at village level.
2. In case of textual land records, these departments have obtained the paper copies of the respective khasra number from the revenue office and don't have digital copies of the same.
3. While ULPIN is not reflected in the land records of government owned khasras in the sample village of north district (Holambi Kalan), in sample village of south west district (Raghupur), the ULPIN is reflected in government owned textual land records. The Aadhaar number is not reflected in any of these records.
4. While the total land area under government ownership in Holambi Kalan village is 37.9 bigha, in Raghupur, government owns 10 bigha land area in total. Further the land area is correctly mentioned in the textual land records for both the sample villages in case of government owned land parcels.
5. There is sole possession for all the land parcels under government ownership in both the sample villages and the land use mentioned in both the case is non-agricultural use. The details of non-agricultural use include Courtyard, path, road, garden, lawn. The land use details of the government owned land parcels for both the villages were reported to be correctly entered in the textual land records.
6. No town planning restriction on land use or Sub-division or Other Restrictions/ Conditions exist on these land parcels.

5.6. Summary and Conclusions

Based on the discussion with state departments, the census of land parcels of two villages was conducted in South-west and North district of Delhi. To have a broader understanding, interviews at patwari level were conducted additionally for 10 villages.

The survey findings based on the land owners and patwaris for the sample 10 villages indicates that (refer Annexure Table 5.4A) while all land owners from both the villages have seen their textual land records and majority of them were found to have digital copies of the same. Just one-fourth had paper copies. Among those who have digital copies, majority have obtained this from the revenue office. This shows that awareness or access among land owners for downloading the textual record copies directly from website is limited. Further, it is found that the textual copies of land records in both sample villages in majority of the land parcels are not linked to ULPIN or Aadhaar.

Majority of the textual records correctly reflect the name of all the owners in joint ownership. In some land parcels, where it is not reflecting the on-ground situation, the reason provided is that land parcel is still in ancestor's name and mutation is not done. Particularly in Holambi Kalan village, it is found that the mutation has not happened

after 2019 except for few cases where death of forefather has taken place. Most of the people have applied for mutation but it is still in process.

Further, it is also reported that the possession details are also correctly reflected in textual land records as mentioned by the majority of the land owners. Most of the land parcels in the sample have agriculture land use. While in general land use is correctly noted in RORs, in case of built-up areas, only 55 per cent show the details accurately. This means that a major proportion of land owners are facing correction issues in their textual copies.

The situation of access to spatial land records is not very encouraging. While none has seen the spatial copy of their land parcels in Raghupur village, in Holambi Kalan just 25 percent who have seen it. Even among these, majority have paper form of spatial copies.

For the 10 sample villages as reported by patwari, majority have agriculture land use pattern and are in joint ownership. More than three-fourth of the land parcels in these sample villages have their textual records digitised. This proportion is just 55 percent in case of the spatial record.

The comparative assessment between the survey findings and the status recorded on DoLR website shows that on most of the indicators there is a lack of consistency between the survey findings and DOLR data. In some cases the position on the ground is an advance on that shown on the DoLR website and in some cases the latter shows an achievement not reached as yet. This kind of situation indicates lack of coordination and flow of information between various departments that maintain the land records or deal with the land owners at the ground level and the reporting system.

Overall, based on the findings of this report, the following actions can be suggested for improvement in the digitisation of land records and their utilisation in Delhi. First, create awareness among land owners in the relevant villages about access to digital copies of both textual and spatial land records; expedite availability of legally useable digital copies of the record in balance villages; raise awareness about the importance of accuracy of the record and of processes to correct land record entries; integrate data bases for actually creating up to date and comprehensive land records; appropriate instructions at field level to enter details of built up property and possibly efforts to link the land records with ULPIN and Aadhaar number. The possession details should be updated and mutation process may be expedited so that land records can better reflect the ground realities.

Chapter 6. Status of Digitisation of Land Records in Rajasthan

This chapter presents the findings for the status of digitisation of land records for the state of Rajasthan based on the information canvassed from land owners, patwaris and State Revenue Department.

6.1. Introduction

According to DILRMP-MIS (as on October 14, 2024), there are 657 villages in Rajasthan of which 97.3 per cent have digitised RoRs and 92 per cent of cadastral maps have been digitised. In addition to this, 87 per cent of the cadastral maps in Rajasthan are linked to RORs and all SROs (657) have been computerised in the State.

6.2. Land Owner Perspective on Digitization of Land Records

This section discusses the socio-demographic profile of the land owners, basic details of the land parcels owned, updation of textual records, spatial records in terms of ownership, possession, land use, extent, area and encumbrances. The findings are based on an analysis of the information secured through the field survey of the owners of the 385 privately owned land parcels in the two selected villages of Jhanjhar Badla in Udaipur district and Pitumbri in Sirohi district.

6.2.1. Profile of the land owners and land parcels

The socio-demographic profile of the land owners along with the basic details about the land parcels owned are discussed in this section of the chapter. *For details refer Annexure Table 6.1A and 6.2A.*

6.2.1.1. Socio-demographic profile of the land owners

The key features of the socio-demographic profile of the land owners in the two sample villages is presented in this section (refer Table 6.1A in Annexure).

1. In the two sample villages of Rajasthan, 29.8 per cent of landowners in Jhanjhar Badla and 45.6 per cent in Pitumbri are household heads. Another one-third of the land owners are the sons / daughters of the household head.
2. About 75 per cent of the land owners in both sample villages are in the age groups of upto 45 years and 46-60 years.
3. The land distribution across gender reveals extreme level of skewness towards males in both the villages.
4. All landowners in Jhanjhar Badla and 98.9 per cent in Pitumbri follow Hindu religion. Further, two communities own most of the land parcels in the sample villages: Schedule Tribe and OBC.
5. The educational attainment among land owners in the sample villages is quite low with 59 per cent being illiterate or literate without formal education. Almost all land owners in the sample villages are self-employed, mostly engaged in farming.

6.2.1.2. Details of the land parcels owned

The basic details of the land parcels owned by land owners are discussed in this section (Table 6.2A in Annexure).

- i. About 65 per cent of the land parcel owners in the sample villages own more than four land parcels, followed by another 26 per cent who own between 2-4 land parcels. Only 9% of land parcel have just one owner.
- ii. Nearly 93 per cent of land owners have obtained the land parcels through inheritance from their family, while 6 per cent have bought them from others.
- iii. The land parcels in these villages are usually measured in Bigha or Biswa units.

6.2.2. Knowledge of Textual Land Records

Land owners in the selected villages were asked whether they have seen the textual land records of their holding. If yes, when and in what form? Thereafter questions sought to know how well the record reflects the ground realities in terms of ownership details, possession, land use, area, extent and encumbrances. The answers to these questions have been discussed in this section of the chapter (for details refer Table 6.1, 6.2 and 6.3).

6.2.2.1. Details of textual land Records

Textual Record copies: Nearly 92 per cent of the land owners in the two sample villages have seen the copies of their textual land records. This proportion is 89.3 per cent in Jhanjhar Badla and 96.1 per cent in Pitumbri. In 87 per cent of the cases, these copies are upto one year old (refer Table 6.1).

Digital copies of textual land records: Despite the fact that 97.3 per cent of the RoRs are digitized as per DoLR website and are also available online for download (as on Nov 16, 2024), only 55 percent of the land owners in the two sample villages have copies of the digital record with them. About 38 per cent of the land owners have obtained paper copies. In Jhanjhar Badla, while more than 50 per cent have obtained a digital record copy from e-service centre, in Pitumbri more than 50 per cent have obtained a copy of the paper record from the revenue office.

Records linked with ULPIN and Aadhar number: ULPIN is reflected in 53 per cent of the land parcels in the sample villages. Aadhaar number is found to be reflected in the land records of 25 per cent of the land parcels. Although DoLR website shows very low proportion of villages where land records are linked to Aadhaar. In that regard, these two sample villages reflects better position in Aadhaar linking.

Table 6.1. Details of Textual land record copy

Indicators	Sub-heads	Jhanjhar Badla	Pitumbri	Total
% Distribution of land owners				
Textual land records seen by land owners	Yes	89.3	96.1	92.5
	No	10.7	3.9	7.5
How old is the land record copy	Upto one month	8.3	9.4	8.8
	1-6 months	24.4	30.0	27.0
	6 months- 1 year	53.7	48.9	51.4
	1-5 years	2.9	5.6	4.2
	> 5 years	0.0	2.2	1.0
	No response	10.7	3.9	7.5
Type of land record copy	Paper copy obtained from revenue office	25.9	51.1	37.7
	Digital copy obtained from office	10.2	2.8	6.8
	Digital copy obtained from e service centre	53.2	42.8	48.3
	Digital copy obtained from website	0.5	0.0	0.3
	Other, specify	0.0	0.0	0.0
	No response	10.7	3.9	7.5
Is ULPIN reflected in land record copy	Yes	63.4	40.6	52.7
	No	26.3	46.1	35.6
	Don't know	0.0	9.4	4.4
	No response	10.7	4.4	7.8
Whether Aadhaar reflected in land record copy	Yes	4.9	47.2	24.7
	No	84.9	48.9	68.1
	Don't know	0.0	0.0	0.0
	No response	10.7	4.4	7.8
Total		100.0	100.0	100.0

Source: NACER's Land Study Survey, 2024

6.2.2.2. Ownership details of textual land Records

Ownership details, the extent to which the textual land records are updated and reflect the on-ground situation is discussed in this section (For details refer Table 6.2).

Ownership Type: Most of the land parcels are under joint ownership, with proportion of jointly owned land parcels being much higher in Jhanjhar Badla compared to Pitumbri. Only one-third of the land parcels have just one owner.

Reflection in the record: About 92 per cent of land parcels correctly reflects the ownership by name. Within those who have mentioned that land records do not show the name of owners correctly, just very few have mentioned that the reason is delay in mutation after the passing away of an ancestor. In other cases, reasons were not clear. However, no action has been taken to get the record corrected due to expenses involved in correction procedure.

6.2.2.3. Area details in textual land Records

Nearly 93 per cent of land parcel owners in sample villages reported accurate recording of the land area in textual records. The trend is almost similar in both the villages.

6.2.2.4. Possession details in textual land Records

The land parcels under joint possession of co-owners were reported at 53 per cent while another 43 per cent are under single owner possession (refer Table 6.2). For the land parcels which are under joint ownership, correct names of all owners are mentioned in 97 per cent of the records. None of the land owners reported to have issues about possession since this detail is not separately given in land records in Rajasthan.

6.2.2.5. Land use details in textual land Records

For 97 per cent of the land parcels in both sample villages at an aggregate, land use reported is agriculture. (refer Table 6.2). The figure is 99.5 per cent of land parcels in Jhanjhar Badla and 93.9 per cent in Pitumbri village. In agricultural land use, 61% parcels are classified under 'rainfed crop' and 39 per cent as 'irrigated crop'. Significant variations are reflected at village level in agriculture land use pattern. While in Jhanjhar Badla, all have mentioned rainfed crops, in Pitumbari 86 per cent have mentioned irrigated crops. While just 0.5 per cent have mentioned non-agricultural land use in Jhanjhar Badla village, in Pitumbari this proportion is 6 per cent.

Ground realities vs. land records

For about 93 per cent of the land parcels, the land use as recorded in land records is same as on-ground (refer Table 6.4). If there is built up area, details given in the land records are correctly reflecting ground realities.

Table 6.2. Recording of ground realities in textual land records

Indicators	Sub-heads	Jhanjhar Badla	Pitumbri	Total
% Distribution of land owners				
A. Recording of ownership details				
Type of ownership	Single	27.8	39.4	33.2
	Joint/ Multiple	72.2	60.0	66.5
	No Response	0.0	0.6	0.3
Does the record reflect ownership by name	Yes	88.3	95.6	91.7
	No	0.5	0.0	0.3
	Don't know	0.5	0.6	0.5
	Not seen records	10.7	3.9	7.5
	Total	205	180	385
B. Recording of land area details				
Correct recording of land area in textual records	Yes	89.3	96.1	92.5
	No	0.0	0.0	0.0
	No Response	10.7	3.9	7.5
	Total	205	180	385
C. Recording of possession details				
Possession of land parcel	In sole possession	30.2	57.2	42.9
	In joint possession with other co-owners	62.0	43.3	53.2
	In the possession of short-term sharecroppers	0.0	0.0	0.0
	In the possession of longer-term tenants	0.0	0.0	0.0
	In some other person/s' possession	6.3	0.0	3.4
	Don't know	1.5	0.0	0.8
	Total	205	180	385
For joint ownership, whether the names of all co-owners having possession of the land parcel are correctly shown in land records	Yes	97.6	97.4	97.6
	No	0.0	0.0	0.0
	Don't know/ No Response	2.4	2.6	2.4
	Total	127	78	205

D. Recording of land use details				
What is the use to which this land parcel in your ownership has been put?	Agricultural-	99.5	93.9	96.9
	Non-agricultural	0.5	6.1	3.1
	Total	205	180	385
If agricultural, type of land use	Irrigated crop	0.0	85.8	38.9
	Rainfed crop	100.0	14.2	61.1
	No Response	0.0	0.0	0.0
	Agricultural Total	204	169	373
If non-agricultural, type of land use	Built-up	0.0	9.1	8.3
	Courtyard, path, road, garden, lawn	0.0	0.0	0.0
	Other, specify	100.0	90.9	91.7
	No response	0.0	0.0	0.0
	Non-Agri Total	1	11	12
Recording of land use details in the land records as it appears on-ground	Yes	89.8	96.7	93.0
	No	0.0	0.0	0.0
	Don't Know	0.0	0.0	0.0
	No response	10.7	3.9	7.5
	Total	205	180	385
In case of build-up area, whether details recorded in the land records as it appears on-ground- Yes		-	100.0	100.0

Source: NACER's Land Study Survey, 2024

6.2.2.6. Recording of encumbrances in textual land Records

Refer table 6.3 for the following observations.

Loan/ Lien: Around 39 per cent of the land parcels have been used as collateral to take loan, with varied proportion village-wise. The proportion of those using land for collateral is higher in Pitumbri (53.9 per cent) than in Jhanjhar Badla (26.8 per cent). For the land parcels which were used to take loans, the details are correctly shown in the land records in more than 97 per cent of the cases. In all these cases, the loan/lien/mortgage was entered by the bank. While all the land owners were consulted before the entry was made in Jhanjhar Badla, in Pitumbri this proportion was slightly lesser.

Other encumbrances: As per land owners responses in both villages, there are no Revenue Court Proceedings, Civil Court Proceedings, town planning restriction on land use or Sub division on land parcel in both the villages. These findings are in line with the position on DoLR website.

Table 6.3. Recording of encumbrances in textual land records

Indicators	Sub-heads	Jhanjhar Badla	Pitumbri	Total
% Distribution of land owners				
Have you taken any loan using this land parcel as collateral?	Yes	26.8	53.9	39.5
	No	73.7	46.1	60.8
	Don't Know	0.0	0.6	0.3
If yes, was the Loan/ Lien/ Mortgage shown in the land records	Yes	100.0	95.9	97.4
	No	0.0	4.1	2.6
	Don't Know	0.0	0.0	0.0
Existence of Revenue Court Proceedings on land parcel	Yes	0.0	0.0	0.0
	No	100.0	100.0	100.0
Existence of Civil Court Proceedings on land parcel	Yes	0.0	0.0	0.0
	No	100.0	100.0	100.0
Imposition of town Planning Restriction on land use or Sub division	Yes	0.0	0.6	0.3
	No	100.0	99.4	99.7
If yes, whether town planning restriction is reflected in the land record	Yes	0.0	100	100
	No	0.0	0.0	0.0
Imposition of other Restrictions/ Condition to land parcel	Yes	0.5	0.6	0.5
	No	99.5	99.4	99.5
If yes, type of other restrictions/ conditions applied to land parcel		0.0	0.0	0.0
	No right to alienate for a certain time period			
	Acquired under special permission for particular use	0.0	100	0.0
	Other	100	0.0	0.0
	No Response	0.0	0.0	0.0
Reflection of other restrictions/ conditions in the land record	Yes	0.5	0.0	0.3
	No	0.0	0.0	0.0
	Don't Know	0.0	0.0	0.0
	No Response	99.5	100.0	99.7
Total		205	180	385

Source: NACER's Land Study Survey, 2024

6.2.3. Knowledge of Spatial Land Records

Land owners in the selected villages were asked whether they have seen the spatial maps of their land parcels and if yes, how well it reflects the ground situation in terms of boundaries/ location and area / extent. The answers to these questions have been discussed in this section (for details refer Table 6.4).

Spatial land record copies: The copies of spatial land record have been seen by 76.4 percent of the land owners in both sample villages with varied proportions at village level: Jhanjhar Badla (67 per cent) and Pitumbri (87 per cent). In 66 percent of the cases, the spatial copies of the land parcels were upto one year old, whereas in another 30 per cent they were 1-5 years old.

Digital copies of spatial land records: The proportion of land owners who possess copies of their spatial record and have obtained digital copies of their land parcel maps in both the sample villages of Rajasthan is 95 per cent. These findings are in line with DOLR data, which shows that 92 per cent of the cadastral maps in the state are digitised as per Nov 16, 2024. About 74.5 per cent in Jhanjhar Badla and 45.9 per cent in Pitumbri have obtained the digital spatial copy from a revenue office and in other cases from e-service centres.

Records linked with ULPIN and Aadhar number: ULPIN is reflected in 56 per cent of the spatial copies, and Aadhaar number is reflected in just 11 per cent of the records.

Reflection in record: Land area is correctly recorded in all the spatial records i.e. 100 per cent.

Table 6.4. Details of Spatial land record copy

Indicators	Sub-heads	Jhanjhar Badla	Pitumbri	Total
% Distribution of land owners				
Spatial Land records seen by land owners	Yes	66.8	87.2	76.4
	No	33.2	12.8	23.6
	Total	205	180	385
How old is the land record copy	Upto one month	11.7	10.8	11.2
	1-6 months	13.1	15.3	14.3
	6 months- 1 year	30.7	49.7	40.8
	1-5 years	43.8	18.5	30.3
	> 5 years	0.7	5.7	3.4
	No response	0.0	0.0	0.0
	Total	100	100	100
Type of land record copy	Paper copy obtained from revenue office	8.0	1.3	4.4

	Digital copy obtained from office	74.5	45.9	59.2
	Digital copy obtained from e service centre	17.5	45.2	32.3
	Digital copy obtained from website	0.0	6.4	3.4
	Other, specify	0.0	1.3	0.7
Is ULPIN reflected in land record copy	Yes	69.3	43.9	55.8
	No	30.7	51.6	41.8
	Don't know	0.0	3.8	2.0
	No response	0.0	0.6	0.3
Aadhaar reflected in land record	Yes	6.6	14.0	10.5
	No	93.4	85.4	89.1
Total		137	157	294
<i>Recording of land area details</i>				
Correct recording of land area in spatial records	Yes	100.0	100.0	100.0
	No	0.0	0.0	0.0
	Don't know/ No Response	0.0	0.0	0.0
Total		137	157	294

Source: NACER's Land Study Survey, 2024

6.3. Patwari's Perspective on Digitization of Land Records

This section has analysed the responses of the Patwaris from Sirohi and Udaipur districts of Rajasthan about their understanding of the situation with regard to the digitisation of land records. From each of these two districts 5 patwaris were interviewed in relation to the records of a total of 10 villages covering 6,455 land parcels.

6.3.1. Basic Details of Land Parcels in Sample villages

Of the total land parcels in the surveyed villages, 52.5 per cent of the land parcels are under single ownership. About 79 per cent of the land parcels are under agricultural use, while 21 per cent are under non-agricultural use (refer Table 6.5).

Table 6.5. Distribution of Land Parcels by Ownership Type and Land use (in %age)

Indicators	Sub-heads	Udaipur	Sirohi	Total
Per cent Distribution				
Land Ownership type	Single	49.8	57.9	52.5
	Joint	50.2	42.1	47.5
	Total	100.0	100.0	100.0
Land use pattern	Agriculture	76.6	83.9	79.0
	Non-Agriculture	23.4	16.1	21.0
Total		100.0	100.0	100.0

Source: NACER's Land Study Survey, 2024

6.3.2. Computerization and Integration of the Textual/ Spatial copies of the Land Records

Copies of Textual land records: In 9 out of 10 sample villages covered in the study the textual records are digitized (refer Table 6.6). Of these, 8 villages have digitally signed and legally useable copies which can be downloaded from the net. For the remaining 2 villages legally signed copy can only be obtained from patwari or tehsil office. As per DoLR website, digitally signed RoRs are available online and are legally valid in the State, indicating consistency between DoLR website data and survey findings.

Copies of Spatial land records: In 9 out of 10 sample villages the spatial records are digitised (refer Table 6.6). Of these, 6 villages have digitally signed and legally useable copies which can be downloaded from the net, for the remaining 3 villages, legally useable copy can either be obtained at an e-service centre or from patwari/tehsil office. However, 8 out 9 sample villages have only scanned version of the spatial copies of the land parcels.

Integration of Textual and Spatial copies of the Land Records: For all sample villages, the textual and spatial records are integrated. This is consistent with the position on the DOLR website, which shows that in 87 per cent of the villages in Rajasthan, the cadastral maps are integrated with RoRs. While in six villages, Unique Land Parcel Identification Number (ULPIN) have been assigned to land parcels, for linking land records with Aadhaar number, the progress is slow. (Refer Table 6.6.)

Table 6.6. Computerisation of the Textual/ Spatial copies of the Land Records and Its Integration (no of villages)

Indicators	Sub-heads	No of villages
Sample villages with digitised textual records for land parcels	Yes	9
	No	1
	Total	10
If digitised, type of digital copies available to public	Yes, digitally signed and legally useable copies can be downloaded from the net	8
	Yes, legally useable copy can be obtained at an e-service centre	0
	Yes, legally signed copy can only be obtained from my or tehsil office	1
	Not available	0
	Total	9
Sample villages with digitised spatial records for land parcels	Yes	9
	No	1
	Total	10
If digitised, type of digital copies available to public	Yes, digitally signed and legally useable copies can be downloaded from the net	6
	Yes, legally useable copy can be obtained at an e-service centre	2
	Yes, legally signed copy can only be obtained from my or tehsil office	1
	Not available	0
	Total	9
If digital copies available, type of digitisation of spatial copies	Scanned	8
	Scanned and Vectorised	0
	Other (specify)	0
	Don't know	1
	Total	9
Integration between textual and spatial records?	Yes	10
	No	0
	Total	10
Linking land parcels with Unique Land Parcel	Yes	6
	No	3

Identification Number (ULPIN) / Bhu-Aadhaar	Don't Know	1
	Total	10
Linking digital copies of the land records to Aadhaar	Yes	1
	No	9
	Don't Know	0
	Total	10

Source: NACER's Land Study Survey, 2024

6.3.3. Status on Integration between land records and on-ground situation

For 9 out of 10 sample villages, patwaris stated that there is linkage between ROR and registration process and almost similar proportion of villages reportedly have linkages between ROR and birth and death registers (refer Table 6.7). With regard to time gap between occurrence of an event and mutation being attested, patwaris report that in 4 sample villages it has happened within two weeks, in 3 sample villages each it has happened within a month and within 3 months respectively. Delay in attestation of mutation is said to be caused by event intimation not being received by officers to enter mutation apart from non-availability of revenue officer to attest mutation (refer Table 6.7). The failure to receive intimation is not consistent with the statement that there is linkage with registration and birth and death registers and the position on DoLR website which shows availability of auto triggering of mutation facility in the State.

For 7 out of 10 sample villages, patwaris stated that the area of land parcels shown in RoR is the same as in digitised and vectorised CMs. In 2 sample villages there is no difference between on ground possession in land parcels and ownership recorded in RoR, whereas in remaining 8 villages there is a variation of less than 5 per cent (refer Table 6.7).

Table 6.7. Integration between land records and on-ground situation

Indicators	Sub-heads	No of villages
Link between ROR and registration process	Yes	9
	No	1
	Total	10
Link between RoR and birth and death registers	Yes	9
	No	0
	Don't know	1
	Total	10
	Within two weeks	4
	Within a month	3

Time gap between occurrence of event and a mutation being attested	Within 3 months	3
	Within 6 months	0
	Within 1 year	0
	More than 1 year	0
	No Response	0
	Total	10
Reasons for delay in attestation of mutation	Intimation not received to enter mutation	7
	Revenue officer not available to attest mutation	2
	Delay due to issues within dept and from public	0
	Usual time/no delay	1
	Total	10
Whether extent (area) of land parcels shown in RoR is the same as in digitised and vectorised CMs	Yes	7
	No	0
	Don't know	3
	Total	10
Extent to which the ground possession in land parcels differ from the ownership recorded	No difference	2
	Less than 5 per cent	8
	Between 5- 10 per cent	0
	Between 10- 25 per cent	0
	Total	10

Source: NACER's Land Study Survey, 2024

In 9 out of 10 sample villages, the land use of land parcels on ground is the same as shown in ROR (refer Table 6.8). Of these, 6 villages report no difference between actual land use and land use shown in RoR records, while in remaining 3 villages, they report a difference of less than 5 per cent.

With regard to recording of agricultural land use in ROR, in 4 villages only nature of land is recorded, while in other 5 villages both nature of land and crop are recorded in ROR.

In the case of non-agricultural land use, in 3 villages only non-agriculture is written, in 4 villages, the land records show simple mention of use like building, road, path, pond, etc. in ROR and in the remaining two the land records show further details of type and use of building, (residence, cowshed, shop, factory, etc) as mentioned by the concerned Patwaris. For all sample villages covered, the built-up-area is mentioned in the land record.

Table 6.8. Updation of ground situation of land use in land records

Indicators	Sub-heads	No of villages
Reflection of land use of land parcels shown in RoR	Yes	9
	No	1
	Total	10
Difference between on-ground land use and what is recorded in RoR	No difference	6
	Less than 5 per cent	3
	Total	9
Way in which agricultural land use is recorded in RoR	Nature of land- irrigated, rainfed, short term fallow, long term fallow, orchard, pasture, etc	4
	Nature of crop in each season- rice, wheat, mustard, pulses, vegetables, fruits etc.	0
	Both nature of land and crop	5
	Other	0
	Total	10
Way in which non-agricultural land use is recorded in RoR	No detail only recorded as non-agricultural	3
	Simple mention of use like building, road, path, pond, etc	4
	Further details of type and use of building, (residence, cowshed, shop, factory, etc)	2
	Further details of number of floors and built-up area of building	0
	Total	10
In case of non-agricultural land use, refection of built-up area in land record copies	Yes	9
	No	1
	Total	10

Source: NACER's Land Study Survey, 2024

Nine out of the 10 Patwaris said that location of all land parcels mentioned in RoR can always or mostly be understood by the given landmarks, while one did not think that landmarks were shown in the RoRs. Only four Patwaris are of view that the location landmarks given in the land records are quite helpful and upto date as on-ground (refer table 6.9).

Table 6.9. Updation of ground situation of land location in land records

Indicators	Sub-heads	No of villages
Is location of all land parcels shown in RoR by easily understood landmarks?	Yes-always	8
	Yes- in most cases	1
	Yes- in some cases	0
	Not shown	1
	Total	10
If shown, how good are the location landmarks for actually locating land parcels on the ground?	They are outdated since they date back to the last settlement and often do not exist	5
	Quite upto date and helpful	4
	Total	9

Source: NACER's Land Study Survey, 2024

The patwari responses were consistent with the data provided by State land revenue department which states that the digital database in Rajasthan are integrated to reflect mortgages only. However, patwaris stated that out of 10 sample villages, only in 5 villages, the mortgages have been linked to RoR to ensure record of encumbrances. Overall, these findings are similar to that reported on DOLR website, which states that land records in Rajasthan are not linked to revenue and civil courts.

The issue is that mortgages are not registered in Rajasthan. Once the banks give out a loan with land as collateral, they intimate the details to the tehsildar through a request letter for a mutation who enters and attests the mutation showing the charge with the bank. When the loan is repaid the landowner procures a letter to this effect from the bank and brings it to the tehsildar for a mutation to delete the charge against the land.

6.3.4. Overall status of digitization of land records and processes and suggestions.

Updation and accuracy of digitised land records

As per patwari responses, 7 villages have fully up to date and accurate records, whereas for other 3 villages, the records to a large extent are accurate and updated.

Suggestions by Patwaris for necessary actions

According to patwaris, following actions may be prioritized for improvement in coordination among various departments: greater interest of higher authorities to issue appropriate instructions and monitor implementation and more training of field staff.

6.4. Digitization of Land records and processes at State/UT Level

In addition to the census survey of land owners and patwaris in sample villages, the state land revenue departments were also contacted to provide the data on digitization of land records and its processes for the entire state to have broader perspective. For details refer Annexure Table 6.3A.

6.5. Government Owned Land

Out of total 228 land parcels in Jhajar Badla village of Kotra tehsil of Udaipur district, 23 land parcels are owned by the government. All of these khasras are under Rajya Sarkar and Gram Panchayat. Similarly, in Pitumbari village of Pindwara tehsil in Sirohi district, out of 227 land parcels, 47 comes under government control. While most of the government land in Jhajar Badla village is fallow land, in Pitumbari it is being used for community purposes like school, playground, cremation ground, road etc., with some portion being fallow land. The interviews for the government owned land parcels were conducted with the BDOs with responsibility for the area. Following are the key findings:

- 1) The respective government department who own land parcels in the sample villages have copies of the textual and spatial record pertaining to the land parcels.
- 2) In both the sample villages, while the textual record copies are downloadable from the website directly, spatial record copies are downloadable from the website only for Jhajar Badla village. For Pitumbari digital copies are available from revenue office.
- 3) While ULPIN is reflected in the land records of government owned khasras in the sample village of Jhajar Badla and Pitumbari, the Aadhaar number is not reflected in any of these records.
- 4) While the total land area under government ownership in Jhajar Badla village is 14 bigha, in Pitumbari, government owns 21 bigha land area in total. Further the land area is correctly mentioned in both textual and spatial land records in both the sample villages in case of government owned land parcels.
- 5) The land use in both villages is correctly shown as non-agricultural.

6.6. Summary and Conclusions

Based on the discussion with state departments the census of two villages was conducted in Udaipur and Sirohi district of Rajasthan. In addition to have broader understanding, 10 villages interview at patwari level were conducted in total. Jhajar Badla village in Udaipur district is a tribal village with lower levels of literacy. Therefore, despite digitization of land records pertaining to this village, there is lack of awareness amongst the land owners. In contrast, the other sample village i.e. Pitumbari from Sirohi district is a well-developed and prosperous village. Education levels and awareness levels are much higher in this village. Landowners even check their land record on their mobile phone.

The survey findings based on the land owners and patwaris for the sample 10 villages indicates that (refer Annexure Table 6.2A)

1. Majority of the land owners' (90% and above) are aware of and have seen the textual record of their land parcels. In many cases they possess digital copies (55%), often new and usually obtained from the e-service centre. Moreover, the digital copies are reported to have legal validity.
2. Copies of the spatial maps are seen by majority of the landowners. These copies are mostly digital in nature although just the scanned prints as mentioned by land owners and patwaris. Further, the survey finds integration of the textual and spatial record data bases.
3. By and large there is satisfaction among landowners that the details of ownership, possession, use, area and encumbrances are correctly reflected in the land record.
4. The sample villages in the two districts of Rajasthan indicates that the time gap between occurrence of event and a mutation being attested is relatively small (i.e. within 3 months) compared to some of the other States/ UTs where survey was conducted.
5. The patwari responses were sought only in relation to villages which are their responsibility. As such it was unlikely that they would point out any shortcomings in the record pertaining to their charge! It would have been appropriate to seek their views in general to elicit a more accurate position on issues like land use.

By large, the survey findings based on Land owners, Patwari and State revenue office is consistent with information on DoLR website. In the case of most indicators- such as recording of encumbrances, integration of textual and spatial land records, legal validity of digitally available land records this was the position.

Rajasthan is in line with the states that have reported a higher level of digitisation of land records and integration of data bases. The level of landowner satisfaction with the record appears high. The survey also brought out areas that need addressing in term of capacity building of revenue department field staff, better coordination among various departments, need to link land records with Aadhaar number and need for updating and accurate recoding of the landmark or locations of land parcels in the land records.

Chapter 7. Conclusion and Policy Recommendations

This chapter summarises the status of digitisation of land records based on the field investigation of land owners, patwaris and information about the status at State / UT level

7.1. Introduction

The National Land Records Modernisation Programme (NLRMP) was launched in 2008 as a centrally sponsored scheme. In 2016, it was relaunched as the Digital India Land Records Modernisation Programme and converted into a 100% centrally funded central sector scheme. The scheme, now extended till 2025-26, aims to develop a modern, comprehensive and transparent land record management system with the integration of all relevant data bases. According to DILRMP-MIS, 95.6 per cent of India's villages now have digitised RoRs, with 15 States / UTs having achieved 100 per cent digitisation of their textual land records. In addition to this, 95.7 per cent of SROs (657) have been computerised till date in India. This substantial progress is not matched in the case of cadastral maps where digitisation is only 60 per cent. Less than 55 per cent of these Cadastral Maps are Geo-referenced while the linkage between cadastral maps and RORs is reported as less than 75 per cent.

The availability of updated, accurate, transparent and comprehensive land records, not only help in reducing the transaction costs and the incidence of land disputes but also has a potential to address several longstanding issues in land management. Considering the immense benefits of digitised land records, it becomes imperative to expeditiously pursue this objective and evaluate the benefits that flow from this achievement. In this regard, regular monitoring and evaluation of the land records digitization efforts by States and UTs can yield valuable information about the perspectives of various stakeholders. The DoLR decision to undertake such an exercise in relation to landowners and grassroot revenue department officials is a step in this direction. This will help in understanding the extent to which there is awareness about digitisation, the extent to which digitised land records reflect ground reality and the utility of the records as perceived by users.

This study was commissioned in relation to four States and UTs and specifically aimed at: a) identifying the gaps in terms of progress of digitization of textual records, digitization of spatial records, computerization of registration process and integration between these components and gaps in the integration of various data bases that can ensure more uptodate, accurate and comprehensive land records, b) find out the extent to which RORs and Maps are being updated expeditiously; c) identify the status of mutation / subdivisions including the extent of problem due to people not applying for mutation / subdivisions in case of inheritance; and d) understanding the status and process of rectification in digitized records.

As per the design of the study given by DoLR, complete land parcel surveys of two villages in each of the 4 States / UTs i.e. Chandigarh, Delhi, Punjab and Rajasthan were conducted. Questionnaires were formulated to canvas the information (specified by DoLR) from the owners of all the land parcels in these villages. In addition to this, responses from the Patwaris (the keeper of the land record at village level) of an

additional 40 sample villages were obtained about the on-ground situation and progress of the DILRMP scheme. Information was also canvassed from the revenue departments of the respective States and UTs on their progress and experience regarding the digitisation of land records.

7.2. Summary of the findings

This section summarises the key findings of both progress and gaps at an aggregate level based on the information gathered from the land owners, patwaris and State/UT departments. The sample comprised 1,342 land parcel owners in the eight selected villages, patwaris responsible for 40 sample villages, relevant Tehsildars and Gram panchayats apart from state level data made available by the State revenue departments. The revenue departments of neither Chandigarh or Delhi responded to the request for overall information. *The village wise comparative assessment of land owners profile, digitization of land parcels, gaos and ground situation is given in Annexure Table 7.1A. The state level assessment of key parameters is given in Annexure Table 7.2A.*

The survey reveals substantial progress in achieving the targets of the DILRMP programme over the years. However, it is observed that despite this progress, there are still areas of concerns that need to be addressed. There is another important caveat in viewing these findings. The village selection has a bias since it was the state / UT which made the final choice and so these are not randomised representative samples. Furthermore, the patwari responses relate to villages in their charge and therefore there is less likelihood of shortcomings being pointed out by them in the land records they are responsible for maintaining.

(For state level summary, refer annexure tables 3.3A, 4.3A, 5.3A and 6.3A and for summary on land owners and patwari survey, refer annexure tables 3.4A, 4.4A, 5.4A and 6.4A).

The overall findings are summarised here.

- 1) *High awareness about textual land records but low about the availability and advantages of digital land records:* A majority of the land owners are aware of and have seen the textual land records pertaining to their land parcels. However, the awareness about availability of digital copies of the textual land records is much lower. The position is surprisingly poor on awareness about ease of access to copies of a digital record in the urbanised and literate areas like Chandigarh and Delhi. Even in cases, where land owners are aware about the digitised textual land records, the ease of access to these records by directly downloading from the web is very limited as most of them have obtained copies from the revenue offices. Only in case of Rajasthan, slightly less than 50 per cent of the land owners have obtained digital copies of the textual land records from the e-service centres. Rajasthan has also made significant progress in making available digitally signed RoRs as legally valid documents in the State.
- 2) *Land records reflecting the ground realities:* By and large there is satisfaction among landowners that the details of ownership, possession, use, area and encumbrances (only loan/ lien/ mortgage) are correctly reflected in the textual

land records. In cases where land owners have seen their spatial land records, a majority have shown satisfaction with the shape, boundaries and land area shown. There may be reason to believe that overall this high satisfaction level is because there are no disputes or differences on the various aspects of the land owned and not so much because a conscious effort has been made by landowners to see if the exact on ground situation is reflected in the record.

- 3) *Only slight variations in recording of on-ground possession details:* The survey found only slight variations in the recording of possession details as reflected on-ground and as recorded in RoR. The reason for this may be both because of the lack of disputes on land which leads to records not being questioned and in state like Rajasthan the fact that: a) there is no column of possession in RoR and b) Possession of any person other than owner/s is not allowed to be shown in the land records as per instructions.
- 4) *Low progress on digitization of spatial records:* Only in Rajasthan, three-fourth of the surveyed land owners are aware of and have seen their spatial land records (a majority have obtained the digital copies of the same from the revenue office). In all other surveyed States and UTs, most landowners have not seen the spatial land records or if seen, it is mostly manually drawn paper copies of the land parcel map. In many cases the maps are only scanned copies and in Punjab, it has been reported that the digitised spatial records are mostly the scanned maps of village mosaics. Chandigarh has reported making available vectorised digital spatial records on their portal. However, there is lack of awareness amongst land owners in this regard. In other words, in most states, the spatial map lacks the importance attached to the textual record for title and other legal purposes and therefore, is not given importance by landowners. Its importance in issues like sub division does not seem to be felt either.
- 5) *Land records lack integration with ULPIN and Aadhaar:* The survey shows that in most cases across all four States and UTs, the RORs (or cadastral maps) do not reflect ULPIN and Aadhaar numbers. Not only is the progress on linking RORs with Aadhaar number is very slow or negligible in surveyed States and UTs, most land owners and even patwaris lack awareness on the instructions regarding reflecting ULPIN in land records. Among the four surveyed States and UTs, only Rajasthan is found to have made some progress in linking ULPIN with RoRs, but here also a significant proportion of land owners, are unaware of this provision.
- 6) *Link between ROR and registration process:* The benefits of linking registration events with RoRs are still to be experienced in any significant way in most of the States and UTs. Even in Rajasthan which appear to have made most progress in digitising records and enabling benefits to flow from this, there was a gap in securing intimation of mutation in all cases.
- 7) *Recording of encumbrances:* Except for the Loan/ Lien/ Mortgages that is shown in the land records as mentioned by States and UTs surveyed (other than Chandigarh), all other encumbrances such as Revenue Court Proceedings (claimed to be shown by the authorities in Punjab but needs independent verification whether institution is actually linked and shown in RoR), Civil Court Proceedings, imposition of Town Planning restriction on land use or Sub division and imposition of other Restrictions/ Conditions to land parcels are not yet

reflected in the land records. Despite States making progress in recording loan/ mortgage details in the land records, the up-dation of the return/ clearance of any such loan/lien/ mortgage in the land records is still not taken up well. Overall, the creation of a comprehensive record showing all encumbrances related to land parcels is still distant in all the states.

- 8) *Status on digitisation of registration process:* The state level data as collected from State revenue department and through their online portals indicates that States have made progress in digitizing the registration process such as: provision for online portal for entry for registration, online facility for booking appointment slot, online circle rates, e-Calculator for citizens to compute fees, online PAN verification system integrated for registrations and availability of home visit module for registry of the document by SRO. However, there are still areas of concerns that seek quick actions by States: provision for capturing party signature using digital pen and pad during registration, online payment of registration fees, upload facility for identification documents, facility for online verification of payment/ scrutiny of requisite details and completion of registration process with digital signature and facility for immediate delivery of digitally signed registered documents.
- 9) *Lack of knowledge on procedure for rectification of errors in the records:* It is found that in instances where ground realities of the land parcels are not correctly reflected in the land records, there is lack of awareness among the land owners on how to get the record rectified. In most of the cases, land owners do not take actions for rectification due to lack of awareness on whom to reach out and to avoid the anticipated expenses involved in the rectification procedure.
- 10) *Time gap between occurrence of event and a mutation:* States and UTs are making progress in reducing the time gap between occurrence of event and a mutation as indicated by the survey. Except for Punjab, where this time gap is comparatively larger, in other surveyed States and UTs, as per the report of the functionaries it takes about a months' time to reflect the changes in the land records. In cases where, delays happen in mutation process, it is mainly on account of non-receipt of intimation to enter mutation, non-availability of the revenue officer to attest mutation, and delay due to issues within dept and from public. No state seems to have been able to effectively capture events such as death to initiate mutations relating to inheritance.
- 11) *Lack of proper data on land records at State level:* Despite several years of implementation of the DILRMP scheme and initiatives taken by states and UTs at various levels of digitizing and integrating their land records, it is found that few States and UTs are documenting properly various aspects of the digitization of land records. One reason is that these details are individually maintained by different departments of the States and UTs such as sub-registrar office, revenue office, tehsildar office etc., and a lack of coordination between them makes it difficult to compile the entire data at one place. States need to pay attention to creating ways to credibly capture and reflect the progress on digitisation and the manner in which various events are dealt with.
- 12) *Inconsistencies between DOLR website data and ground realities:* In the surveyed states and UTs, the details reported on DoLR website were often found

vary from that mentioned as the position on the ground. NCAER's earlier study on N-LRSI also reported on the mismatch between the DoLR website data and that revealed through online test checks that were conducted in two rounds during 2019-21. The present study also found inconsistencies that are particularly high in case of reported integration between land records and registration process and mutation time. In addition to these, Chandigarh also reported inconsistencies in recording of encumbrances, linking of spatial and textual records, while Delhi shows mismatch in the findings for availability of digitally signed copies that can be used legally. For Rajasthan, while most of the information gathered in this survey is consistent with reporting on DoLR website, there were some instances of variation. This kind of mismatch reduces the credibility of the data sets on the DoLR website. It can easily be remedied if the task of updating this information is taken more seriously at state level by ensuring co-ordination and accuracy in the data being reported to the DoLR.

- 13) Whether subdivisions reflected in spatial maps: Mutations typically involve two situations: (i) transfer of ownership or recording of encumbrance in relation to entire land parcels or (ii) transfer of sub divisions of land parcels. Usually in case of mutations of inheritance the entire land parcel will be transferred to another person or persons and therefore there is no question of subdivision here. If there is a division between heirs through a partition then sub division of land parcels may occur. Similarly, in case of transfer of part of a land parcel or a recording of encumbrance on part of a land parcel, a sub division will become necessary. These subdivisions will be recorded in the following manner in these States:

- Traditionally in *Punjab*, if a part of a land parcel is sold then a tatima is drawn showing the sub division of the land parcel with boundaries and line lengths. This tatima map will form part of the mutation document. The Patwari keeps a copy of the Shajra (village map or reference map that visually depicts the land parcels and their boundaries) on Cloth called 'Latha'. It gives survey numbers and dimension of a field (now-a-days usually prepared on the scale 40 Karam to one Inch). This Patwari's copy of latha is kept up-to-date through field inspection and incorporation of all transfers attested from time to time. Once mutation is done and details of subdivisions are recorded in RoR, patwari will mark the subdivision in spatial maps on his latha (cloth map). Even now, while subdivision is affected in the digitised RoR, it is not being affected in the digitised cadastral maps. The digital copies of spatial maps in Punjab are not publicly available as yet. For securing demarcation, online facility is available but for sub divided plots it can only be done using the Latha.
- Similarly, in case of *Chandigarh*, the subdivisions although marked in patwari records are not updated in the digitised spatial maps.
- The position is the same in *Delhi* as in Punjab / Chandigarh.
- In *Rajasthan*, it is reported that the tehsils which are online have digitized maps linked to the RoR (jamabandi). The number of khasras in the map is equal to the number of khasras in the jamabandi. If any khasra is divided in

the jamabandi, the map is also amended so that the jamabandi and map remain current. (Refer Annexure Table 6.3A, point 44).

7.3. Policy Recommendations

Digitizing the existing land record is just a beginning. It must be accompanied by awareness and efforts to enhance the quality of the record by ensuring an accurate reflection of the on-ground situation. Based on the overall findings of the report, following suggestions are recommended to be implemented at State/ UT level for improving the real time updation of the land records to reflect the ground realities.

- 1) The land (and property) records are maintained across different departments and agencies, and may, therefore, contain inconsistencies or may not have been updated to reflect the current picture. Therefore, there is an urgent need for improving coordination among various departments and integrating various databases for the timely updation of the records.
- 2) It is observed that land owners are quite satisfied with the land records reflecting the ground realities on ownership and possession details, land use pattern, location and area. However, for on-ground reflection of non-agriculture land use details in the land records, landowners mentioned shortcomings. This is because the separate column is not available to note the details of the built-up areas for non-agriculture land use e.g. floors, type of building, extent of the built-up area etc. The lack of such details in the land records creates space for various type of conflicts. Therefore, creating a separate column to record such details would not only gives more clarity on the non-agricultural land use but will also help in reducing discrepancies and conflicts, thereby making land records more comprehensive in nature.
- 3) While Punjab and Chandigarh have not linked the RoRs with birth and death registers, Delhi and Rajasthan have done it to some extent. It is therefore suggested that States and UTs should maintain genealogical tables (currently only Punjab is doing so) in which the names of the heirs are recorded/ listed. Therefore, if the birth and death registers are linked with RoRs (with genealogical tables) then whenever any landowner dies then the digital data bases can communicate both the need for a mutation and the details of heirs as a note to the RoR. This will ensure that inheritance mutations which are often delayed can be more timely.
- 4) So far, the encumbrances are mostly reflected in the land records in case of loan, lien and mortgages. However, the return or clearance of any such type of encumbrance is not necessarily reflected in the land records. The failure to update these details will restrict transaction/ sale of the land parcel. Therefore, it become important that provisions should be made to update these details as well in the records as soon as these kinds of restrictions are removed from the land parcel.
- 5) Lack of awareness among the land owners is again a very important point that is observed during the field work. Even patwaris lack certain information of digitization aspects of the land parcels. Further, whenever there are errors in land

records, people are not aware on whom to reach out to for correction. Short video clips on state websites may be considered to explain how various processes can be undertaken. Therefore, regular awareness campaigns may be organized for both land owners and patwaris regarding accessing digital land records, rectification procedures and cost involved at the village level and other land issues. Collaborative initiatives may be taken in this regard by local self-help groups, land revenue department officers, patwaris, tehsildars and gram panchayats.

- 6) In view of inconsistencies that are observed between survey findings and data on DoLR website across all four States and UTs, it is suggested that for effective implementation of DILRMP program at ground level, it is important that this addressed to bring greater credibility to the information being presented.

The survey also brought out the need for addressing issues in term of capacity building of revenue department field staff, adoption of latest technologies and software to expedite the linkage between ROR and registration process, mutation process, linking RoR with birth and death registers and linking RoR with ULPIN and Aadhaar number. In cases, where spatial records have been digitized, efforts should be made to convert them from just scanned copies to vectorised forms to reflect line lengths, land use and exact location. Provisions should be made available for citizen to apply online for correction of their RoRs.

Going forward, the assessment of the States and UTs progress on various aspects of digitisation at regular intervals of time offers a great opportunity to learn and initiate remedial action. The regular conduct of such exercises will not only help the Government secure better quality, but also helps States and UT to update their databases. The States/UTs can be requested to make updating a real-time exercise by standardising the links to the relevant databases and to carry out more quality checks of their records.

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ANNEXURE TABLES

Annexure Table 1.1.A. State-wise Physical progress of digitization of land records, Part I

S.N o.	State/ UT	Total RORs	Total Villages	CLR Complet ed (%)	Cadastral Maps	Digitised Cadastral Maps %
1	Andaman & Nicobar Islands	1,20,449	205	100.0	12,783	2.6
2	Andhra Pradesh	2,72,94,315	17,564	98.8	48,84,661	91.9
3	Arunachal Pradesh	0	5,591	0.0	0	0.0
4	Assam	43,78,822	23,033	85.5	23,534	85.7
5	Bihar	4,25,33,351	45,949	99.6	68,915	100.0
6	Chandigarh	5,392	25	100.0	108	100.0
7	Chhattisgarh	2,21,54,450	19,818	99.3	47,858	99.9
8	Goa	7,89,875	425	100.0	14,854	100.0
9	Gujarat	1,19,40,832	18,389	100.0	26,025	100.0
10	Haryana	49,29,960	7,100	97.0	56,081	91.8
11	Himachal Pradesh	11,87,349	21,067	99.3	1,80,433	90.6
12	Jammu & Kashmir	65,91,042	6,850	99.7	41,394	90.9
13	Jharkhand	24,14,830	32,945	99.3	53,574	99.5
14	Karnataka	1,68,45,472	30,715	95.7	1,60,05,335	52.7
15	Kerala	1,42,81,074	1,674	100.0	8,29,944	100.0
16	Ladakh	678	247	6.5	714	82.4
17	Lakshadweep	72,425	24	100.0	11,124	82.4
18	Madhya Pradesh	4,56,42,133	55,693	100.0	1,49,177	99.2
19	Maharashtra	2,40,07,776	44,798	100.0	50,21,213	29.2
20	Manipur	6,11,343	2,715	20.2	377	100.0
21	Meghalaya	0	6,750	0.0	0	0.0
22	Mizoram	3,56,587	911	54.3	3,56,587	90.0
23	Nagaland	1,07,830	1,600	32.0	1,008	100.0
24	NCT of Delhi	67,010	207	94.7	14	100.0
25	Odisha	1,45,62,018	51,788	99.9	1,15,403	100.0
26	Puducherry	2,98,219	130	100.0	20,881	100.0
27	Punjab	56,71,959	13,016	97.8	51,945	86.1
28	Rajasthan	1,22,28,831	48,719	97.3	1,52,184	91.8
29	Sikkim	1,82,596	421	98.1	5,423	100.0
30	Tamilnadu	2,32,01,068	16,810	99.9	55,40,181	100.0
31	Telangana	1,29,19,557	10,947	93.1	33,03,511	0.2
32	DNH & DD	96,352	100	98.0	3,036	100.0
33	Tripura	13,06,362	897	100.0	5,341	100.0
34	Uttarakhand	15,22,960	16,691	94.8	79,229	71.4
35	Uttar Pradesh	2,25,66,485	1,09,096	96.8	1,26,615	92.2
36	West Bengal	4,85,93,416	42,423	99.6	77,864	92.8
	Grand Total	36,94,82,818	6,55,333	1.0	3,72,67,326	0.6

Source: <http://dilrmp.gov.in> accessed Nov 16, 2024

Annexure Table 1.2A. State-wise Physical progress of digitization of land records – Part II

S.No	State/ UT	Cadastral Maps Geo-referenced %	Cadastral Maps linked to RoR%	MRR Sanctioned	MRR Completed (%)	Total SROs	SRO digitised %
1	Andaman & Nicobar Islands	2.0	26.3	0	0.0	5	100.0
2	Andhra Pradesh	95.4	94.5	167	50.9	290	100.0
3	Arunachal Pradesh	0.0	0.0	0	0.0	18	0.0
4	Assam	36.2	64.5	155	49.0	78	100.0
5	Bihar	97.2	96.7	534	85.4	137	100.0
6	Chandigarh	100.0	100.0	1	100.0	1	100.0
7	Chhattisgarh	0.0	97.9	181	80.7	102	100.0
8	Goa	100.0	100.0	2	50.0	12	100.0
9	Gujarat	100.0	99.9	253	100.0	287	100.0
10	Haryana	5.4	5.4	118	100.0	142	100.0
11	Himachal Pradesh	3.2	53.6	117	73.5	188	89.9
12	Jammu & Kashmir	86.2	12.6	148	0.0	86	98.8
13	Jharkhand	98.8	97.1	268	81.3	42	100.0
14	Karnataka	93.9	47.6	185	0.0	258	100.0
15	Kerala	24.2	0.1	14	100.0	315	99.7
16	Ladakh	4.5	11.7	1	0.0	12	100.0
17	Lakshadweep	33.3	37.5	0	0.0	10	0.0
18	Madhya Pradesh	99.9	99.9	351	100.0	234	100.0
19	Maharashtra	58.8	18.7	358	100.0	515	100.0
20	Manipur	6.3	0.0	31	51.6	40	40.0
21	Meghalaya	0.0	0.0	0	0.0	11	9.1
22	Mizoram	70.3	70.3	15	100.0	23	78.3
23	Nagaland	32.1	32.1	1	0.0	121	0.0
24	NCT of Delhi	32.4	32.4	0	0.0	22	100.0
25	Odisha	0.6	99.9	317	98.1	206	100.0
26	Puducherry	0.8	100.0	8	100.0	10	100.0
27	Punjab	47.0	0.9	28	71.4	181	100.0
28	Rajasthan	35.9	87.1	331	65.9	657	100.0
29	Sikkim	93.8	0.2	28	96.4	19	100.0
30	Tamil Nadu	25.7	4.4	313	74.1	582	100.0
31	Telangana	16.4	12.8	69	24.6	141	100.0
32	DNH & DD	35.0	35.0	1	0.0	3	66.7
33	Tripura	100.0	100.0	45	100.0	23	100.0
34	Uttarakhand	28.8	13.1	128	60.2	53	94.3
35	Uttar Pradesh	71.7	86.1	138	37.7	364	99.7
36	West Bengal	2.0	93.5	339	98.2	274	93.1
	Grand Total	0.5	0.7	4,645	0.8	5,462	1.0

Source: <http://dilrmp.gov.in> accessed Nov 16, 2024

Annexure Table 2.1A. Detaile Description of the 8 Sample villages

Jhanjhar Badla village, Udaipur, Rajasthan

This is a tribal village and education levels are relatively low. Land Parcels are a mix of agricultural land, non-agricultural land like Charagah (pasture) as well as some land in government ownership. The land records of the village are digitised but since education levels are low, there is limited understanding of this digitization. Approximately 8-10 per cent males from this village go to Gujarat to earn their livelihood. Topographically, the village is surrounded by forested hills, and has poor connectivity with the tehsil Kotra which is approximately 10 km from this village. Total plots in the village are 226 of which 203 are private land parcels, all under agriculture land use. Most of the government land is not being utilised in any manner. There is a provision for this land to be used for community purposes like a cremation ground, a water body or playground, etc., on the basis of a decision in a meeting in which the Patwari, BDO and Sarpanch are all present.

Patumbri village, Sirohi, Rajasthan

This village is well developed and prosperous. Digitization of land records is 100 per cent in this village and people are educated and well aware of digitised copies of land records. They are even able to check their land records on their mobile phone. Land Parcels are a mix of agricultural land, non-agricultural land like Charagah (pasture) as well as some land in government ownership. Apart from farming and animal husbandry, approximately 20 per cent people are engaged in other livelihood activities like property dealing and business selling groceries, household goods, items of clothing, etc. This commercial activity is concentrated in Swaroop Ganj (5 km from the village). There are 227 government plots and 178 private land parcels in this village. The latter are all under agriculture land use. The agriculture activity is not just dependent on rain water as most of the large farmers have their own borewells. Government land is being used for purposes like school, playground, cremation ground, road, etc. Some of the govt land is unutilised. There is a provision for this land to be used for community purposes on the basis of a decision in a meeting in which the Patwari, BDO and Sarpanch are all present.

Holambi Kalan village, Narela, Delhi

The village land is of two types: agriculture land falling under Holambi Khurd and Lal dora land comprising the built up area. There are approximately 61 khasra numbers recorded in government ownership (under DDA now), 204 private land parcels and 22 commercial plots in the village. Of the total land parcels, only 20-30 land parcels have agriculture land use. About 5 per cent of the people in this village live outside India. In the case of a few of the land parcels amongst the commercial plots, the owners of the businesses / factories have left the village and no one knows about their location/ contact details and hence they could not be contacted. In many cases, land in this village is still in name of an earlier generation which has passed on. Inheritance mutations have not been done in a number of cases. Land owners reported that mutations are pending since 2019 even though people have applied for the same. The people of this village are quite knowledgeable and informed and know about the online system to some extent. The Lal dora land is still awaiting a record and in its absence loans are difficult.

RaghoPur village, Kapasehra, Delhi

Land Record/ Khatauni (RoR) are updated in this village. All the activity and records pertaining to farmland is completely updated. People of this village are updated and informed about digitization. People are not aware if digital maps of their land parcels are available. The information made available is that these are not available in any useable form. Credit is said to be easily available in this village, but currently no one has taken any loan in this village. Prior to 2020, there were KCC loan on most of the plots in this village but in 2020 people paid of all those loans and no loans have been taken after that. The total number of Khasra numbers in village are 710, of which 30 percent are under government ownership. In the case of another 30 per cent of khasra numbers under private ownership, the owners do not reside in the village and in the absence of contact details, they could not be approached. The interviews have been conducted with the remaining 40 per cent of land owners.

Kheri Ranwa village, Patiala, Punjab

In Patiala district, Kheri Ranwa village in Dodhan Sadhan Sub-Tehsil under Patiala Tehsil has been covered. In Kheri Ranwa village there are 61 Khewats (owner accounts) with 386 land parcels, out of which 103 land parcels are owned by government departments and 283 by private individuals. All the privately held land parcels are being used for agricultural purpose. There are some land parcels owned by the Gram Panchayat which have been leased out to some landless and underserved households belonging to SC communities for the purpose of agriculture.

Chani village, Pathankot, Punjab

Chani village of Pathankot Tehsil consists of 300 land parcels. In this village all the land parcels are being used for agricultural purposes.

Butrela village, Chandigarh

In Butrela, there are a total of 283 land parcels of which 26 land parcels are owned by private individuals. Every one of these private land parcels has been sub divided amongst multiple owners (but the sub divisions are not recorded separately). The other 257 land parcels have been acquired by the LAO (Land Acquisition Officer) of Chandigarh Administration in different periods (between 1965 to 1978) and handed over to the Civil Engineering Department of Chandigarh Administration for the development of Capital Projects.

Attawa village, Chandigarh

In Attawa village, there are 261 land parcels of which only 15 land parcels are privately held while the other 246 land parcels have been acquired by the LAO (Land Acquisition Officer) of Chandigarh Administration in different periods (between 1965 to 1978) and handed over to the Civil Engineering Department of Chandigarh Administration in the following periods for the development of Capital Projects. Here also every one of the private land parcels has been sub divided amongst multiple owners (but the sub divisions are not recorded separately).

Annexure Table 3.1A. Socio-Demographic Profile of Land Owners

Indicators	Sub-heads	% distribution of land owners		
		Kheri	Chani	Total
Relationship with household head	Self	71.6	54.3	63.7
	Spouse of HH	4.7	15.5	9.7
	Parents of HH	2.5	0.0	1.4
	Son/daughter of HH	13.1	29.3	20.5
	Other Hhd members	6.2	0.9	3.7
	Other relatives	1.8	0.0	1.0
Age category	<=45 years	31.3	10.8	21.9
	46-60 years	51.6	26.3	40.0
	61 years and above	17.1	62.9	38.1
	Total	100.0	100.0	100.0
	Average Age	52.2	63.3	57.3
Gender	Male	85.5	72.8	79.7
	Female	14.5	27.2	20.3
Religion	Hinduism	14.9	87.5	48.1
	Islam	0.0	0.0	0.0
	Christianity	0.7	0.0	0.4
	Sikhism	84.4	12.5	51.5
Social category	General	90.2	12.5	54.6
	Other Backward Class	7.3	0.9	4.3
	Schedule Caste	2.5	84.5	40.0
	Schedule Tribe	0.0	2.2	1.0
Current marital status	Single/ Never married	0.0	0.0	0.0
	Currently married	81.5	84.9	83.0
	Separated/Divorced/ Married	18.5	15.1	17.0
	No response	0.4	0.0	0.2
Highest level of education completed	Illiterate	10.5	37.1	22.7
	Literate: without formal education	0.0	0.4	0.2
	Primary	3.6	24.6	13.2
	Middle	26.2	11.6	19.5
	Secondary	27.3	16.8	22.5
	Senior Secondary	16.0	0.9	9.1
	Graduate & abv	16.4	8.6	12.8
	No response	0.4	0.0	0.2
Employment status (over the last Twelve Months)	Employed / wage labour	1.1	15.5	7.7
	Self Employed – farmer	78.9	42.7	62.3
	Self Employed – nonfarm work	1.8	2.6	2.2
	Disabled/ retired/ out of workforce/ live on passive income	4.0	19.4	11.0
	Others	14.2	19.8	16.8
Number of land parcel owners		275	232	507

Source: NACER's Land Study Survey, 2024

Annexure Table 3.2A. Basic details of land parcels owned

Indicators	Sub-heads	% distribution of land owners		
		Kheri	Chani	Total
Number of land parcels (khasra/s) owned by Owner/s	One	0.4	4.7	2.4
	Two	2.2	3.0	2.6
	Three	5.1	0.0	2.8
	Four	2.9	6.5	4.5
	> Four	89.5	85.8	87.8
Manner of obtaining land parcel	Inherited from family	88.0	83.6	86.0
	Inherited from marriage/ spouse's family	0.0	0.0	0.0
	Bought from private individual	11.3	16.4	13.6
	Given by non-family member	0.0	0.0	0.0
	Gift from own/ spouse family	0.7	0.0	0.4
Number of land parcel owners		275	232	507

Source: NACER's Land Study Survey, 2024

Annexure Table 3.3A. State Level Status of Land Records Digitisation- Punjab

Module I. Record of Rights			
Q.No	Questions	Data available through various sources	Data Sources
1	Total number of Land Parcels in the State/UT	Total (Map Sheets): 51945	https://dilrmp.gov.in/bhoomisammannew/
2	Total number of Khata numbers in the State/UT	-	
3	Total number of Record of Rights (RoRs) in the State	56,71,959	https://dilrmp.gov.in/bhoomisammannew/
4	Total number of villages with computerized land records	Total villages: 13016	https://dilrmp.gov.in/bhoomisammannew/
		Completed villages: 12731	
		Percentage %: 97.8	
5	Is the list of all RoRs of the entire village available in the following manner for any citizen? Yes, can be viewed-1, Yes, can be downloaded-2, Both-3, None of above-4	Yes, can be downloaded	https://jamabandi.punjab.gov.in/Jamabandi.aspx?section=Khasra-Number-Wise&itemID=9&itemPID=3
6	What is the unit of land measurement used in RoR? What is its conversion rate in acres?	-	
7	Number of columns in RoRs; what details are prescribed to be captured in RoRs; What details are actually captured and not captured in practice?	-	
8	Describe terms used in RORs and Maps along with	-	

	English /Hindi standard terms in tabular form?		
9	Have manual records been discontinued so that digital records are the sole legal record? (Only manual records available-1, Only digital records available-2, Both manual and digital are in place-3, other-specify-4)	-	
10	No of RoRs computerized	-	-
11	Is RoR available on web portals for any citizen? (MR) Yes, can be viewed-1, Yes, can be downloaded-2, None of above-3	Yes, can be downloaded (after selecting filters such as khata, khasra number can download ROR in pdf format)	https://jamabandi.punjab.gov.in/FardRequest.aspx?section=Khasra-Number-Wise&itemID=27&itemPID=24
12	Is digitally signed RoR available for download by any citizen? Yes-1, No-2	-	
13	Is digitally signed RoR a legally valid document in the State? Yes-1, No-2	Not digitally signed, not legally valid; But there is an option on the RoR display page to apply for Certified Copy of the selected khewat (Fard) through courier and/or email after payment of fee	https://jamabandi.punjab.gov.in/Jamabandi.aspx?section=Khasra-Number-Wise&itemID=9&itemPID=3
14	Is digitally signed RoR verifiable through a QR code/ unique ID? Yes-1, No-2	No	https://jamabandi.punjab.gov.in/Jamabandi.aspx?section=Khasra-Number-Wise&itemID=9&itemPID=3
15	What is the average number of land holders in each RoR?	-	

16	What is the number of single land holder in RORs?	-	
17	In case of joint ownership in ROR, is share of each holder mentioned in RoR? Yes-1, No-2	Yes	https://jamabandi.punjab.gov.in/Jamabandi.aspx?section=Khewat-Number-Wise&itemID=8&itemPID=3
18	In which column, share of each land holder is mentioned?	3rd column	https://jamabandi.punjab.gov.in/Default.aspx?itemPID=1
19	How many applications are pending for including names in RoRs?	-	
20	In case of joint ownership in ROR, is sub-division of plot also mentioned? Yes-1, No-2 (Details of process followed may be briefly mentioned)	-	
21	Is an alert message sent to the registered mobile number in case of any change in that RoR / mutation? Yes-1, No-2	-	
22	Is there a provision for citizen to apply online for correction of their RoR? Yes-1, No-2	Yes (need to give info about Name, Mobile, E-mail, District, Tehsil, Village, about (options-Jamabandi, mutation, etc.), Select, Feedback)	https://jamabandi.punjab.gov.in/CorrectionRequest.aspx?itemPID=17
23	Total number of RoRs corrected in the last financial year? (Apr 2023-Mar 2024)	-	
24	Is RoR seeded with Aadhaar? Yes-1, No-2	-	

25	If yes, number of RoRs seeded with Aadhaar?	-	
26	Is RoR seeded with mobile number of land holder? Yes-1, No-2	-	
27	If yes, number of RoRs seeded with mobile?	-	
28	On what occasion phone number and Aadhaar are seeded?	-	
29	Is gender of land holder captured in RoR? Yes-1, No-2	Yes, not explicitly. With every name, its written son of, wife of, daughter of.	https://jamabandi.punjab.gov.in/Default.aspx?itemPID=1
30	If yes, how many females are land holders in your State/UT?	-	
31	Is RoR database linked with Cadastral maps? Yes-1, No-2	No. (Only village cadastral maps available. They are pictures of physical cadastral maps)	https://jamabandi.punjab.gov.in/CadastralMap.aspx?itemPID=19
32	If yes, Number of RoRs linked with Cadastral maps?	-	
33	Is mortgage mentioned in the RoR? Yes-1, No-2	Yes, the last column gives details about the loan on a particular ROR)	https://jamabandi.punjab.gov.in/Default.aspx?itemPID=1
34	Number of RoRs with mention of mortgage (as on date)?	-	
35	Please explain the process followed for mentioning the mortgage details in ROR?	-	
36	Is mortgage release updated in the RoR? Yes-1, No-2	-	

37	Please explain the process followed for mention of release of mortgage in RoR?	-	
38	Is RoR database linked with Banks for mortgage? Yes-1, No-2	-	
39	If yes, number of districts where RoR database linked with Banks for mortgage?	-	
40	Please provide the number of banks and bank branches where these are linked?	-	
41	Number of banks and bank branches which are not linked?	-	
42	Is online transliteration facility available for RoRs? Yes-1, No-2	No	https://jamabandi.punjab.gov.in/Jamabandi.aspx?section=Khewat-Number-Wise&itemID=8&itemPID=3
43	What are the documents/ registers maintained by the Revenue authorities in the State/UT related to RoR such as Jamabandi Register etc?	-	
44	Please explain a brief process flow of who maintains what kind of documents and when entries are made in these documents/ registers?	-	
45	Is RoR of Govt held land computerized in the State? Yes-1, No-2	Yes	https://jamabandi.punjab.gov.in/FardRequest.aspx?section=Khasra-Number-Wise&itemID=27&itemPID=24

46	Is land record of urban and peri-urban areas also digitized and updated? Yes-1, No-2	Yes	https://jamabandi.punjab.gov.in/Default.aspx?itemPID=1
47	If yes, how many urban RoRs are there and which entity maintains it?	-	
Module II. Cadastral Maps			
1	In which year the survey was last done in the State?	-	
2	Scale of available cadastral maps	-	
3	Total no of Cadastral Maps	Total (Map Sheets): 51941 Digitized (Map Sheets): 44730 Percentage %: 86.12	https://dilrmp.gov.in/bhoomisammannew/
4	Total number of maps scanned	-	
5	Total scanned maps converted into digital format (vectorized)	Not vectorized	https://jamabandi.punjab.gov.in/CadastralMap.aspx?itemPID=19
6	Total no of cadastral maps Geo-referenced	-	
7	Number of Land Parcels Geo-referenced	-	
8	Number of Land Parcels assigned ULPIN	1760916	https://dilrmp.gov.in/bhoomisammannew/
9	Whether any Other unique ID assigned (Is unique ID a random number or does the ID has some logical basis)? If logical, details of the same may be provided?	-	

10	Is online facility available for land owners to request survey of their land parcel for subdivision? Yes-1, No-2	Yes, for demarcation (Demarcation online facility available. Maybe not same as subdivision)	https://rcms.punjab.gov.in/DemarcationLand.aspx
11	Brief description of process flow from receipt of request to updating of sub-division including time taken (average days)	-	
12	Number of online requests pending for subdivision (as on date)	Total applications-71116 (for demarcation, and not pending but total)	https://rcms.punjab.gov.in/index.aspx
13	Are subdivisions updated in the cadastral map, as a practice? Yes-1, No-2	-	
14	Ratio of Survey number and RORs land holders per ROR	-	
Module III. Registration Details			
1	Total no of Sub Registrar Office (SROs) in the State	181	https://dilrmp.gov.in/PhyscialComponent/sro/state-level
2	Number of SROs computerized	181	https://dilrmp.gov.in/PhyscialComponent/sro/state-level
3	Month and Year of Computerisation of 1st SRO in the State?	November 17, 2017 (rolled out at district level)	State revenue department
4	Month and Year of computerisation of latest SRO in the State	June 2018	State revenue department
5	Number of land properties registered in SROs in FY 2023-24	All	State revenue department
6	Number of SROs integrated with Revenue Offices and Land Record database	All 181 done	State revenue department

7	Whether there is any provision for online entry of data when a transaction is to be registered? Yes-1, No-2 Don't know-3	Yes	State revenue department
8	Is there online facility for booking appointment slot for registration? Yes-1, No-2	Yes, for all (181)	State revenue department
9	What information/ details are captured during online system for appointment slot booking?	All details captured- Address, aadhaar, PAN, Mobile etc.	State revenue department
10	What Property attributes (survey number, door number, plot number, khasra, khewat, khatouni number, etc) are captured in online system?	All details captured in online system: details of buyers for booking, survey number, door number, plot number, khasra, khewat, khatouni number, urban plot nos etc.	State revenue department
11	Whether Circle Rates/ Ready Reckoner Rates/ Guideline values / Collector Rates for lands are available to citizens in then online registration software? Yes-1, No-2	Yes, this website has a list of all districts, tehsils within them, and sub-tehsil within them. Clicking on the links from the names we go to another page which has links for the pdfs of the rates.	https://revenue.punjab.gov.in/?q=collector-ratepunjab
12	Which mode is available for paying registration fees/ stamp duty for the land parcels? Purchase of stamp paper from vendor-1, Purchase of e-stamp papers-2, Online payment-3, All three options are available-4	All options available. E-stamping can be done upto Rs 500, above this amount need to vist vendor/ Bank. Online payment onlyavailable for online appointment. E-registration fees is available online.	State revenue department
13	Is e-Calculator (Online Stamp duty calculator)	Yes, available	State revenue department

	made available for citizens to compute fees? Yes-1, No-2		
14	Is party/ owner names and area details checked from Land Records (RoR) before registration? Yes-1, No-2	Yes	State revenue department
15	Is the copy of RoR downloaded as proof of checking? Yes-1, No-2	Yes	State revenue department
16	If not in Q15, what process is followed as proof for checking?	-	
17	Is this mandated in Rules, Standard operating practice (SOP), Manual or just a practice?	-	
18	In practice, how many year's registration deeds are searched by SRO before registration?	-	
19	Do SRO check seller's ownership document by past record? Yes-1, No-2	Yes	State revenue department
20	Which documents are captured for each party? PAN-1, Aadhaar number-2, mobile number-3, Others- 4 specify.....	It captures all documents for each party. However, online PAN verification not done yet	State revenue department
21	Is online PAN verification system integrated for Registrations involving higher cost? Yes-1, No-2	Not done yet	State revenue department
22	Is facility available to verify eKYC of Aadhaar/ PAN	Will be launched soon	State revenue department

	during admission of parties? Yes-1, No-2		
23	Whether party signature is captured using digital pen and pad? Yes-1, No-2	Not done yet	State revenue department
24	Whether the facility for online verification of payment/ scrutiny of requisite details and completion of registration process with digital signature available for the registration process? Yes-compulsory -1, Yes-optional -2, Not available -3	Yes , available	State revenue department
25	Whether the facility for immediate delivery of digitally signed registered documents available? Yes-compulsory-1, Yes-optional-2, Not available-3	Yes through digi locker	State revenue department
26	Whether identification documents upload facility is available? Yes-1, No-2	Yes	State revenue department
27	Whether SRO is able to complete registration online? Yes-1, No-2	Yes	State revenue department
28	Whether home visit module is available for registry of the document by SRO? Yes-1, No-2	Yes (mainly in cases such as medicl emergency, jail prisoners. Checklist is available online)	State revenue department
29	Whether SRO has facility to generate encumbrance certificate and e-search? Yes-1, No-2	Yes	State revenue department

30	Whether SRO can access legacy data as a ready reference? Yes-1, No-2	Yes, for 13 years	State revenue department
31	Does every registration trigger a corresponding digital mutation in the RoR? Yes-1, No-2	Yes	State revenue department
32	Whether SRO can push pending data of mutation in case of any network failure? Yes-1, No-2	Yes, can check in jamabandi	State revenue department
33	Whether SRO can check litigations online for a property scheduled for registration? Yes-1, No-2	Yes	State revenue department
34	Whether SRO is able to trigger SMS for important events during document registration? Yes-1, No-2	Yes	State revenue department
35	Whether there is an online registration system for citizens available through eKYC for first sale, Leave and License Agreements to facilitate presence less registration anywhere anytime? Yes-1, No-2	This will be done soon as testing is done and will be implemented soon	State revenue department
36	Whether dynamic deed templates are available? Yes-1, No-2	Available	State revenue department
37	Whether (AI Nibhrit) solution is available for masking personal information of PAN, Aadhaar number and	Implementation in process, but done asking for Aadhaar details to hide from public	State revenue department

	fingerprint impressions on registered pdf deeds? Yes-1, No-2		
38	Whether data of old registration deeds is available online? Yes-1, No-2 Don't know-3	Available by khewat/ khasra	State revenue department
39	If Yes=1, for how many years this legacy data is available? Upto 2 years-1, 2-5 years-2, 5-10 years-3, 10-25 years-4, > 25 years-5	2002 onwards jamabandi digitised	State revenue department
40	Whether an Online grievance redressal system is available for filing complaints related to property registration at Sub Registrar Office? Yes-1, No-2	Yes, common grievance redressal website is there for all govt. departments, not for SRO specifically	https://connect.punjab.gov.in/service/grievance/gr1
41	If yes, number of online grievances received and settled during FY 2023-24?	-	
42	Whether a document can be searched based on Name, Property details like survey number, deed number, etc? Yes-1, No-2	Yes, the details given in column E (Seller/Buyer Name, Khewat No, Registration No, Registration Date)	https://jamabandi.punjab.gov.in/RegistryDeed.aspx
43	Whether there is a mobile app developed for land registration related services? Yes-1, No-2	No	State revenue department
44	Whether sale of Govt. Land is blocked/ red-flagged (details of process followed	Not blocked	State revenue department

	be provided) in the State? Yes-1, No-2		
Module IV. Mutation Details			
1	Number of applications received for mutation in FY 2023-24?	-	
2	Number of applications disposed in FY 2023-24?	-	
3	Number of applications pending for mutation?	-	
4	Is online facility available for requesting mutation? Yes-1, No-2	Yes	https://jamabandi.punjab.gov.in/Mutation-After-Registry.aspx?itemPID=6
5	Is auto-trigger mutation facility available in the State/UT? Yes-1, No-2	-	
6	What type of transactions are eligible for auto-trigger mutation?	-	
7	How many such transactions occurred in FY 2023-24 which were eligible for auto-mutation?	-	
8	Of these, how many mutations were actually completed through auto-trigger?	-	
9	Number of mutations related to sub-division?	-	
10	Out of total mutation cases received through Registration how many are for mutation of land with entire Khasra?	-	

11	What is the process flow followed in the State/UT for mutation process?	-	
12	What is the process followed for receiving objections from public?	-	
13	Is SMS sent to all mobile number of all villagers? Yes-1, No-2	-	
14	Is there facility for objections to be sent online? Yes-1, No-2	Yes, can be done by clicking correction request and choosing mutation.	https://jamabandi.punjab.gov.in/CorrectionRequest.aspx?itemPID=17
15	What is the prescribed period for issue of mutation orders from the date of receipt and what is actual period in practice?	-	
16	Is SMS alert sent to applicant at each stage for his/her information? Yes-1, No-2	-	
17	Does Patwari submit his report online? Yes-1, No-2	-	
18	How is the certified order copy of the mutation sent to the applicant? 1. Through email, 2. Through whatsapp, 3. It is available for download from RCMS website	-	
19	How many cases are pending where mutation orders have been passed but certified copy is not yet sent to the applicant?	-	

20	Average number of days of pendency of such cases?	-	
21	Is Cyber Tehsil functional or proposed to be functional in the State? Yes, functional-1, Yes- Proposed-2, No-3	-	
22	If proposed, what is the stage?	-	
23	Are RoRs updated immediately after issue of mutation orders or does the State follow a different practice and cycle of updating of RoRs? Please explain	-	
24	In what type of mutation, request is carried out without inviting objection?	-	
Module V. Revenue Court Management System (RCMS)			
1	Total number of Revenue Courts in the State?	467 (verified by State department also)	https://rcms.punjab.gov.in/index.aspx
2	Number of Revenue Courts computerised?	All computerised	State revenue department
3	Number of revenue court cases handled in the computerized system in the last financial year (2023-24)?	almost all (more than 1 lakh)	State revenue department
4	Number of revenue court cases handled in the manual system in the last financial year (2023-24)?	-	
5	Does State have online system for public to enter case details? Yes-1, No-2	No, Registration by authorized users only	https://rcms.punjab.gov.in/index.aspx

6	Is yes, what details are captured at data entry stage?	-	
7	How is online appointment date and time notified to applicant? Through email-1, Whatsapp-2, Website-3	website	State revenue department
8	How is the court order typed? On the RCMS system directly-1, Separate PDF copy of the court order uploaded-2, other-3, specify.....	either on the template given there or interi order uploaded	State revenue department
9	How is court order sent to litigants? Email-1, Whatsapp-2, Posted on website-2, other- 3, specify.....	Check on website	State revenue department
10	How are the court hearings held? Online-1, Video conferencing-2, Physical mode-3, Hybrid-4, other-3, specify.....	physical mode only	State revenue department
11	How the court cases documents are stored in the court? Electronically-1, Physically-2, other-3, specify.....	both electronically and physical	State revenue department
12	Is Land Records database linked to RCMS system? Yes-1, No-2	Yes, one can see the RORs which are under litigation	https://rcms.punjab.gov.in/PublicPropUnderDisputeRpt.aspx
13	Can RoR be viewed/downloaded by Revenue Courts? Yes, can be viewed-	Yes, can be downloaded by anyone even by the revenue court	https://jamabandi.punjab.gov.in/Dashboard.aspx?itemPID=2

	1, Yes, can be downloaded- 2, Both -3, None of above-4		
14	Is Registration software linked to RCMS software enabling pushing of land registration to auto-mutation? Yes-1, No-2	-	
15	Is the fact of a pending revenue court case red-flagged in RoR? Yes-1, No-2	-	
15a	Number of revenue court cases red-flagged in the RoR (as on date)?	-	
15b	What system is followed in the State for red-flagging revenue court cases?	-	
15c	What exact remarks are mentioned on the RoR?	-	
15d	The remarks are mentioned in which column?	-	
<i>Details of Civil Court Cases in RORs</i>			
16	Is Land Records database linked to e-Courts system of Civil courts? Yes-1, No-2	-	
17	If yes, how many e-Courts are linked with LR database?	-	
18	Whether RoR can be viewed/ downloaded by Civil Courts? Yes, can be viewed-1, Yes, can be downloaded-2, Both viewed & downloaded-3, No-4	Yes, can be downloaded by anyone, even by the civil courts	https://jamabandi.punjab.gov.in/Dashboard.aspx?itemPID=2

19	Is the fact of a pending civil court case red-flagged in RoR? Yes-1, No-2	-	
19a	If yes, number of civil court cases red-flagged in the RoR (as on date)?	-	
19b	What is the system followed in the State for red-flagging civil court cases in ROR?	-	
19c	What exact remarks are mentioned on the RoR for civil court case?	-	
19d	The remarks are mentioned in which column?	-	

Note: While the two sections on registration and RCMS are directly provided by the Punjab revenue department, for remaining sections, data has been compiled from secondary sources including state website and DOLR.

Source: NACER's Land Study Survey, 2024

Annexure Table 3.4A. Progress & Gaps in Digitisation of Land Records for Punjab- Summary

Q. No	Particulars	Kheri Ranwa	Chani	Punjab
1	What are the differences between spatial records and the textual records, especially in terms of following:			
a	Extent (area) of the land parcels	Generally those who have seen the spatial records, for them the extent (area) of the land parcels does not have any differences in spatial and textual records.		
b	Updation of partition and demarcation actions	Only village level scanned copies of spatial records are available with Patwaris and some land onwers have taken photocopes or pictures of the same for their own land parcel form Patwari.		
2	What are the differences between on-ground status and land records status in terms of ownership details			
a	Is RoR able to capture ownrship details corectly as on-ground situaton (including where applicable, multiple, share-based and other forms ownership that may exist)?	Ownership by name correctly mentioned in land records as per on-ground status: 99.3%; For joint ownership, the names of all co-owners having land possession of the land parcel corectly shown in land records; 98.9%	Ownership by name correctly mentioned in land records as per on-ground status: 98.7%; For joint ownership, the names of all co-owners having land possession of the land parcel corectly shown in land records; 96.9%	Ownership by name correctly mentioned in land records as per on-ground status: 99%; For joint ownership, the names of all co-owners having land possession of the land parcel corectly shown in land records; 97.9%
b	Is the RoR format able to capture non-agricultural land uses in detail (e.g. in- built up areas, ownership of flats or individual floors)?	Among the land owners having non-agricultural land use, more than 80% have said, the land use details are correctly mentioned.		

c	Does the on-ground ownership details, including any built-up area on the land parcel, coincide with the details in land record, especially in context of shared ownership. Or multiple owners?	Out of 187 land parcels that shows joint ownership, in 185 of them, the land use details are correctly mentioned.	Out of 193 land parcels that show joint ownership, in 190 of them the land use details are correctly mentioned.	Out of 380 land parcels that show joint ownership, in 375 of them , the land use details are correctly mentioned.
d	If not up-to-date, how land has the record remained un-updated, and likely reasons for the same?	Not applicable	Not applicable	Not applicable
3	What are the differences between on-ground status and land records status, in terms of Classification of land parcel?			
a	Is there a difference between the on-ground use of land, and the one stated in ROR?	98.55% say there is correct recording of land use details in the land records as it appears on-ground. Out of 276 land parcel owners, 272 say that the details are correctly mentioned.	98.3% say there is correct recording of land use details in the land records as it appears on-ground. Out of 232 land parcel owners, 228 say that the details are correctly mentioned.	98.4% say there is correct recording of land use details in the land records as it appears on-ground. Out of 508 land parcel owners, 500 say that the details are correctly mentioned.

b	Is the ROR format able to capture non-agricultural land uses in detail?	85.7% are correctly mentioned in land records about non-agricultural land use. Out of 7 land owners with non-agricultural land use, 6 have said that the details are correctly mentioned in land records. Details of non-agricultural land use; Built-up:28.6%, Other:71.4%	86.67% are correctly mentioned in land records about non-agricultural land use. Out of 15 land owners having non-agricultural land use, 13 of them have said, the land use details are correctly mentioned. Details of non-agricultural land use; Built-up:46.7%, Courtyard, Pond, etc. 33.3%, Other:20%	86.36% are correctly mentioned in land records about non-agricultural land use. Out of 22 land owners having non-agricultural land use, 19 of them have said, the land use details are correctly mentioned. Details of non-agricultural land use; Built-up:40.9%, Courtyard, Pond, etc. 22.7%, Other:36.4%
c	If not up-to-dated, how long has the record not been updated, and reasons for the same?	Out of 276 land parcel owners, 272 say that the details are correctly mentioned. None have mentioned about details being incorrect.	Out of 232 land parcel owners, 228 say that the details are correctly mentioned. One has said there is no separate column for mentioning built-up features, hence	Out of 508 land parcel owners, 500 say that the details are correctly mentioned.

			there is incorrect recording in the land records.	
4	What are the differences between on-ground status and land records status, in terms of Location and extent of the land parcel?	Locations are mostly ckaer and detailed and most of the cases they are updated.		
a	What is the difference between the on-ground location, and that marked in the revenue maps (these maps would be the latest legally relevant spatial records available)?	Not Applicable	Not Applicable	Not Applicable
b	What is the difference in area between on-ground situation, spatial records on paper, and Records of Rights?	Generally those who have seen the spatial records, for them the extent (area) of the land parcels does not have any differences in spatial and textual records.		
c	If there is a difference between the two, then percentage of error for selected land parcels?	Not Applicable	Not Applicable	Not Applicable
d	Have on-ground partition and demarcation proceedings been incorporated in textual and spatial records?	Not Applicable	Not Applicable	Not Applicable

5	What are the differences between on-ground status and land records status, in terms of Encumbrances on parcel?	Only mortgage/loan and lien are reported to be reflected in land records	Only mortgage/loan and lien are reported to be reflected in land records	Patwaris say mortgages, revenue records, civil records are recorded in ROR. This is consistent with the data from state revenue department.
6	What are the various encumbrances (e.g. loans, liens, mortgages, litigations, court orders, acquisition proceedings) on the land parcels, and how many of these are mentioned on the RoR?	-	-	Majorly loan/lien mortgages. It shows RCMS and civil court cases in RoRs where litigation exists.

Note: Data summarized based on village survey of land owners and patwaris

Source: NACER's Land Study Survey, 2024

Annexure Table 4.1A. Socio-Demographic Profile of Land Owners

Indicators	Sub-heads	Buterla	Attawa	Total
		% Distribution of land owners		
Relationship with household head	Self	57.7	51.7	54.5
	Spouse of HH	3.8	6.9	5.5
	Parents of HH	3.8	13.8	9.1
	Son/daughter of HH	7.7	27.6	18.2
	Other Household members	19.2	0.0	9.1
	Other relatives	7.7	0.0	3.6
Age category	<=45 yrs	15.4	20.7	18.2
	46-60 yrs	38.5	34.5	36.4
	61 years and abv	42.3	44.8	43.6
	Total	96.2	100.0	98.2
	Average Age	60.3	55.5	57.7
Gender	Male	88.5	69.0	78.2
	Female	11.5	31.0	21.8
Religion	Hinduism	0.0	24.1	12.7
	Islam	0.0	0.0	0.0
	Christianity	0.0	0.0	0.0
	Sikhism	100.0	75.9	87.3
Social category	General	80.8	96.6	89.1
	OBC	19.2	3.4	10.9
	Schedule Caste	0.0	0.0	0.0
	Schedule Tribe	0.0	0.0	0.0
Current marital status	Single/ Never been married	0.0	0.0	0.0
	Currently married	80.8	75.9	78.2
	Separated/Divorced	19.2	24.1	21.8
	no response	0.0	0.0	0.0
Highest level of education completed	Illiterate	19.2	6.9	12.7
	Literate: without formal education	0.0	0.0	0.0
	Primary	7.7	10.3	9.1
	Middle	7.7	3.4	5.5
	Secondary	42.3	44.8	43.6
	Senior Secondary	11.5	3.4	7.3
	Graduate & abv	11.5	31.0	21.8
	no response	0.0	0.0	0.0
Employment status (over the last Twelve Months)	Employed / wage labour	3.8	13.8	9.1
	Self Employed – farmer	30.8	3.4	16.4
	Self Employed – nonfarm work	11.5	44.8	29.1
	Disabled/ retired/ out of workforce/ live on passive income	26.9	13.8	20.0
	Others	26.9	24.1	25.5
Number of land parcel owners		26	29	55

Source: NACER's Land Study Survey, 2024

Annexure Table 4.2A. Basic details of land parcels owned

Indicators	Sub-heads	Buterla	Attawa	Total
		% Distribution of land owners		
Number of land parcels (khasra/s) owned by Owner	One	76.9	93.1	85.5
	Two	23.1	6.9	14.5
	Three	0.0	0.0	0.0
	Four	0.0	0.0	0.0
	> Four	0.0	0.0	0.0
Way of obtaining land parcel	Inherited from family	80.8	44.8	61.8
	Inherited through marriage/ spouse's family	0.0	0.0	0.0
	Bought from private individual	19.2	55.2	38.2
	Given by non-family member	0.0	0.0	0.0
	Gift from own/ spouse family	0.0	0.0	0.0
Number of land parcel owners		26	29	55

Source: NACER's Land Study Survey, 2024

Annexure Table 4.3A. State Level Status of Land Records Digitisation- Chandigarh

Q.No	Indicatorss	Data available through various sources	Secondary source link
A	Module I. Record of Rights		
1	Total number of Land Parcels in the State	-	
2	Total number of Record of Rights (RoRs) in the State	5392	https://dilrmp.gov.in/#
	No of RoRs computerized	-	-
3	Is RoR of Govt held land computerized in the State? Yes-1, No-2	Yes	https://revenue.chd.gov.in/Nakal.aspx
4	What are the documents/ registers maintained by the Revenue authorities in the State related to RoR such as Jamabandi Register etc?	-	
5	Please explain a brief process flow of who maintains what kind of documents and when entries are made in these documents/ registers?	-	
7	Is RoR available on web portals for any citizen? (MR) Yes, can be viewed-1, Yes, can be downloaded-2, None of above-3	Yes, (It can be viewed only)	https://revenue.chd.gov.in/Nakal.aspx
8	Is digitally signed RoR available for download by any citizen? Yes-1, No-2	Not digitally signed	https://revenue.chd.gov.in/Nakal.aspx
9	Is digitally signed RoR a legally valid document in the State? Yes-1, No-2	-	
10	Is digitally signed RoR verifiable through a QR code/ unique ID? Yes-1, No-2	-	
11	Have manual records been discontinued so that digital records are the sole legal record? (Only manual records available-1, Only digital records available-2, Both manual and digital are in place-3, other-specify-4)	-	

2a	Total number of villages with computerized land records	Total (Villages): 25; Completed (Villages): 25; Percentage: 100	https://dilrmp.gov.in/PhysicalComponent/CLR/state-level
12	Is the list of all RoRs of the entire village available in the following manner for any citizen? Yes, can be viewed-1, Yes, can be downloaded-2, Both-3, None of above-4	None of the above	https://revenue.chd.gov.in/Nakal.aspx
13	How many Khata numbers are there in total in the State?	-	
14	What is the average number of land holders in each RoR?	-	
15	What is the number of single land holder in RORs?	-	
16	How many applications are pending for including names in RoRs?	-	
17	In case of joint ownership in ROR, is share of each holder mentioned in RoR? Yes-1, No-2	Yes	https://revenue.chd.gov.in/Nakal.aspx
18	In which column, share of each holder is mentioned to be elaborated?	Last column of the ROR; not the share but area in units	https://revenue.chd.gov.in/Nakal.aspx
19	In case of joint ownership in ROR, is sub-division of plot also done? (Details of process followed may be briefly mentioned)	Request for Demarcation facility available online	https://revenue.chd.gov.in/Demarcation.aspx
20	Is RoR seeded with Aadhaar? Yes-1, No-2	No	https://dilrmp.gov.in/PhysicalComponent/CLR/state-level
21	If yes, number of RoRs seeded with Aadhaar? Yes-1, No-2		
22	Is RoR seeded with mobile number of land holder? Yes-1, No-2	No	https://dilrmp.gov.in/physicalProgressReports/aadhar-link/state-level
23	If yes, number of RoRs seeded with mobile?	-	
24	On what occasion phone number and Aadhaar are seeded?	-	
25	Is an alert message sent to the registered mobile number in case of any change in that RoR / mutation? Yes-1, No-2	-	

26	Is there a provision for citizen to apply online for correction of their RoR? Yes-1, No-2	-	
27	Total number of RoRs corrected in the last financial year? (Apr 2023-Mar 2024)	-	
28	Is RoR database linked with Cadastral maps? Yes-1, No-2	Yes, (Can apply filters of khasra no. to view cadastral map, can't see if the maps are linked to the khatuni)	https://bhunaksha.chd.gov.in/
29	If yes, Number of RoRs linked with Cadastral maps?	100%, Cadastral Maps linked to Record of Rights (Villages)	https://dilrmp.gov.in/#
30	Is RoR database linked with Banks for mortgage? Yes-1, No-2	-	
31	If yes, number of districts where RoR database linked with Banks for mortgage?	-	
32	Please provide the number of banks and bank branches where these are linked?	-	
33	Number of banks and bank branches which are not linked?	-	
34	Is mortgage mentioned in the RoR? Yes-1, No-2	No	https://revenue.chd.gov.in/Nakal.aspx
35	Please explain the process followed for mentioning the mortgage details in ROR?	-	
36	Number of RoRs with mention of mortgage (as on date)?	-	
37	Is mortgage release updated in the RoR? Yes-1, No-2	-	
38	Please explain the process followed for mention of release of mortgage in RoR?	-	
39	Is online transliteration facility available for RoRs? Yes-1, No-2	-	

40	Number of columns in RoRs; what details are prescribed to be captured in RoRs; What details are actually captured and not captured in practice?	Khewat number, khatauni number, Nam Patti, Owner's name, Tenant's name, Khasra number, Area, Type of land, Remarks	https://revenue.chd.gov.in/Nakal.aspx
41	Is gender of land holder captured in RoR? Yes-1, No-2	No	https://revenue.chd.gov.in/Nakal.aspx
41a	If yes, how many females are land holders in your State?	9%	https://dhsprogram.com/pubs/pdf/FR375/FR375.pdf
42	What is the unit of land measurement used in RoR?	-	
	What is its conversion in acres?		
42a	What is the conversion rate of the unit of land measurement used in RoR in acres?	-	
43	Is land record of urban and peri-urban areas also digitized and updated? Yes-1, No-2	Yes (100% Digitization)	https://dilrmp.gov.in/#
44	If yes, how many urban RoRs are there and which entity maintains it?	-	
45	Describe terms used in RORs and Maps along with English /Hindi standard terms in tabular form?	-	
B	Module II. Cadastral Maps	-	
1	In which year the survey was last done in the State?	-	
2	Scale of available cadastral maps	-	
3	Total no of Cadastral Maps	Total Map Sheets : 108; Digitized Map Sheets: 108; Percentage % : 100%	https://dilrmp.gov.in/#
4	Total number of maps scanned	108	https://dilrmp.gov.in/#
5	Total scanned maps converted into digital format (vectorized)	-	

6	Total no of cadastral maps Geo-referenced	108	https://dilrmp.gov.in/physicalProgressReports/map/state-level
7	Number of Land Parcels Geo-referenced	0	https://dilrmp.gov.in/physicalProgressReports/map/state-level
8	Number of Land Parcels assigned ULPIN	11662	https://dilrmp.gov.in/bhoomisammannew/
9	Whether any other unique ID assigned (Is unique ID a random number or does the ID has some logical basis? If logical, details of the same may be provided?	-	
10	Is online facility available for land owners to request survey of their land parcel for subdivision? Yes-1, No-2	Yes, a request for demarcation is available. Applicants can provide details such as name, khewat, village or city, address ownership details etc. and request for demarcation.	https://revenue.chd.gov.in/Demarcation.aspx
11	Brief description of process flow from receipt of request to updating of sub-division including time taken (average days)	-	
12	Number of online requests pending for subdivision (as on date)	-	
13	Are subdivisions updated in the cadastral map, as a practice? Yes-1, No-2	-	
14	Ratio of Survey number and RORs land holders per ROR	-	
C	Module III. Registration		
1	Total no of Sub Registrar Office (SROs) in the State	1	https://dilrmp.gov.in/bhoomisammannew/

2	Number of SROs computerized	1	https://dilrmp.gov.in/bhoomisammannew/
3	Month and Year of Computerisation of 1st SRO in the State?	-	
4	Month and Year of computerisation of latest SRO in the State	-	
5	Number of land properties registered in SROs in FY 2023-24	5,392 (No. of ROR)	https://dilrmp.gov.in/PhyscialComponent/CLR/state-level
6	Number of SROs integrated with Revenue Offices and Land Record database	1	https://dilrmp.gov.in/PhyscialComponent/sro/state-level
7	Is there online facility for booking appointment slot for registration? Yes-1, No-2	Yes, under property registration-online appointment	https://revenue.chd.gov.in/signin.aspx
8	What information/ details are captured during online system for appointment slot booking?	Needs registration and asks for info like address, electricity bill, etc. Only property owner can check this info as software asks for property registration details.	https://revenue.chd.gov.in/SelfRegistration/AddDetails.aspx
9	What Property attributes (survey number, door number, plot number, khasra, khewat, khatouni number, etc) are captured in online system?	-	
10	Whether anywhere registration is allowed in the state? Yes-1, No-2	-	

11	Whether sale of Govt. Land is blocked/ red-flagged (details of process followed be provided) in the State? Yes-1, No-2	Not in registration software, but a link provided which gives a pdf of these details.	https://revenue.chd.gov.in/sro.pdf
12	Whether Circle Rates/ Ready Reckoner Rates/ Guideline values / Collector Rates for lands are available to citizens in then Registration software? Yes-1, No-2	Yes	https://revenue.chd.gov.in/OnlineReg.aspx
13	Is Online payment facility available for application fee - Stamp duty, registration fees, etc? Yes-1, No-2	Yes	https://revenue.chd.gov.in/StampDuty.aspx
14	Is e-Calculator (Online Stamp duty calculator) made available for citizens to compute fees? Yes-1, No-2	-	
15	Is party/ owner names and area details checked from Land Records (RoR) before registration? Yes-1, No-2	-	
15a	Is the copy of RoR downloaded as proof of checking? Yes-1, No-2	-	
15b	If not in Q15a, what process is followed as proof for checking?	-	
16	Is this mandated in Rules, Standard operating practice (SOP), Manual or just a practice?	-	
17	In practice, how many year's registration deeds are searched by SRO before registration?	Copy of PAN of both seller and buyer, Residence Proof, 2 not of witnesses, Proof of ownership of property, copy of deed of conveyance, copy of sewerage certificate, affidavits by estate office, photo of	https://revenue.chd.gov.in/SROChecklist.pdf

		executants & claimants of the deed, copy of fard (Nakal) if agri land, report of naib tehsildar revenue, memorandum with resolution, copy of partnership deed with authority letter from other partners, copy of GST/blank pass book	
18	Do SRO check seller's ownership document by past record? Yes-1, No-2	-	
19	Which documents are captured for each party? PAN-1, Aadhaar number-2, mobile number-3, Others- 4 specify.....	-	
20	Is online PAN verification system integrated for Registrations involving higher cost? Yes-1, No-2	-	
21	Is facility available to verify eKYC of Aadhaar/ PAN during admission of parties? Yes-1, No-2	-	
22	Whether party signature is captured using digital pen and pad? Yes-1, No-2	-	
23	Whether identification documents upload facility is available? Yes-1, No-2	-	
24	Whether SRO is able to complete registration online? Yes-1, No-2	-	
25	Whether home visit module is available for registry of the document by SRO? Yes-1, No-2	-	

26	Whether SRO has facility to generate encumbrance certificate and e-search?	-	
27	Whether SRO can access legacy data as a ready reference? Yes-1, No-2	-	
28	Does every registration trigger a corresponding digital mutation in the RoR? Yes-1, No-2	-	
29	Whether SRO can push pending data of mutation in case of any network failure? Yes-1, No-2	-	
30	Whether SRO can check litigations online for a property scheduled for registration? Yes-1, No-2	-	
31	Whether SRO is able to trigger SMS for important events during document registration? Yes-1, No-2	-	
32	Whether there is an online registration system for citizens available through eKYC for first sale, Leave and License Agreements to facilitate presence less registration anywhere anytime? Yes-1, No-2	-	
33	Whether dynamic deed templates are available? Yes-1, No-2	Yes	https://pgportal.gov.in/
34	Whether (AI Nibhrit) solution is available for masking personal information of PAN, Aadhaar number and fingerprint impressions on registered pdf deeds? Yes-1, No-2	-	
35	From which year is digitised legacy data available?	-	
36	Whether an Online grievance redressal system is available for filing complaints related to property registration at Sub Registrar Office? Yes-1, No-2	-	
37	If yes, number of online grievances received and settled during FY 2023-24?	-	
38	Whether a document can be searched based on Name, Property details like survey number, deed number, etc? Yes-1, No-2	-	
39	Whether there is a mobile app developed for land registration related services? Yes-1, No-2	-	

D	Module IV. Mutation		
1	Number of applications received for mutation in FY 2023-24?	719	https://revenue.chd.gov.in/SRODASHBOARD.aspx
2	Number of applications disposed in FY 2023-24?	558	https://revenue.chd.gov.in/SRODASHBOARD.aspx
3	Number of applications pending for mutation?	161	Computed based on above two uestions
4	Is online facility available for requesting mutation? Yes-1, No-2	-	
5	Is auto-trigger mutation facility available in the State? Yes-1, No-2	-	
6	What type of transactions are eligible for auto-trigger mutation?	-	
7	How many such transactions occurred in FY 2023-24 which were eligible for auto-mutation?	-	
8	Of these, how many mutations were actually completed through auto-trigger?	-	
9	Number of mutations related to sub-division?	-	
10	Out of total mutation cases received through Registration how many are for mutation of land with entire Khasra?	-	
11	What is the process flow followed in the State for mutation process?	-	
12	What is the process followed for receiving objections from public?	-	
13	Is SMS sent to all mobile number of all villagers? Yes-1, No-2	-	
14	Is there facility for objections to be sent online? Yes-1, No-2	No	https://eservices.chd.gov.in/Default.aspx
15	What is the prescribed period for issue of mutation orders from the date of receipt and what is actual period in practice?	-	
16	Is SMS alert sent to applicant at each stage for his information? Yes-1, No-2	-	
17	Does Patwari submit his report online?	-	

18	Are certified order copy of the mutation sent to the applicant through email or whatsapp or is it available for download from RCMS website? Yes-1, No-2	-	
19	How many cases are pending where mutation orders have been passed but certified copy is not yet sent to the applicant?	-	
19a	Average number of days of pendency of such cases?	-	
20	Is Cyber Tehsil functional or proposed to be functional in the State? Yes-1, No-2	-	
20a	If proposed, what is the stage?	-	
21	Are RoRs updated immediately after issue of mutation orders or does the State follow a different practice and cycle of updating of RoRs?	-	
21a	If yes, provide us the details of process and cycle followed for updating?	-	
22	In what type of mutation request it is carried out without inviting objection?	-	
E	Module V. Revenue Court Management System	-	
1	Total number of Revenue Courts in the State?	-	
2	Number of Revenue Courts computerised?	-	
3	Number of revenue court cases handled in the computerized system in the last financial year (2023-24)?	-	
4	Number of revenue court cases handled in the manual system in the last financial year (2023-24)?	-	
5	Does State have online system for public to enter case details? Yes-1, No-2	-	
5a	Is yes, what details are captured at data entry stage?	-	
6	How is online appointment date and time notified to applicant? Through email-1, Whatsapp-2, Website-3	-	
7	How is the court order typed? On the RCMS system directly-1, Separate PDF copy of the court order uploaded-2, other-3, specify.....	-	
8	How is court order sent to litigants? Email-1, Whatsapp-2, Posted on website-2, other- 3, specify.....	-	

9	How are the court hearings held? Online-1, Video conferencing-2, Physical mode-3, Hybrid-4, other-3, specify.....	-	
10	How the court cases documents are stored in the court? Electronically-1, Physically-2, other-3, specify.....	-	
11	Is Land Records database linked to RCMS system? Yes-1, No-2	-	
11a	Can RoR be viewed/ downloaded by Revenue Courts? Yes, can be viewed-1, Yes, can be downloaded-2, Both -3, None of above-4	Yes, it can be viewed and downloaded	https://revenue.chd.gov.in/
12	Is Registration software linked to RCMS software enabling pushing of land registration to auto-mutation? Yes-2, No-2	-	
13	Is the fact of a pending revenue court case red-flagged in RoR? Yes-1, No-2	-	
13a	What system is followed in the State for red-flagging?	-	
13b	What exact remarks are mentioned on the RoR?	Mention of ongoing court cases and mortgages.	https://revenue.chd.gov.in/
13c	The remarks are mentioned in which column?	Last Column	https://revenue.chd.gov.in/
14	Number of revenue court cases red-flagged in the RoR (as on date)? Yes-1, No-2	-	
15	Is Land Records database linked to e-Courts system of Civil courts? Yes-1, No-2	-	
16	If yes, how many e-Courts are linked with LR database?	-	
17	Is Land Records database linked to e-Courts system? Yes-1, No-2	-	
17a	If yes, can RoR be viewed/ downloaded by Civil Courts?	-	
17b	Yes, can be viewed-1, Yes, can be downloaded-2, None of above-3	-	
18	Is the fact of a pending civil court case red-flagged in RoR?	-	
18a	What is the system followed in the State for red-flagging?	-	

18b	What exact remarks are mentioned on the RoR?	Mention of ongoing court cases and mortgages.	https://revenue.chd.gov.in/
18c	The remarks are mentioned in which column?	Last Column	https://revenue.chd.gov.in/
19	Number of civil court cases red-flagged in the RoR (as on date)?	-	

Note: Since the data was not provided by the Chandigarh revenue department, it has been compiled from secondary sources including state website and DOLR.

Source: NACER's Land Study Survey, 2024

Annexure Table 4.4A. Progress & Gaps in Digitisation of Land Records for Chandigarh- Summary

Q. No	Particulars	Buterla	Attawa	Chandigarh-UT (aggregate finding)
1	What are the differences between spatial records and the textual records, especially in terms of:			
a	Extent (area) of the land parcels	None of the land owner saw spatial records		100%
b	Updation of partition and demarcation actions	Not Applicable	Not Applicable	Not Applicable
2	What are the differences between on-ground status and land records status in terms of ownership details			
a	What are the differences between on-ground status and land records status in terms of ownership details (including where applicable, multiple, share-based and other forms ownership that may exist)?	Ownership by name- Approximately 81% land owners say that the records are correct. Possession- For joint ownership, all the land owners say that records are correct.	Ownership by name- Approximately 83% land owners say that the records are correct. Possession- For joint ownership, 79% of the land owners say that records are correct.	No difference. 100% correct
b	Is the RoR format able to capture non-agricultural land uses in detail (e.g. in- built up areas, ownership of flats or individual floors)?	All the land parcels are non-agricultural Built up area details- 62% land owners reported that RoR captures built up area	All the land parcels are non-agricultural Built up area details- 32% land owners reported that RoR captures built up area	100% correct
c	Does the on-ground ownership details, including any built-up area on the land parcel, coincide with the details in land record, especially in context of shared ownership. Or multiple owners?	Joint ownership land parcels- 42% Out of these 70% correctly show on ground built up area details on land records.	Joint ownership land parcels- 48% Out of these 30% correctly show on ground built up area details on land records.	Only in 60% villages, it was correctly mentioned in the land records
d	If not up-to-date, how land has the record remained un-updated, and likely reasons for the same?	Respondents willingly did not update the records, they were still in their ancestors name.	None of the land owners gave any reason.	Not the usual practice to reflect built up area.

3	What are the differences between on-ground status and land records status, in terms of Classification of land parcel?	Agricultural- None Non-agricultural- 58% correctly reflect on ground status	No agricultural land. Non-agricultural- 38% correctly reflect on ground status	100% correct
a	Is there a difference between the on-ground use of land, and the one stated in ROR?	In 58% cases, RoR reflected correct on ground land use details.	In 38% cases, RoR reflected correct on ground land use details.	100% correct
b	Is the ROR format able to capture non-agricultural land uses in detail?	All the land parcels are non-agricultural. And in In 58% cases, RoR reflected correct on ground land use details.	All the land parcels are non-agricultural. And in In 58% cases, RoR reflected correct on ground land use details.	Yes, in 9 out of 10 villages- Simple mention of use like building, road, path, pond. one village- only non-agricultural land use written
c	If not up-to-dated, how long has the record not been updated, and reasons for the same?	None of the land owners gave any reason.	None of the land owners gave any reason.	-
4	What are the differences between on-ground status and land records status, in terms of Location and extent of the land parcel?	Not Applicable	Not Applicable	Location is not shown in the RoRs.
a	What is the difference between the on-ground location, and that marked in the revenue maps (these maps would be the latest legally relevant spatial records available)?	Not Applicable	Not Applicable	Location is not shown in the RoRs.
b	What is the difference in area between on-ground situation, spatial records on paper, and Records of Rights?	For all the land parcels correct area is reflected in the land record copies.	Only in 83% land parcels, correct area is reflected.	100% land parcels show correct area in RoRs and CMs
c	If there is a difference between the two, then percentage of error for selected land parcels?	Not Applicable	Not Applicable	-

d	Have on-ground partition and demarcation proceedings been incorporated in textual and spatial records?	Not Applicable	Not Applicable	Not Applicable
5	What are the differences between on-ground status and land records status, in terms of Encumbrances on parcel?	Loan- 2 people took loan and in neither case loan entry was shown in the land records. Revenue court cases- None Civil court cases- None Town planning- None Any other- None	Loan entry was shown in the land records. Revenue court cases and Civil court cases- 1 case each but didn't know whether it was reflected in RoR or not. Town planning/ any other restriction-1 case each and show correctly reflected in RoR	Data bases linked to RoR to ensure record of encumbrances: Mortgages- 100%
6	What are the various encumbrances (e.g. loans, liens, mortgages, litigations, court orders, acquisition proceedings) on the land parcels, and how many of these are mentioned on the RoR?	Loan entry was shown in the land records. Revenue court cases- None Civil court cases- None Town planning- None Any other- None	Loan entry was shown in the land records. Revenue court cases and Civil court cases- 1 case each but didn't know whether it was reflected in RoR or not. Town planning/ any other restriction-1 case each and show correctly reflected in RoR	loans, liens, mortgages

Note: Data summarized based on village survey of land owners and patwaris

Source: NACER's Land Study Survey, 2024

Annexure Table 5.1A. Socio-Demographic Profile of Land Owners

Indicators	Sub Head	Raghupur	Holambi Kalan	Total
		% Distribution of land owners		
Relationship with household head	Self	69.8	86.4	74.7
	Spouse of HH	6.0	0.0	4.3
	Parents of HH	4.3	2.5	3.8
	Son/daughter of HH	1.1	1.7	1.3
	Other HH members	15.7	9.3	13.8
	Other relatives	3.2	0.0	2.3
Age category	<=45 years	58.4	19.5	46.9
	46-60 years	34.2	43.2	36.8
	61 years and abv	7.5	37.3	16.3
	Total	100.0	100.0	100.0
	Average Age	47.5	57.6	50.5
Gender	Male	92.2	88.1	91.0
	Female	7.8	11.9	9.0
Religion	Hinduism	100.0	100.0	100.0
	Islam	-	-	-
	Christianity	-	-	-
	Sikhism	-	-	-
Social category	General	42.0	98.3	58.6
	OBC	58.0	0.8	41.1
	Schedule Caste	-	0.8	0.3
	Schedule Tribe	-	-	-
Current marital status	Single/ Never been married	0.7	3.4	1.5
	Currently married	98.2	96.6	97.7
	Separated/Divorced	1.4	0.8	1.3
	No response	0.0	0.0	0.0
Highest level of education completed	Illiterate	1.4	5.9	2.8
	Literate: without formal education	-	-	-
	Primary	-	5.1	1.5
	Middle	3.2	13.6	6.3
	Secondary	23.8	22.9	23.6
	Senior Secondary	56.9	32.2	49.6
	Graduate & above	14.6	21.2	16.5
	No response	0.4	0.0	0.3
Employment status (over the last Twelve Months)	Employed / wage labour	1.1	11.9	4.3
	Self Employed – farmer	72.6	71.2	72.2
	Self Employed – nonfarm work	19.6	4.2	15.0
	Disabled/ retired/ out of workforce/ live on passive income	-	2.5	0.8
	Others	6.8	10.2	7.8
Number of land parcel owners		281	118	399

Source: NACER's Land Study Survey, 2024

Annexure Table 5.2A. Basic details of land parcel owned

Indicators	Sub-heads	Raghupur	Holambi Kalan	Total
		% Distribution of land owners		
Number of land parcels (khasra/s) owned by Owner	One	-	18.6	5.5
	Two	-	16.9	5.0
	Three	-	8.5	2.5
	Four	1.8	16.1	6.0
	> Four	98.2	39.8	81.0
Way of obtaining land parcel	Inherited from family	95.7	87.3	93.2
	Inherited through marriage/ spouse's family	0.0	0.8	0.3
	Bought from private individual	2.5	11.9	5.3
	Given by non-family member	1.1	-	0.8
	Gift from own/ spouse family	0.4	-	0.3
Number of land parcel owners		281	118	399

Source: NACER's Land Study Survey, 2024

Annexure Table 5.3A. State Level Status of Land Records Digitisation- Delhi

Q.No	Questions	Data available through various sources	Data Sources
Module I. Record of Rights			
1	Total number of Land Parcels in the State/UT	-	
2	Total number of Khata numbers in the State/UT	-	
3	Total number of Record of Rights (RoRs) in the State	67,010	https://dilrmp.gov.in/bhoomisammannew/
4	Total number of villages with computerized land records	196	https://dilrmp.gov.in/bhoomisammannew/
5	Is the list of all RoRs of the entire village available in the following manner for any citizen? Yes, can be viewed-1, Yes, can be downloaded-2, Both-3, None of above-4	Can be viewed and downloaded	DOLR website
6	What is the unit of land measurement used in RoR? What is its conversion rate in acres?	Bigha-Biswa	
7	Number of columns in RoRs; what details are prescribed to be captured in RoRs; What details are actually captured and not captured in practice?	6 columns; Owner(s) details and share, Rect No., Khasra, Area (Bigah-biswa), Remarks (details given under-View khata details after display of the list of owners in khata)	https://dlrc.delhi.gov.in/ror.aspx
8	Describe terms used in RORs and Maps along with English /Hindi standard terms in tabular form?	RoRs- Owner(s) details and share in the land parcel; Rect no.; Khasra no.- Land parcel ID; Area (Biswa-Bigah); Remarks- if any legal issue Map- none	https://dlrc.delhi.gov.in/ror.aspx

9	Have manual records been discontinued so that digital records are the sole legal record? (Only manual records available-1, Only digital records available-2, Both manual and digital are in place-3, other-specify-4)	Both are available	DOLR and NCAER land study
10	No of RoRs computerized	-	
11	Is RoR available on web portals for any citizen? (MR) Yes, can be viewed-1, Yes, can be downloaded-2, None of above-3	Yes, can be downloaded-2 (By Khata owner type, By village, By khata, khasra, and name)	https://dlrc.delhi.gov.in/ror.aspx
12	Is digitally signed RoR available for download by any citizen? Yes-1, No-2	Available after e-registration; Delhi records are not digitally signed, neither downloadable.	https://edistrict.delhigovt.nic.in/in/en/Public/RORDetails.html
13	Is digitally signed RoR a legally valid document in the State? Yes-1, No-2	No	DILRMP
14	Is digitally signed RoR verifiable through a QR code/ unique ID? Yes-1, No-2	-	
15	What is the average number of land holders in each RoR?	-	
16	What is the number of single land holder in RORs?	-	
17	In case of joint ownership in ROR, is share of each holder mentioned in RoR? Yes-1, No-2	Yes	https://dlrc.delhi.gov.in/ror.aspx
18	In which column, share of each land holder is mentioned?	Owner(s) details and shareowner(s) details and share are given in 1 st column after opening khata/Khasra details	https://dlrc.delhi.gov.in/ror.aspx
19	How many applications are pending for including names in RoRs?	-	

20	In case of joint ownership in ROR, is sub-division of plot also mentioned? Yes-1, No-2 (Details of process followed may be briefly mentioned)	-	
21	Is an alert message sent to the registered mobile number in case of any change in that RoR / mutation? Yes-1, No-2	-	
22	Is there a provision for citizen to apply online for correction of their RoR? Yes-1, No-2	-	
23	Total number of RoRs corrected in the last financial year? (Apr 2023-Mar 2024)	-	
24	Is RoR seeded with Aadhaar? Yes-1, No-2	No	https://dilrmp.gov.in/#
25	If yes, number of RoRs seeded with Aadhaar?	NA	
26	Is RoR seeded with mobile number of land holder? Yes-1, No-2	-	
27	If yes, number of RoRs seeded with mobile?	-	
28	On what occasion phone number and Aadhaar are seeded?	-	
29	Is gender of land holder captured in RoR? Yes-1, No-2	Yes, but not explicitly. Each owner is described as the son, daughter, or wife of someone.	https://dlrc.delhi.gov.in/ror.aspx
30	If yes, how many females are land holders in your State/UT?		
31	Is RoR database linked with Cadastral maps? Yes-1, No-2	Yes, by entering khasra no. for ROR, one can get an option to view the map	http://gsdl.org.in/revenue_map/?vill_cen_c=63992&m_khasra_n=4&m_khasra_r=13
32	If yes, Number of RoRs linked with Cadastral maps?	linked to 32.7 per cent villages (67)	DILRMP
33	Is mortgage mentioned in the RoR? Yes-1, No-2	No	https://dlrc.delhi.gov.in/ror.aspx
34	Number of RoRs with mention of mortgage (as on date)?	-	

35	Please explain the process followed for mentioning the mortgage details in ROR?	-	
36	Is mortgage release updated in the RoR? Yes-1, No-2	-	
37	Please explain the process followed for mention of release of mortgage in RoR?	-	
38	Is RoR database linked with Banks for mortgage? Yes-1, No-2	No	DILRMP
39	If yes, number of districts where RoR database linked with Banks for mortgage?	NA	
40	Please provide the number of banks and bank branches where these are linked?	NA	
41	Number of banks and bank branches which are not linked?	NA	
42	Is online transliteration facility available for RoRs? Yes-1, No-2	No	https://dilrmp.gov.in/bhoomisammannew/
43	What are the documents/ registers maintained by the Revenue authorities in the State/UT related to RoR such as Jamabandi Register etc?	Record of Rights (RoR) terms of Khasra and Khatauni; Mutation records; Registered sale deeds; Relevant Court orders; Certificates on request	https://iihs.co.in/knowledge-gateway/wp-content/uploads/2019/07/Property-Record-Maintenance-in-Delhi_Key-Issues-and-Recommendations.pdf
44	Please explain a brief process flow of who maintains what kind of documents and when entries are made in these documents/ registers?	-	
45	Is RoR of Govt held land computerized in the State? Yes-1, No-2	-	
46	Is land record of urban and peri-urban areas also digitized and updated? Yes-1, No-2	No- for Urban; Yes- for Peri-urban	https://dlrc.delhi.gov.in/ror.aspx
47	If yes, how many urban RoRs are there and which entity maintains it?	-	

Module II. Cadastral Maps			
1	In which year the survey was last done in the State?	-	
2	Scale of available cadastral maps	-	
3	Total no of Cadastral Maps	Total (Map Sheets) : 14	https://dilrmp.gov.in/bhoomisammannew/
		Digitized (Map Sheets): 14	
		Percentage %: 100	
4	Total number of maps scanned	-	
5	Total scanned maps converted into digital format (vectorized)	-	
6	Total no of cadastral maps Geo-referenced	Done for 32.37 percent of villages	DILRMP
7	Number of Land Parcels Geo-referenced	0	https://dilrmp.gov.in/#
8	Number of Land Parcels assigned ULPIN	274	https://dilrmp.gov.in/bhoomisammannew/
9	Whether any Other unique ID assigned (Is unique ID a random number or does the ID has some logical basis)? If logical, details of the same may be provided?	-	
10	Is online facility available for land owners to request survey of their land parcel for subdivision? Yes-1, No-2	Partition deed (can ask about steps after application- visit offices or can request partition online); online application for Partition deed	https://deedwriter.delhigovt.nic.in/
11	Brief description of process flow from receipt of request to updating of sub-division including time taken (average days)	-	
12	Number of online requests pending for subdivision (as on date)	-	
13	Are subdivisions updated in the cadastral map, as a practice? Yes-1, No-2	-	

14	Ratio of Survey number and RORs land holders per ROR	-	
Module III. Registration Details			
1	Total no of Sub Registrar Office (SROs) in the State	22	https://dilrmp.gov.in/bhoomisammannew/
2	Number of SROs computerized	Total (SRO): 22	https://revenue.delhi.gov.in/revenue/sub-registar-offices
		Computerized(SRO): 22	
		Percentage % : 100	
3	Month and Year of Computerisation of 1st SRO in the State?	-	
4	Month and Year of computerisation of latest SRO in the State	-	
5	Number of land properties registered in SROs in FY 2023-24	-	
6	Number of SROs integrated with Revenue Offices and Land Record database	22	https://dilrmp.gov.in/bhoomisammannew/
7	Whether there is any provision for online entry of data when a transaction is to be registered? Yes-1, No-2, Don't know-3	Yes	DILRMP website
8	Is there online facility for booking appointment slot for registration? Yes-1, No-2	Yes	DILRMP website
9	What information/ details are captured during online system for appointment slot booking?	-	
10	What Property attributes (survey number, door number, plot number, khasra, khewat, khatouni number, etc) are captured in online system?	-	
11	Whether Circle Rates/ Ready Reckoner Rates/ Guideline values / Collector Rates for lands are available to citizens in then online registration software? Yes-1, No-2	Yes	https://ngdrs.gov.in/NGDRS_Website/

12	Which mode is available for paying registration fees/ stamp duty for the land parcels? Purchase of stamp paper from vendor-1, Purchase of e-stamp papers-2, Online payment-3, All three options are available-4	-	
13	Is e-Calculator (Online Stamp duty calculator) made available for citizens to compute fees? Yes-1, No-2	Yes	https://revenue.delhi.gov.in/revenue/property-registration https://www.shcilestamp.com/estamp_reg_home.html
14	Is party/ owner names and area details checked from Land Records (RoR) before registration? Yes-1, No-2	-	
15	Is the copy of RoR downloaded as proof of checking? Yes-1, No-2	-	
16	If not in Q15, what process is followed as proof for checking?	-	
17	Is this mandated in Rules, Standard operating practice (SOP), Manual or just a practice?	-	
18	In practice, how many year's registration deeds are searched by SRO before registration?	-	
19	Do SRO check seller's ownership document by past record? Yes-1, No-2	-	
20	Which documents are captured for each party? PAN-1, Aadhaar number-2, mobile number-3, Others- 4 specify.....	e-Stamp paper with correct value of Stamp duty, e-Registration fee Receipt of Registration fee, Original ID Proof of the concerned Parties (Seller, Purchaser and Witness) like voter card, pan card. Passport, Driving License, Aadhaar Card, If transaction is for more than Rs. 500000/- self attested copy of Pan Card or Form 60, In case	

		of agriculture Land-NOC, Aadhaar No.	
21	Is online PAN verification system integrated for Registrations involving higher cost? Yes-1, No-2	If transaction is for more than Rs. 500000/- self attested copy of Pan Card or Form 60	https://revenue.delhi.gov.in/sites/default/files/revenue/ereg/updated_check_list.pdf
22	Is facility available to verify eKYC of Aadhaar/ PAN during admission of parties? Yes-1, No-2	Yes, under sale agreement	https://revenue.delhi.gov.in/sites/default/files/revenue/ereg/updated_check_list.pdf
23	Whether party signature is captured using digital pen and pad? Yes-1, No-2	-	
24	Whether the facility for online verification of payment/ scrutiny of requisite details and completion of registration process with digital signature available for the registration process? Yes-compulsory -1, Yes-optional -2, Not available -3	-	
25	Whether the facility for immediate delivery of digitally signed registered documents available? Yes-compulsory-1, Yes-optional-2, Not available-3	-	
26	Whether identification documents upload facility is available? Yes-1, No-2	-	
27	Whether SRO is able to complete registration online? Yes-1, No-2	-	
28	Whether home visit module is available for registry of the document by SRO? Yes-1, No-2	Yes	Sourcehttps://ngdrs.delhi.gov.in/NGDRS_DL/
29	Whether SRO has facility to generate encumbrance certificate and e-search? Yes-1, No-2	-	
30	Whether SRO can access legacy data as a ready reference? Yes-1, No-2	-	
31	Does every registration trigger a corresponding digital mutation in the RoR? Yes-1, No-2	Yes	as per DILRMP website
32	Whether SRO can push pending data of mutation in case of any network failure? Yes-1, No-2	-	

33	Whether SRO can check litigations online for a property scheduled for registration? Yes-1, No-2	-	
34	Whether SRO is able to trigger SMS for important events during document registration? Yes-1, No-2	-	
35	Whether there is an online registration system for citizens available through eKYC for first sale, Leave and License Agreements to facilitate presence less registration anywhere anytime? Yes-1, No-2	-	
36	Whether dynamic deed templates are available? Yes-1, No-2	Yes	DILRMP
37	Whether (AI Nibhrit) solution is available for masking personal information of PAN, Aadhaar number and fingerprint impressions on registered pdf deeds? Yes-1, No-2	-	
38	Whether data of old registration deeds is available online? Yes-1, No-2, Don't know-3	-	
39	If Yes=1, for how many years this legacy data is available? Upto 2 years-1, 2-5 years-2, 5-10 years-3, 10-25 years-4, > 25 years-5	-	
40	Whether an Online grievance redressal system is available for filing complaints related to property registration at Sub Registrar Office? Yes-1, No-2	Yes	https://pgms.delhi.gov.in/Entrygrv.aspx?deptcode=&covflg=N
41	If yes, number of online grievances received and settled during FY 2023-24?	-	
42	Whether a document can be searched based on Name, Property details like survey number, deed number, etc? Yes-1, No-2	-	
43	Whether there is a mobile app developed for land registration related services? Yes-1, No-2	-	

44	Whether sale of Govt. Land is blocked/ red-flagged (details of process followed be provided) in the State? Yes-1, No-2	-	
Module IV. Mutation Details			
1	Number of applications received for mutation in FY 2023-24?	-	
2	Number of applications disposed in FY 2023-24?	-	
3	Number of applications pending for mutation?	-	
4	Is online facility available for requesting mutation? Yes-1, No-2	Yes	DILRMP
5	Is auto-trigger mutation facility available in the State/UT? Yes-1, No-2	Yes	https://111.93.49.17/ptndmc/eMutation/mutaplg/en.php
6	What type of transactions are eligible for auto-trigger mutation?	-	
7	How many such transactions occurred in FY 2023-24 which were eligible for auto-mutation?	-	
8	Of these, how many mutations were actually completed through auto-trigger?	-	
9	Number of mutations related to sub-division?	-	
10	Out of total mutation cases received through Registration how many are for mutation of land with entire Khasra?	-	
11	What is the process flow followed in the State/UT for mutation process?	-	
12	What is the process followed for receiving objections from public?	1. A proclamation is issued inviting objections to the proposed mutation and specifying the date (being not less than fifteen days from the date of the proclamation)	https://dcentral.delhi.gov.in/en/dcentral/agricultural-land-public-revenue#:~:text=In%20case%20any%20objection%20is,30%20days%20of%20the%20order.

		up to which any objection to the mutation will be entertained; 2. The Halqua Patwari submits his report in prescribed format no. P-I.; 3. Statement of parties is recorded; 4. Contents of the documents are matched with the recorded statements; 5. If no objection against the proposed mutation is received, the same is sanctioned; 6. In case any objection is received against the mutation, matter is referred to SDM (Revenue Assistant) of the area; 7. Any party aggrieved by an order of mutation may file an appeal before the Addl. Collector (the concerned Deputy Commissioner) within 30 days of the order.	
13	Is SMS sent to all mobile number of all villagers? Yes-1, No-2	-	
14	Is there facility for objections to be sent online? Yes-1, No-2	-	
15	What is the prescribed period for issue of mutation orders from the date of receipt and what is actual period in practice?	-	

16	Is SMS alert sent to applicant at each stage for his/her information? Yes-1, No-2	-	
17	Does Patwari submit his report online? Yes-1, No-2	-	
18	How is the certified order copy of the mutation sent to the applicant? 1. Through email, 2. Through WhatsApp, 3. It is available for download from RCMS website	-	
19	How many cases are pending where mutation orders have been passed but certified copy is not yet sent to the applicant?	-	
20	Average number of days of pendency of such cases?	-	
21	Is Cyber Tehsil functional or proposed to be functional in the State? Yes, functional-1, Yes- Proposed-2, No-3	-	
22	If proposed, what is the stage?	-	
23	Are RoRs updated immediately after issue of mutation orders or does the State follow a different practice and cycle of updating of RoRs? Please explain	-	
24	In what type of mutation, request is carried out without inviting objection?	-	
Module V. Revenue Court Management System (RCMS)			
1	Total number of Revenue Courts in the State?	57	https://erevenuecourt.delhi.gov.in/ViewCauseList.aspx
2	Number of Revenue Courts computerised?	-	
3	Number of revenue court cases handled in the computerized system in the last financial year (2023-24)?	36405- Total Cases	https://erevenuecourt.delhi.gov.in/index.aspx
		16713- Decided	
		19692- Pending	
		3137- Upcoming Cases	
4	Number of revenue court cases handled in the manual system in the last financial year (2023-24)?	-	

5	Does State have online system for public to enter case details? Yes-1, No-2	-	
6	Is yes, what details are captured at data entry stage?	-	
7	How is online appointment date and time notified to applicant? Through email-1, Whatsapp-2, Website-3	-	
8	How is the court order typed? On the RCMS system directly-1, Separate PDF copy of the court order uploaded-2, other-3, specify.....	-	
9	How is court order sent to litigants? Email-1, Whatsapp-2, Posted on website-2, other- 3, specify.....	-	
10	How are the court hearings held? Online-1, Video conferencing-2, Physical mode-3, Hybrid-4, other-3, specify.....	-	
11	How the court cases documents are stored in the court? Electronically-1, Physically-2, other-3, specify.....	-	
12	Is Land Records database linked to RCMS system? Yes-1, No-2	No	DILRMP
13	Can RoR be viewed/ downloaded by Revenue Courts? Yes, can be viewed-1, Yes, can be downloaded-2, Both -3, None of above-4	Since it can be downloaded by anyone therefore can be downloaded by courts as well, but not admissible in court.	https://dlrc.delhi.gov.in/Default.aspx
14	Is Registration software linked to RCMS software enabling pushing of land registration to auto-mutation? Yes-1, No-2	-	
15	Is the fact of a pending revenue court case red-flagged in RoR? Yes-1, No-2	-	
15a	Number of revenue court cases red-flagged in the RoR (as on date)?	-	

15b	What system is followed in the State for red-flagging revenue court cases?	-	
15c	What exact remarks are mentioned on the RoR?	Order of any court, comments relating to tehsildar, etc	https://dlrc.delhi.gov.in/Default.aspx
15d	The remarks are mentioned in which column?	In the last column of ROR	https://dlrc.delhi.gov.in/ror.aspx
<i>Details of Civil Court Cases in RORs</i>			
16	Is Land Records database linked to e-Courts system of Civil courts? Yes-1, No-2	No	DILRMP
17	If yes, how many e-Courts are linked with LR database?	-	
18	Whether RoR can be viewed/ downloaded by Civil Courts? Yes, can be viewed-1, Yes, can be downloaded-2, Both viewed & downloaded-3, No-4	Yes, can be downloaded	https://dlrc.delhi.gov.in/ror.aspx
19	Is the fact of a pending civil court case red-flagged in RoR? Yes-1, No-2	-	
19a	If yes, number of civil court cases red-flagged in the RoR (as on date)?	-	
19b	What is the system followed in the State for red-flagging civil court cases in ROR?	-	
19c	What exact remarks are mentioned on the RoR for civil court case?	Order of any court, comments relating to tehsildar, etc	https://dlrc.delhi.gov.in/Default.aspx
19d	The remarks are mentioned in which column	Last column of ROR	https://dlrc.delhi.gov.in/Default.aspx

Note: Since the data was not provided by the Delhi revenue department, it has been compiled from secondary sources including state website and DOLR.

Source: NACER's Land Study Survey, 2024

Annexure Table 5.4A. Progress & Gaps in Digitisation of Land Records for Delhi- Summary

Q. No	Particulars	Rahgupur village	Holambi Kalan village	Delhi
1	What are the differences between spatial records and the textual records, especially in terms of:			
a	Extent (area) of the land parcels	All 282 land records show correct details of land area.	All 119 land records show correct details of land area. About 30 owners have seen the spatial records, of which all says land area is correctly mentioned	Land area correctly recorded in almost all land records as mentioned by land owners.
b	Updation of partition and demarcation actions	Demarcation related court proceedings not reflected in ROR	No land parcel under Revenue court proceedings, so no partition and demarcation under way.	-
2	What are the differences between on-ground status and land records status in terms of ownership details (including where applicable, multiple, share-based and other forms ownership that may exist)?	All land owners says correct recoding of owners names in the land records; possession details of co-owners correctly mentioned in almost all land parcels with joint ownership	Majority land owners (86%) says correct recoding of owners names in the land records; possession details of co-owners correctly mentioned in 66% land parcels	Owners names are mostly correctly mentioned in land records; possession details of co-owners correctly mentioned in 94% land owners from 2 villages.
a	Is the RoR format able to capture non-agricultural land uses in detail (e.g. in- built up areas, ownership of flats or individual floors)?	No	Yes	Yes, to some extent

b	Does the on-ground ownership details, including any built-up area on the land parcel, coincide with the details in land record, especially in context of shared ownership. Or multiple owners?	Although, proportion of non-agriculture with built-up is minimal here, even where it is there has not been updated in land records.	In 56% of cases, the built-up area as appear on-ground is shown in land records	In 55% of cases, the built-up area as appear on-ground is shown in land records
c	If not up-to-date, how land has the record remained un-updated, and likely reasons for the same?	Reasons for non updation of built-up area in land records not ementioned by land owners	For non updation of owners name in Land records- mutation has not happened, still in ancestors name; Reasons for non updation of built-up area in land records not ementioned by land owners	Reasons for non updation of built-up area in land records not ementioned by land owners
iii	What are the differences between on-ground status and land records status, in terms of Classification of land parcel?			
a	Is there a difference between the on-ground use of land, and the one stated in ROR?	For all land parcels, land use details correctly mentioned in land records	For majority of land parcels (nearly 75%), land use details correctly mentioned in land records	In 92.5% of sample land parcels, land use details correctly mentioned in land records
b	Is the ROR format able to capture non-agricultural land uses in detail?	Mixed views received from different villages, hence no standard form of recoding non agriculture land use details in the State/UT. Out of 9 villages, in 2 only non-agriculture is written in land records, in 4 villages details of non-agriculture land use given like built-up, building, pond etc; and in other 3 villages further details on type of building, number of floors and built-up area are recorded.		
c	If not up-to-dated, how long has the record not been updated, and reasons for the same?	Reasons not provided	Reasons not provided	No instructions from government for updation wherever not done (as per patwari).

iv	What are the differences between on-ground status and land records status, in terms of Location and extent of the land parcel?	Location of all land parcels shown in RoR in sample villages easily understood by given landmarks as mentioned by patwaris. In about 90 per cent of cases, these locations are helpful and updated.		
a	What is the difference between the on-ground location, and that marked in the revenue maps (these maps would be the latest legally relevant spatial records available)?	NA		
b	What is the difference in area between on-ground situation, spatial records on paper, and Records of Rights?	Land area is correctly mentioned in land records as on ground	Land area is correctly mentioned in land records both textual and spatial as on-ground	Land area correctly shown in land records for nearly all land parcels as seen in two census villages. As per patwaris, in 7 out of 10 villages, land area in textual and spatial record is same
c	If there is a difference between the two, then percentage of error for selected land parcels?	No differences recorded		
d	Have on-ground partition and demarcation proceedings been incorporated in textual and spatial records?	-	-	-
v	What are the differences between on-ground status and land records status, in terms of Encumbrances on parcel?	Loan/ Lien/ Mortgage- no one responded yes to this, Revenue court proceedings- only 1 responded yes(regarding demarcation)(reflected in ROR), Civil court proceedings- no one	Loan/ Lien/ Mortgage- 2 responded yes to this and it is shown in the ROR, Revenue court proceedings- no one responded yes, Civil court proceedings- no one	Patwari responses indicates the linking of mortgage , spatial plans, revenue/civil court cases, other land restrictions with the land records. DOLR shows no linkage with revenue or civil

vi	What are the various encumbrances (e.g. loans, liens, mortgages, litigations, court orders, acquisition proceedings) on the land parcels, and how many of these are mentioned on the RoR?	responded yes, Town planning restriction on LP- 2 said yes, and it is reflected in the ROR, other restrictions- No one responded yes	responded yes, Town planning restriction on LP- no one said yes, other restrictions- No one responded yes	courts cases or mortgage for Delhi, thereby reflecting inconsistencies in data.
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Note: Data summarized based on village survey of land owners and patwaris

Source: NACER's Land Study Survey, 2024

Annexure Table 6.1A. Socio-Demographic Profile of Land Parcel Owners

Indicators	Sub-head	Jhanjhar Badla	Pitumbri	Total
		% Distribution of land owners		
Relationship with household head	Self	29.8	45.6	37.1
	Spouse of HH	0.0	0.6	0.3
	Parents of HH	0.0	0.0	0.0
	Son/daughter of HH	31.7	33.9	32.7
	Other Household members	29.3	19.4	24.7
	Other relatives	9.3	0.6	5.2
Age category	<=45 years	49.8	32.2	41.6
	46-60 years	31.7	35.6	33.5
	61 years and abv	18.5	32.2	24.9
	Total	100.0	100.0	100.0
	Average Age	43.7	54.9	48.9
Gender	Male	100.0	98.9	99.5
	Female	0.0	1.1	0.5
Religion	Hinduism	100.0	98.9	99.5
	Islam	0.0	1.1	0.5
	Christianity	0.0	0.0	0.0
	Sikhism	0.0	0.0	0.0
Social Category	General	1.5	8.3	4.7
	OBC	0.0	91.7	42.9
	Schedule Caste	0.5	0.0	0.3
	Schedule Tribe	98.0	0.0	52.2
Current marital status	Single/ Never been married	0.5	0.6	0.5
	Currently married	99.5	100.0	99.7
	Separated/Divorced	0.0	0.0	0.0
	No response	0.5	0.0	0.3
Highest level of education completed	Illiterate	28.3	22.2	25.5
	Literate: without formal education	57.6	6.7	33.8
	Primary	1.0	16.1	8.1
	Middle	3.9	27.8	15.1
	Secondary	3.4	8.9	6.0
	Senior Secondary	2.9	8.9	5.7
	Graduate & abv	3.4	10.0	6.5
	No response	0.0	0.0	0.0
Employment status (over the last Twelve Months)	Employed / wage labour	0.5	0.0	0.3
	Self Employed – farmer	97.6	90.0	94.0
	Self Employed – nonfarm work	2.0	9.4	5.5
	Disabled/ retired/ out of workforce/ live on passive income	0.0	0.0	0.0
	Others	0.0	0.6	0.3
Number of land parcel owners		205	180	385

Source: NACER's Land Study Survey, 2024

Annexure Table 6.2A. Basic details of land parcel owned

Indicators	Sub-heads	Jhanjhar Badla	Pitumbri	Total
		% Distribution of land owners		
Number of land parcels (khasra/s) owned by Owner	One	9.8	7.8	8.8
	Two	3.9	13.9	8.6
	Three	6.8	11.7	9.1
	Four	2.0	16.1	8.6
	> Four	77.6	50.6	64.9
Way of obtaining land parcel	Inherited from family	99.5	86.1	93.2
	Inherited through marriage/ spouse's family	0.0	0.6	0.3
	Bought from private individual	0.0	12.8	6.0
	Given by non-family member	0.0	0.0	0.0
	Gift from own/ spouse family	0.5	0.6	0.5
Number of land parcel owners		205	180	385

Source: NACER's Land Study Survey, 2024

Annexure Table 6.3A. State Level Status of Land Records Digitisation- Rajasthan

Rajasthan		
S.No.	Indicators	Responses/Verification by State Borad
Module 1 - Record of Rights (RoRs)		
1	Total number of Land Parcels in the State	53425319 *
2	Total Number of khata numbers in the state	10664549 *
3	Total number of Record of rights (RoRs) in the State	48514
4	Total number of Villages with computerized Land records	47387 (online villages)
5	Is the list of all RoRs of entire village available in the following manner for any citizen? Yes, can be viewed-1, yes, can be downloaded-2, both-3, None of above-4	For tehsils with online records, any cultivator/other people can download the e-signed ROR for any khasra no./khata no. from http://apnakhata.rajasthan.gov.in
6	What is the unit of land measurement used in RoR? What is its conversion in acres?	Hectare (1 hectare=2.471 acre)
7	Number of columns in RoRs; what details are prescribed to be captured in RoRs; What details are actually captured and not captured in practice?	As per the provisions of Rajasthan Land Revenue Land Records Rules 1957, Form-26 has been prescribed for Jamabandi which has 17 columns. It contains the details like village, Patwar Halka, Land Records Inspector, Tehsil, District, Samvat, new and old account number, name of cultivators, father's name, caste, residence, Khasra number, area, soil classification, source of irrigation, rent etc. All the details have been included in the online Jamabandi.
8	Describe terms used in RORs and Maps along with English /Hindi standard terms in tabular form.	-
9	Have manual records been discontinued so that digital records are the sole legal record? (Only manual records available-1, only digitalrecords available-2, Both manual and digital are in place-3, other specify)	3- Both Manual and digital are in place.
10	No of RoRs computerized	47387 (online villages)

11	Is RoR available on web portal for for any citizen? Yes, can be viewed-1, yes, can be download-2, None of the above-3	Yes. In online tehsils, farmers/common people can view and download e-signed copy of jamabandi through apnakhata website (http://apnakhata.rajasthan.gov.in).
12	Is digitally signed RoR available for download by any citizen? Yes-1, No-2	Yes, source- (http://apnakhata.rajasthan.gov.in) in online Tehsil
13	Is digitally signed RoR a legally valid document in the State? Yes-1, No-2	Yes
14	Is digitally signed RoR verifiable through a QR code/ unique ID? Yes-1, No-2	Yes
15	What is the Average number of land holders in each RoR?	1300** (according to Village)
16	What is the Number of single land holder in RoRs?	4039774**
17	In case of Joint ownership in RoR, is share of each holder mentioned in RoR?	Yes
18	In which column, share of each holder is mentioned?	"In online tehsils, there is information about the share of each farmer in his account. In jamabandi, the share of the farmer is displayed only after his name. (Copy attached)"
19	Number of pending applications for including names in RoRs	1719**
20	In case of joint ownership in RoR, is sub-division of plot also done? Yes-1, No-2 (Details of process followed may be briefly mentioned)	Under Section 53 of the Rajasthan Tenancy Act 1955, the division of land holdings is mentioned in the following manner- By agreement between. 1. Co-tenants. 2. By a decree or order of a competent court in a suit for the purpose of division of land holdings by one or more co-tenants.
21	Is an alert message sent to the registered mobile number in case of any change in that RoR/ mutation? Yes-1, No-2	No
22	Is there a provision for citizen to apply online for correction of their RoR? Yes-1, No-2	No

23	Total number of RoRs corrected in the last financial year (April 2023-March 2024)	2834955**
24	Is RoR seeded with Aadhaar? Yes-1, No-2	No
25	If yes, number of RoRs seeded with Aadhaar?	-
26	Is RoR seeded with mobile number of land holder?	No
27	If yes, number of RoRs seeded with mobile?	-
28	On what occasion phone number and Aadhaar are seeded?	-
29	Is gender of land holder captured in RoR? Yes-1, No-2	Yes
30	If yes, how many females are land holders in state	14803694**
31	Is RoR database linked with Cadastral maps	In the present scenario, the tehsils which are online have digitised maps linked to the jamabandi.
32	If yes, Number of RoRs linked with Cadastral maps	47387 (online villages)
33	Is mortgage mentioned in the RoR? Yes-1, No-2	In the online tehsils, the details of the land on which the mortgage has been taken along with the bank details of the cultivator are displayed in the jamabandi. (Copy attached)
34	Number of RoRs with mention of mortgage (as on date)	4167237**
35	Please explain the Process followed for mentionthe mortgage details in RoR?	The applicant applies online for mortgage through Apna Khata Portal/E-Mitra. The application is displayed on the SSO ID of the concerned Patwari. The Patwari registers the transfer within the prescribed period and forwards it to the ID of the concerned Tehsildar/Sarpanch. The transfer is decided and locked within the prescribed period by the Tehsildar/Sarpanch. Thereafter, the mortgage is displayed in the Jamabandi of the concerned cultivator along with the bank details.
36	Is mortgage release updated in the RoR? Yes-1, No-2	Yes

37	Please explain the Process followed for mention of release of mortgage in RoR?	The applicant applies online for mortgage relief through his account portal/e-mitra. The application is displayed on the SSO ID of the concerned Patwari. The Patwari registers the mutation within the prescribed period and forwards it to the ID of the concerned Tehsildar/Sarpanch. The mutation is decided and locked within the prescribed period by the Tehsildar/Sarpanch. Thereafter, the bank details are removed from the Jamabandi of the concerned cultivator.
38	Is RoR database linked with Banks for mortgage? Yes-1, No-2	No
39	If yes, number of districts where RoR database linked with Banks for Mortgage?	-
40	Please provide number of banks and bank branches where these are linked	-
41	Number of banks and bank branches which are not linked	-
42	Is online transliteration facility available for RoRs? Yes-1, No-2	No
43	What are the other documents/ registers maintained by the Revenue authorities in the State related to RoR such as Jamabandi Register etc.	Mutation register (P-21), Fard Badar (shudhdhi Patra P-27) and Revenue Maps

44	A brief process flow of who maintains, what and when entries are made in these documents/ registers to be provided	<p>According to Rule 399 of Rajasthan Land Revenue (Land Records) Rules 1957 and Section 20 (a) (1) of Rajasthan Land Revenue Act, the Collector is the Land Records Officer of his district. It is his statutory responsibility to keep the Record of Rights completely up to date.</p> <p>Under Chapter 7 of Rajasthan Land Revenue (Land Records) Rules 1957, tehsils are being made online. Where Mutation register (P-21), Fard Badar (shudhdhi Patra P-27) and Revenue Maps are being maintained online.</p> <p>Mutation register (P-21) - Mutation register is prescribed for every entry of allotment, transfer, court order, khatedari rights, sale of land by registered document, surrender, inheritance. Fard Badar (correction letter P - 27) - Orders are issued in Fard Badar to correct any clerical error in Jamabandi. Revenue Maps - In the present scenario, the tehsils which are online have digitized maps linked to Jamabandi. The number of Khasras in the map is equal to the number of Khasras in the Jamabandi. If any Khasra is divided in the Jamabandi, the map is also amended. So that the Jamabandi and the map remain the same.</p>
45	Is RoR of Govt. held land computerized in the State	Yes
46	Is land record of urban and peri-urban areas also digitized and updated?	The work of digitization of Jamabandi and maps related to agricultural land has been done and made online, which also includes agricultural land of urban and semi-urban areas.
47	If yes, how many urban RoRs are there and which entity maintains it?	-
* At present, out of 426 tehsils of the state, 421 tehsils are online and even among the 421 online tehsils, 311 villages are still online. Hence, the above information is of online tehsils which has been obtained from the e-Dharti portal developed by NIC.		
**As per information received from NIC Jaipur.		
Module II - Cadastral Maps		
1	In which Year when Survey was last done in the State?	Related to Settlement
2	Scale of available cadastral maps	1:4000
3	Total no. of Cadastral Maps	48,514 (in villages)
4	Total number of maps scanned	136030 sheets*

5	Total scanned maps converted into digital format (vectorized)	136030 sheets*
6	Total no. of cadastral maps Geo-referenced	46578 villages
7	Number of Land Parcels Geo-referenced	43522089*
8	Number of Land Parcels assigned ULPIN	43569064*
9	Whether any other unique ID assigned (Is unique ID a random number or does the ID has some logical basis? If logical, details of the same	N.A.
10	Is online facility available for land owners to request survey of their land parcel for sub-division	No. The development of a module for online application for partition on the basis of consent is under process.
11	Brief description of process flow from receipt of request to updation of sub-division including time taken (average days)	-
12	Number of online requests pending for sub-division (as on date)	-
13	Is subdivisions updated in the cadastral map, as a practice?	In the present scenario, the tehsils which are online have digitized maps linked to jamabandi. The number of khasras in the map is equal to the number of khasras in the jamabandi. If any khasra is divided in the jamabandi, the map is also amended so that the jamabandi and map remain current.
14	Ratio of Survey number and RORs land holders per ROR	755: 1300**
*The information is of online tehsils which has been obtained from e-Dharti portal developed by NIC.		
** As per information received from NIC Jaipur.		
Module III. Registration Details		
1	Total no of Sub Registrar Office (SROs) in the State	659 (https://dilrmp.gov.in/PhysicalComponent/sro/district-level/8)
2	Number of SROs computerized	659 (https://dilrmp.gov.in/PhysicalComponent/sro/district-level/8)
3	Month and Year of Computerisation of 1st SRO in the State?	Dec-14

4	Month and Year of computerisation of latest SRO in the State	Sep-24
5	Number of land properties registered in SROs in FY 2023-24	More than 22 Lac Approx
6	Number of SROs integrated with Revenue Offices and Land Record database	559 Out of 659
7	Whether there is any provision for online entry of data when a transaction is to be registered? Yes- 1, No-2, Don't know-3	1, (https://epanjiyan.rajasthan.gov.in/Citizen/propertydistrict.aspx)
8	Is there online facility for booking appointment slot for registration? Yes-1, No-2	1, for 55 SROs (https://epanjiyan.rajasthan.gov.in/Citizen/propertydistrict.aspx)
9	What information/ details are captured during online system for appointment slot booking?	Date & Time (At the time of Submission)
10	What Property attributes (survey number, door number, plot number, khasra, khewat, khatouni number, etc) are captured in online system?	Location (District, Type, Colony, Area, Zone, , Category), ID, Issuing Authority, Road Width, Latitude, Longitude, Plot/Khasra No., Corner Detail, Area, Surrounding (4 Sides), Construction Details, and Intermediate Document Details etc.
11	Whether Circle Rates/ Ready Reckoner Rates/ Guideline values / Collector Rates for lands are available to citizens in then online registration software?	Yes, (https://epanjiyan.rajasthan.gov.in/dlcdistrict.aspx)
12	Which mode is available for paying registration fees/ stamp duty for the land parcels?	Purchase of stamp paper from vendor, Purchase of e-stamp papers and Online payment (by eGrass portal), 4 (https://www.shcilestamp.com/); (https://egrass.rajasthan.gov.in/)
13	Is e-Calculator (Online Stamp duty calculator) made available for citizens to compute fees?	Yes, (https://epanjiyan.rajasthan.gov.in/Citizen/propertydistrict.aspx)
14	Is party/ owner names and area details checked from Land Records (RoR) before registration? Yes-1, No-2	-
15	Is the copy of RoR downloaded as proof of checking? Yes-1, No-2	-

16	If not in Q15, what process is followed as proof for checking?	-
17	Is this mandated in Rules, Standard operating practice (SOP), Manual or just a practice?	-
18	In practice, how many year's registration deeds are searched by SRO before registration?	-
19	Do SRO check seller's ownership document by past record?	Yes
20	Which documents are captured for each party? PAN-1, Aadhaar number-2, mobile number-3, Others- 4 specify.....	Various ID proof (GoR Rules)
21	Is online PAN verification system integrated for Registrations involving higher cost? -	Yes
22	Is facility available to verify eKYC of Aadhaar/ PAN during admission of parties? -	Yes
23	Whether party signature is captured using digital pen and pad? Yes-1, No-2	No
24	Whether the facility for online verification of payment/ scrutiny of requisite details and completion of registration process with digital signature available for the registration process? -	-
25	Whether the facility for immediate delivery of digitally signed registered documents available? -	Not available
26	Whether identification documents upload facility is available? -	No
27	Whether SRO is able to complete registration online? -	No
28	Whether home visit module is available for registry of the document by SRO?	Yes, on site registration service available (https://epanjiyan.rajasthan.gov.in/Registryatlocation.aspx)

31	Does every registration trigger a corresponding digital mutation in the RoR?	Yes
32	Whether SRO can push pending data of mutation in case of any network failure?	
33	Whether SRO can check litigations online for a property scheduled for registration?	Yes
34	Whether SRO is able to trigger SMS for important events during document registration?	Yes
35	Whether there is an online registration system for citizens available through eKYC for first sale, Leave and License Agreements to facilitate presence less registration anywhere anytime?	No
36	Whether dynamic deed templates are available?	Yes (For Sale Gift, Lease-Rent and Partition Deeds) (https://epanjiyan.rajasthan.gov.in/Citizen/propertydistrict.aspx)
37	Whether (AI Nibhrit) solution is available for masking personal information of PAN, Aadhaar number and fingerprint impressions on registered pdf deeds?	No
38	Whether data of old registration deeds is available online?	Yes
39	If Yes=1, for how many years this legacy data is available?	5-10 years
40	Whether an Online grievance redressal system is available for filing complaints related to property registration at Sub Registrar Office? Yes-1, No-2	Yes (This is not specifically land record grievance platform, but can complain about any govt dept.) (https://sampark.rajasthan.gov.in/Grievance_Entry/Grievance_Entry_CCC_Nrrs.aspx)
41	If yes, number of online grievances received and settled during FY 2023-24?	871/872

42	Whether a document can be searched based on Name, Property details like survey number, deed number, etc?	Yes (https://epanjiyan.rajasthan.gov.in/e-search-page.aspx)
Module IV -Mutation		
1	Number of applications received for mutation in FY 2023- 24	Online applications for inheritance nomination started from 20.12.2023 through Apna Khata portal. After 31.03.2024, online applications for remaining nomination, mortgage, mortgage-free, adult, allotment and court order started. Hence, the number of inheritance applications received from 01.04.2023 to 31.03.2024 is 124015*.
2	Number of applications disposed in FY 2023-24	123141*
3	Number of applications pending for mutation	874*
4	Is online facility available for requesting mutation?	Yes
5	Is auto-trigger mutation facility available in the State?	Yes
6	What type of transactions are eligible for auto-trigger mutation?	Circular No. P. 13 (1) Raj-1/2020 dated 05.12.2023 of the Deputy Secretary Revenue (Group-6) Department of Government in all the online tehsils of the state, due to which the jamabandi is getting automatically updated along with the registration of the sale document in the registration department.
7	How many such transactions occurred in FY 2023-24 which were eligible for auto-mutation?	The process of automatic renaming of sale document started in the online tehsils of the state from 20.12.2023, hence the number of registrations of sale documents from 20.12.2023 to 31.03.2024 is 43153*.
8	Of these, how many mutations were actually completed through auto-trigger	32858*
9	Number of mutations related to sub-division	620224 **(online Tehsil Data)
10	Out of total mutation cases received through Registration how many are for mutation of land with entire Khasra	118820**(from 20-12-2023 to 21-10-2024 automutation of sale)

11	What is the process flow followed in the State for mutation process	<p>In online tehsils, applications for mutation type inheritance, mortgage, mortgage-free, adult, allotment and court order are being taken online. These are forwarded to the ID of the concerned Patwari. The concerned Patwari takes action on mutation within the prescribed period of 5 days and forwards it to the ID of the concerned Sarpanch/Tehsildar. The mutation is decided within the prescribed time period of 20 days by the concerned Sarpanch/Tehsildar. There is a provision of auto forward if the Patwari/Sarpanch does not take action.</p> <p>There is a provision of automatic mutation for registered sale documents in which the Jamabandi is being automatically updated as soon as the documents are registered. Applications for such mutations of sale which are not being auto-mutated are being taken by the Patwari and the mutation is being registered and the conversion applications are also being taken by the Patwari and registered. The remaining mutations are being registered by the RPG and forwarded to the ID of the concerned Patwari and action is being taken as above.</p>
12	What is the process followed for receiving objections from public?	NA
13	Is SMS sent to all mobile number of all villagers?	Presently, applications for name change types such as inheritance, mortgage, mortgage-free, adult, allotment and court order are being accepted online in online tehsils. And in those names change types of applications which are being accepted online, provision has been made to send a message on the mobile number of the concerned applicant.
14	Is there facility for objections to be sent online?	In the name change type of applications which are being taken online, provision has been made to send a message on the mobile number of the concerned applicant. If the concerned Patwari finds any deficiency in the application, then the Patwari can reject the application, the message of which is sent on the mobile number of the concerned applicant.
15	What is the prescribed period for issue of mutation orders from the date of receipt and what is actual period in practice	At present, as per the rules, 5 days are prescribed for Patwari and 20 days for Sarpanch/Tehsildar for renaming. Hence, action is being taken as per the rules. There is a provision for auto forwarding of the application if action is not taken within the prescribed period.

16	Is SMS alert sent to applicant at each stage for his information	At present, there is only provision for the applicant to apply online for name change and to send a message regarding rejection of the application.
17	Does Patwari submit his report online	
18	Are certified order copy of the mutation sent to the applicant through email or whatsapp or is it available for download from RCMS website	Presently, there is a provision to get e-signed copy of name transfer free of cost from your account in all online tehsils.
19	How many cases are pending where mutation orders have been passed but certified copy is not yet sent to the applicant? Average number of days of pendency of such cases?	As soon as the renaming is decided in the online tehsils, its copy becomes available on Apna Khata portal.
20	Is Cyber Tehsil functional or proposed to be functional in the State. If proposed, what is the stage?	-
21	Are RoRs updated immediately after issue of mutation orders or does the State follow a different practice and cycle of updation of RoRs? If so, the details of process and cycle followed for updation	At present, in all online tehsils, as soon as the name change is decided, it is recorded in the jamabandi. Hence, the revenue records remain updated.
22	In what type of mutation request it is carried out without inviting objection?	-
*The information is of online tehsils which has been obtained from e-Dharti portal developed by NIC.		
** As per information received from NIC Jaipur.		
Module V. Revenue Court Management system		
1	Total number of Revenue Courts in the State	1651
2	Number of Revenue Courts computerised	1651
3	Number of Revenue Court case handled in the computerized system in the last financial year	90800

4	Number of Revenue Court cases handled in the manual system in the last financial year	-
5	Does State have online system for public to enter case details? What details are captured at data entry stage?	NA
6	Is online appointment date and time notified to applicant through email/ whatsapp/ website	yes, available and can be seen at gcms portal (URL: https://gcms.rajasthan.gov.in/)
7	Is the court order typed on the RCMS system directly or is separate pdf of the court order uploaded?	Separately Uploaded
8	Is court order sent to litigants on email/ whatsapp/ posted on website	Yes, available and can be downloaded through gcms portal (URL: https://gcms.rajasthan.gov.in/)
9	Are court hearings held online/ VC or only in physical mode or hybrid	currently only in physical mode
10	How the court cases documents are stored in the court (electronically/physically)	Physically
11	Is Land Records database linked to RCMS system and can RoR be viewed/ downloaded by Revenue Courts	Currently, not interlinked and not available
12	Is Registration software linked to RCMS software enabling pushing of land registration to auto-mutation?	No
13	Is the fact of a pending revenue court case red-flagged in RoR? What is the system followed in the State for red- flagging and what exact remarks are mentioned on the RoR and in which column?	No
14	Number of revenue court cases red-flagged in the RoR (as on date)	-

15	Is Land Records database linked to eCourt system of Civil courts?	No
16	If yes, how many eCourts are linked with LR database?	-
17	Is Land Records database linked to eCourt system and can RoR be viewed/ downloaded by Civil Courts	No
18	Is the fact of a pending civil court case red-flagged in RoR? What is the system followed in the State for red- flagging and what exact remarks are mentioned on the RoR and in which column?	No
19	Number of civil court cases red-flagged in the RoR (as on date)	-

Note: The data has been majorly provided by the Rajasthan revenue department, at few places secondary sources have been used including state website and DOLR.

Source: NACER's Land Study Survey, 2024

Annexure Tale 6.4A. Progress & Gaps in Digitisation of Land Records for Rajasthan- Summary

Rajasthan				
Q. No	Particulars	Jhanjhar Badla	Pitumbri	State aggregates
1	What are the differences between spatial records and the textual records, especially in terms of:			
a	Extent (area) of the land parcels	67% of land owners have seen spatial land records. All land owners says their area is same in both textual and spatial records.	87% of land owners have seen spatial land records. All land owners says their area is same in both textual and spatial records.	In 7 villages, patwari told extent (area) of land parcels shown in RoR is the same as in digitised and vectorised CMs.
b	Updation of partition and demarcation actions	Not Applicable	Not Applicable	Not Applicable
2	What are the differences between on-ground status and land records status in terms of ownership details (including where applicable, multiple, share-based and other forms ownership that may exist)?	88.3% of record reflect ownership by name. In joint ownership, 97.6% of the records reflect co-owner names correctly.	95.6% of land records reflect ownership by name. In joint ownership, 97.4% of the records reflect co-owner names correctly.	Overall possession details reorded correctly in most land records.
a	Is the RoR format able to capture non-agricultural land uses in detail (e.g. in- built up areas, ownership of flats or individual floors)?	Out of 206 records, only 2 shows non-agriculture land use and 100% of such non-agriculture land uses is captured in land records.	Out of 181 land records, only 12 records show non-agriculture land uses and 100% of such non-agriculture land uses is captured in land records.	In 33.3% cases no detail only recorded as non-agricultural, In 44.4% cases simple mention of use like building, road, path, pond, etc, In 22.2% cases Further details of type and use of building, (residence, cowshed, shop, factory, etc).

b	Does the on-ground ownership details, including any built-up area on the land parcel, coincide with the details in land record, especially in context of shared ownership. Or multiple owners?	Out of total 148 joint land parcels, 141 land parcels show land use and ownership details.	Out of total 108 joint land parcels, 106 land parcels show land use and ownership details.	In most cases, on-ground details on ownership including any built-up area coincide with the details in land record
c	If not up-to-date, how land has the record remained un-updated, and likely reasons for the same?	-	-	In 80% cases there is difference of less than 5% due to any reason like tenancy, sharecropping, contract farming, joint ownership. Rest 20% cases there is no difference.
3	What are the differences between on-ground status and land records status, in terms of classification of land parcel?	Out of 206 land records, 204 records show agriculture land uses, of which 182 land records correctly captures on-ground land use details. Only 2 records show non-agriculture land use and 100% of such non-agriculture land uses is captured in land records.	Out of 181 land records, 169 records show agriculture land uses out of which 162 land records correctly captures on-ground land use details. Only 12 records show non-agriculture land uses and 100% of such non-agriculture land uses is captured in land records.	In majority cases there is no difference. In one-third cases there is difference of less than 5%.
a	Is there a difference between the on-ground use of land, and the one stated in ROR?	In 89.8% of land parcels, recording of land use details in the land records appears same as on-ground.	In 96.7% of land parcels, recording of land use details in the land records appears same as on-ground.	In majority cases there is no difference. In one-third cases there is difference of less than 5%.
b	Is the ROR format able to capture non-agricultural land uses in detail?	Out of 206 records, only 2 shows non-agriculture land use and 100% of such non-agriculture land uses is captured in land records.	Out of 181 land records, only 12 records show non-agriculture land uses and 100% of such non-agriculture land uses is captured in land records.	In 33.3% cases no detail only recorded as non-agricultural, in 44.4% cases simple mention of use like building, road, path, pond, etc, In 22.2% cases Further details of type and use of building, (residence, cowshed, shop, factory, etc).

c	If not up-to-dated, how long has the record not been updated, and reasons for the same?	Reasons being lack of clear instructions on the subject.		
4	What are the differences between on-ground status and land records status, in terms of location and extent of the land parcel?	In 9 out of 10 sample villages, location shown in RoR is easily understood by landmarks in most cases.		
a	What is the difference between the on-ground location, and that marked in the revenue maps (these maps would be the latest legally relevant spatial records available)?	Not Applicable	Not Applicable	Not Applicable
b	What is the difference in area between on-ground situation, spatial records on paper, and Records of Rights?	There is no difference in area between on-ground situation, spatial records and Records of Rights in case where people have seen spatial and textual records.	There is no difference in area between on-ground situation, spatial records and Records of Rights in case where people have seen spatial and textual records.	In 7 out of 10 sample villages, patwari told extent (area) of land parcels shown in RoR is the same as in digitised and vectorised CMs.
c	If there is a difference between the two, then percentage of error for selected land parcels?	Not Applicable	Not Applicable	Not Applicable
d	Have on-ground partition and demarcation proceedings been incorporated in textual and spatial records?	In 100% cases partition and demarcation proceedings are incorporated.		
5	What are the differences between on-ground status and land records status, in terms of Encumbrances on parcel?	In most cases, reflect ground realities, only mortgages are recorded in land records.		

6	What are the various encumbrances (e.g. loans, liens, mortgages, litigations, court orders, acquisition proceedings) on the land parcels, and how many of these are mentioned on the RoR?	In 100% cases mortgage is shown in land records. There is no existence of revenue court / civil court proceeding or any other restrictions on any land parcel.	In 95.9% cases mortgage is shown in land records. There is no existence of revenue court / civil court proceeding or any other restrictions on any land parcel.	Mortgages/loan/ lien recorded in land records. No recording of revenue/ civil court proceedings.
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Note: Data summarized based on village survey of land owners and patwaris

Source: NACER's Land Study Survey, 2024

Annexure Table 7.1A. Compararative assessment of sample villages by land owners' profile, digitisation of the land records, gaps and ground situation

Indicators	Punjab		Chandigarh		Delhi		Rajasthan	
	Kheri Ranwa	Chani	Buterla	Attawa	Holambi Kalan	Roghopur	Jhanjhar Badla	Pitumbri
District	Patiala	Pathankot	Chandigarh	Chandigarh	North	South West	Udaipur	Sirohi
Tehsil	Patiala	Pathankot	Chandigarh	Chandigarh	Narela	Kapashera	Kotra	Pindwara
Private land parcels	275	232	26	29	118	281	205	180
Govt land parcels	103	76	257	246	61	91	23	47
Land parcels with not available owners	8	-	-	-	108	440	-	-
Total land parcels	386	308	283	275	287	812	228	227
Relationship of the land owners with household head	72% respondents were the household head	54% respondents were the household head	58% respondents were the household head	52% respondents were the household head	86% respondents were the household head	70% respondents were the household head	32% respondents were Son/daughter of the Household Head. 30% respondents were the household head	46% respondents were the household head. 34% respondents were Son/daughter of the Household Head.
Age category	52% landowners were 46-60 years old. 31% landowners were less than 45 years old.	63% landowners were above 61 years old. 26% landowners were 46-60	43% landowners were above 61 years old. 39% landowners	45% landowners were above 61 years old. 35% landowners were 46-60	43% landowners were 46-60 years old. 37% landowners were above 61	58% landowners were less than 45 years old. 34% landowners were 46-60	50% landowners were less than 45 years old. 32% landowners	36% landowners were 46-60 years old. 32% landowners were less than

Indicators	Punjab		Chandigarh		Delhi		Rajasthan	
	Kheri Ranwa	Chani	Buterla	Attawa	Holambi Kalan	Roghopur	Jhanjhar Badla	Pitumbri
	Average is 52 years old.	years old. Average is 63 years old.	were 46-60 years old. Average is 60 years old.	years old. Average is 56 years old.	years old. Average is 58 years old.	years old. Average is 48 years old.	were 46-60 years old. Average is 44 years old.	45 years old and 32% were above 61 years old. Average is 55 years old.
Gender	86% were male.	73% were male.	89% were male.	70% were male.	88% were male.	92% were male.	100% were male.	99% were male.
Highest level of education completed	27% were educated upto secondary level. 26% were educated upto middle level. Only 16% were graduate and above.	37% were illiterate. 25% were educated upto primary level. 17% were educated upto secondary level.	42% were educated upto secondary level. 12% were educated upto senior secondary level. 12% were graduate and above.	45% were educated upto secondary level. 31% were graduate and above.	32% were educated upto senior secondary level. 23% were educated upto secondary level. 21% were graduate and above.	57% were educated upto senior secondary level. 24% were educated upto secondary level. 15% were graduate and above.	58% were Literate: without formal education. 29% were illiterate.	28% were educated upto middle level. 22% were illiterate. 16% were educated upto primary level.
Employment status (over the last Twelve Months)	79% were Self Employed – farmer. 14% were employed in other activities (excluding self-employed-non-farm work and wage labour work).	43% were Self Employed – farmer. 15.5% Employed / wage labour	31% were Self Employed – farmer. 27% were Disabled/ retired/ out of workforce/ live on passive income.	45% were Self Employed – nonfarm work. 14% were Disabled/ retired/ out of workforce/ live on passive income. 4% were Self Employed – farmer.	71% were Self Employed – farmer. 10% were employed in other activities (excluding self-employed-non-farm work and wage labour work).	73% were Self Employed – farmer. 20% were Self Employed – nonfarm work.	98% were Self Employed – farmer. 2% were Self Employed – nonfarm work.	90% were Self Employed – farmer. 9% were Self Employed – nonfarm work.

Indicators	Punjab		Chandigarh		Delhi		Rajasthan	
	Kheri Ranwa	Chani	Buterla	Attawa	Holambi Kalan	Roghampur	Jhanjhar Badla	Pitumbri
Link for RoR portal	https://jamabandi.punjab.gov.in/		https://revenue.chd.gov.in/		https://dlrc.delhi.gov.in/Default.aspx		https://apnakhata.rajasthan.gov.in/Owner wise/District Map.aspx	
How many have seen textual copy	100%	100%	100%	90%	100%	100%	89%	96%
How many own digital copy	66%	49%	12%	45%	48%	84%	64%	46%
From where obtained digital copy	Office- 52% E service centre- 0.4% Website-14%	Office- 49%	Office-12%	Office- 35% Website-10%	Office- 41% Website-7%	Office- 84%	Office- 10% E service centre-53% Website- 0.5%	Office- 3% E service centre- 43%
Link for spatial portal	https://jamabandi.punjab.gov.in/CadastralMap.aspx?itemPID=19		https://bhunaksha.chd.gov.in/		https://gsdl.org.in/revenue/		https://bhunaksha.rajasthan.gov.in/	
How many have seen spatial copy	15%	3%	None	None	25%	None	67%	87%
How many own digital copy (of those who have seen the copy)	None, Punjab has not made it public.	None, Punjab has not made it public. But most of those who have seen the copies have taken picture of the cloth map from patwari.	None	None	7%	None	92%	98%
From where obtained digital copy	-	-	-	-	Revenue Office- 7%	-	Revenue Office- 75% E service centre-18%	Revenue Office- 46% E service centre-45% Website-6%

Indicators	Punjab		Chandigarh		Delhi		Rajasthan	
	Kheri Ranwa	Chani	Buterla	Attawa	Holambi Kalan	Roghampur	Jhanjhar Badla	Pitumbri
Type of spatial copy available on portal	Scanned- Picture of a village cloth map	Scanned- Picture of a village cloth map	Vectorised	Vectorised	It is in mosaic form. We can only select khasras, no other details are mentioned.	It is in mosaic form. We can only select khasras, no other details are mentioned.	Vectorised	Vectorised
Type of spatial copy available with land owner (those who have seen spatial copies)	Paper copy obtained from revenue office- 100%	Paper copy obtained from revenue office- 100%	None	None	Paper copy from revenue office-93% Digital from Revenue Office-7%	-	Paper copy from revenue office- 8% Digital copy from various sources- 92%	Paper copy from revenue office- 1% Digital copy from various sources- 98%
Type of ownership- single/ joint	68% joint ownership land parcels.	83% joint ownership land parcels.	58% single ownership land parcels.	52% single land parcels.	64% joint ownership land parcels.	100% joint ownership land parcels.	72% joint ownership land parcels.	60% joint ownership land parcels.
Average number of land owners under joint ownership	5	6	3	3	4	6	4	3
Range of joint owners on land parcels (Min- Max)	2-14	2-14	2-3	2-7	2-10	2-19	2-12	2-10
<i>% Distribution of jointly owned land parcels by number of joint owners</i>								
2-3 owners	58.3	29.5	100	71.4	53.9	32.7	69.6	75.9
4-7 owners	36.9	43.7		28.6	40.8	46.3	14.9	14.8
8-10 owners	3.7	13.2			5.3	10.7	12.8	9.3
>10 owners	1.1	13.7				10.3	2.7	
Total	100	100	100	100	100	100	100	100

Indicators	Punjab		Chandigarh		Delhi		Rajasthan	
	Kheri Ranwa	Chani	Buterla	Attawa	Holambi Kalan	Roghopur	Jhanjhar Badla	Pitumbri
Updation of Ownership details (correctly reflected)- Name	99%	99%	81%	83%	86%	100%	88%	96%
Updation of Ownership details (correctly reflected)- Land Area	99%	99%	100%	83%	100%	100%	89%	96%
Updation of Land use (correctly reflected)	99%	98%	58%	38%	75%	100%	90%	97%
Reflection of mortgages in RoR	Mortgage cases- 48% Reflected in 99% cases.	Mortgage cases- 7% Reflected in 93% cases	2 mortgage cases only and in neither case loan entry was shown in the land records.	Loan entry was shown in the land records.	2 cases found and mortgages are reflected in the RoRs.	No mortgage cases.	100%	96%

Note: Information is based on the census of land owners conducted in 8 sample villages in 4 States and UTs.

Source: NACER's Land Study Survey, 2024

Annexure Table 7.2A. Comparartive Assessment of Sample States by Key Paramters

S.no	Output / Outcome Indicators	Punjab	Chandigarh	Delhi	Rajasthan
1	Number of villages where RoRs computerized	12,731 villages out of 13,016- (97.8%)	All – 100 per cent: 25/25 villages	196 villages out of 207 - (94.7%)	47,417 villages out of 48,719- (97.3%)
2	Number of RoRs linked with Aadhaar	51 villages out of 13,016- (0.4%)	In none of the village, RoRs linked with Aadhaar	None	9 villages out of 48,719- (0.02%)
3	Number of cadastral maps digitized (including Tippans/ FMBs)	44,734 CMs/ Tippans/ FMBs out of 51,945- (86.1%)	All CMs/ Tippans/ FMBs- 100 per cent (108/108)	14/14 - (100%)	1,39,691 CMs out of 1,52,184- (91.8%)
4	Number of Tippans/FMBs digitized	covered in point 3.	covered in point 3.	Covered in point 3	Covered in point 3.
5	Number of villages where cadastral maps/ FMBs/ Tippans are linked with RoR	122 villages out of 13,016- (0.9%)	All – 100 per cent: 25/25 villages	67 villages out of 207 – (32.7%)	42,438 villages out of 48,719 – (87.1%)
6	Number of geo-referenced land parcels	6,118 villages out of 13,016- (47%)	None of the land parcel is geo-referenced, although in case of CMs all maps (108) are geo-referenced.	None of the land parcels geo-referenced but 32.4 per cent of the total CMs are geo-referenced	17,506 villages out of 48,719 – (35.93%)
7	Number of Land Parcels assigned ULPIN	17,60,916	11,662	274	96,327
8	Number of Districts in which sub-division of land parcels is as per current ownership*	Demarcation online facility available. Maybe not same as subdivision	NA, However, online facility for a request for demarcation is available. Applicants can provide details such	Partition deed is available (can ask about steps after application- visit offices or can request partition online); online	NA The online facility for land owners to request survey of their land parcel for sub-division is not available. The

			as name, khewat, village or city, address ownership details etc. and request for demarcation.	application for Partition deed available	development of a module for online application for partition on the basis of consent is under process.
9	Whether legally valid digitally signed RoR available online for download by citizens	Issuance of digitally signed ROR (Villages) – 116 out of 13,016- (0.9%)	No	Issuance of digitally signed ROR (Villages) - 195/207 (94.2%)	Issuance of digitally signed ROR (Villages) – 41,355/48,719- (84.9%)
10	Whether registration process is completely online & paperless	Yes, registration process is online	There is only one SRO which is computerised; SROs integrated with Revenue Offices and land record database; online facility for booking appointment slot for registration available; Circle rates available online; Online payment facility available for application fee - Stamp duty, registration.	All 22 SROs digitised, online facility for booking appointment slot for registration available, provision for online entry of data when a transaction is to be registered, circle rates available online, e-calculator available, home visit module is available for registry of the document by SRO, every registration trigger a corresponding digital mutation in the RoR, Online grievance redressal system is available for filing complaints related to property registration at Sub Registrar Office	All 659 SROs are digitised, provision for online entry of data when a transaction is to be registered, online facility for booking appointment slot for registration available, circle rates available online, all modes of payment (Purchase of stamp paper from vendor, Purchase of e-stamp papers, Online payment) available, e-calculator available.

Source: DOLR website, <https://rcms.punjab.gov.in/DemarcationLand.aspx> ; <https://revenue.chd.gov.in/Demarcation.aspx>; <https://dilrmp.gov.in/bhoomisammannew/>; Rajasthan Revenue Department



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