

# LAND RECORDS AND TITLES IN INDIA

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Land titles are presumptive and don't guarantee ownership

Land records are maintained across multiple departments, and are in poor condition

Process of updating land records has been slow

### Land ownership in India is presumptive

- In India, land ownership is primarily established through a registered sale deed (a record of the property transaction between the buyer and seller). Other documents used to establish ownership include the record of rights (document with details of the property), property tax receipts, and survey documents. However, these documents are not a government guaranteed title to the property, but only a record of the transfer of property. During such transactions, the onus of checking past ownership records of a property is on the buyer. Therefore, land ownership in India, as determined by such sale deeds, is presumptive in nature, and subject to challenge.

### Land records are poorly maintained; they do not reflect the on ground position

- Land records consist of various types of information (property maps, sale deeds) and are maintained across different departments at the district or village level. These departments work in silos, and the data across departments is not updated properly. Hence, discrepancies are often noted in land records. In the past, surveys to update land records have not been undertaken or completed, and maps have not been used to establish actual property boundaries on the ground. Therefore, in several records, the property documents do not match the position on the ground.
- Poor land records also affect future property transactions. It becomes difficult and cumbersome to access land records when data is spread across departments and has not been updated. One has to go back several years of documents, including manual records, to find any ownership claims on a piece of property. Such a process is inefficient and causes time delays.

### Policy responses have addressed modernisation and digitisation of land records

- In order to improve the quality of land records, and make them more accessible, the central government implemented the National Land Records Modernization Programme (now Digital India Land Records Modernization Programme). It seeks to achieve complete computerisation of the property registration process and digitisation of all land records.
- However, the pace of modernisation of records and bringing them to an online platform has been slow. From 2008 till September 2017, 64% of the funds (see Table 3 in the Annexure) released under DILRMP have been utilised.

**Table 1: Status of completion of various components under the Digital India Land Records Modernization Programme (DILRMP)**

Computerisation of land records	86%
Mutation computerised	47%
Issuance of digitally signed RoR	28%
Cadastral Maps digitised	46%
Spatial data verified	39%
Cadastral maps linked to RoR	26%
Real time updation of RoR and maps	15%
Number of villages where survey/re-survey work completed	9%
Area surveyed	35%

Note: RoR is Record of Rights. Data is updated till September 2017. Sources: Department of Land Resources, Ministry of Rural Development; PRS.

### Moving to a system of state guaranteed titles will be challenging

- To address issues with land records, a move towards conclusive titling has been proposed. In a conclusive titling system, the government provides guaranteed titles, and compensation in case of any ownership disputes. Achieving this will require shifting to a system of registered property titles (as opposed to sale deeds) as the primary evidence of ownership, and having clear and updated land records.
- However, adopting a conclusive system of titling will require undertaking several measures. All existing land records will have to be updated to ensure that they are free of any encumbrances. Information on land records, which is currently spread across multiple departments, will have to be consolidated. Further, several changes in existing laws that govern registration and transfer of land, and institutional changes in maintenance of land records will also have to be done.

## LAND AS A VALUABLE ASSET

Land as an asset is unique because it is immovable, its value depends on its location, and with growing population, its demand keeps increasing, while its supply is limited. Access to land (or land rights) has a wide-ranging impact on livelihoods, industrial, economic, and social growth. It has been noted that people with extensive rights to land are better off than the landless, due to better access to markets and other economic opportunities that come with land rights.<sup>1</sup>

Land ownership is broadly defined by the access to a land title. Land title is a document that determines the ownership of land or an immovable property. Having a clear land title protects the rights of the title holder against other claims made by anyone else to the property. In India, land ownership is determined through various records such as sale deeds that are registered, property tax documents, government survey records, etc.

However, land titles in India are unclear due to various reasons such as legacy issues of the zamindari system, gaps in the legal framework, and poor administration of land records. This has led to several legal disputes related to land ownership, and affected the agriculture and real estate sectors. Such issues have further highlighted the importance of having clear land titles, and a well organised land records system. We discuss a few such issues in the following section.

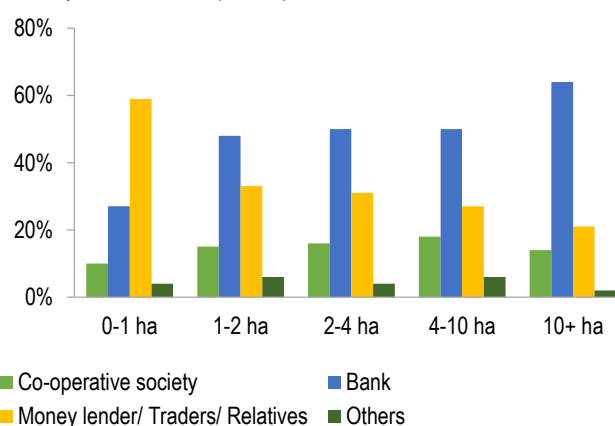
## THE NEED FOR CLEAR LAND TITLES

**High litigation:** A World Bank study from 2007 states that some estimates suggest that land-related disputes account for two-thirds of all pending court cases in the country.<sup>2</sup> These land disputes include those related to the validity of land titles and records, and rightful ownership. A NITI Aayog paper suggests that land disputes on average take about 20 years to be resolved.<sup>3</sup> Land disputes add to the burden of the courts, tie up land in litigation, and further impact sectors and projects that are dependent on these disputed land titles.

**Agricultural credit:** Land is often used as collateral for obtaining loans by farmers. It has been observed that disputed or unclear land titles inhibit supply of capital and credit for agriculture.<sup>4</sup> Small and marginal farmers, who account for more than half of the total land holdings, and may not hold formal land titles, are unable to access institutionalised credit.<sup>5</sup>

Credit flow to agriculture has been consistently increasing with the banking sector exceeding the targets set for loan disbursement by the government. The target for credit flow to agriculture increased from Rs 6.6 lakh crore in 2010-11 to Rs 13.4 lakh crore in 2014-15. The actual credit flow for both these years was Rs 8.1 lakh crore and Rs 14.4 lakh crore respectively. While the credit flow to agriculture has been rising every year, the extent of financial exclusion still remains large. Farmers with smaller land holdings (less than one hectare) primarily borrow from informal sources of credit such as moneylenders (41%), and friends and relatives (14%) (see Figure 1).

**Figure 1: Land holdings and sources of agricultural credit, as of 2013 (in %)**



Sources: RBI Report on Medium-term Path on Financial Inclusion; PRS.

Incorrect land records also affect the availability of other inputs for farming. For example, if the actual area being cultivated is more than the area marked in the land records, the area insured is less than the cultivated area. This could lead to a reduction in the insurance claims of farmers.<sup>6</sup>

**Development of new infrastructure:** Over the last few decades, the economy of the country has seen a shift from being agrarian based to becoming manufacturing and services based (see Figure 2). This has necessitated the development of infrastructure, and a shift in land use from agriculture to commercial, industrial, and residential. Land that was earlier used for farming, is now being used to set up industries, power plants, manufacturing units, build roads, housing, and shopping malls.

However, several of the new infrastructure projects are witnessing delays, with land related issues often being a key factor. These delays occur because of non-availability of encumbrance free land (evidence that the property in question is free from any monetary and legal liability), non-updation of land records, resistance to joint measurement survey of land records, demands for higher compensation by land owners, and filing of large number of arbitration cases by land owners.<sup>7</sup> For example, obtaining a land ownership certificate can take around 60 days in Gujarat and up to 12 months in Chennai and Odisha.<sup>8</sup>

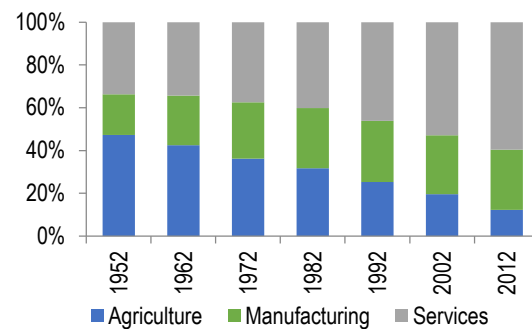
Unclear land titles, accompanying costs due to title disputes and litigation, and lack of transparency in real estate transactions make the real estate market inefficient.<sup>9,10</sup> Execution of new projects requires clarity on the ownership and value of land, both of which become difficult in the absence of clear land titles. Any infrastructure created on land that is not encumbrance free, or has unclear land records can be potentially challenged in the future, making such investments risky.

**Urbanisation and the housing shortage:** More recently, land use is also changing due to urbanisation and further expansion of such urban areas (see Figure 3). While census towns are places with urban characteristics (population above 5,000, at least 75% of the population engaged in non-agricultural work, and a population density of at least 400 people per sq. km.), statutory towns are urban areas with a local authority. Figure 3 implies that rural areas are rapidly urbanising, and may not necessarily have an urban local body. Note that census towns could be governed by gram panchayats and be classified as rural areas despite having urban characteristics.

The housing shortage in urban areas was estimated to be 1.87 crore units in 2012, and this is expected to increase to two crore units by 2022.<sup>11,12</sup> With the inner cities getting more crowded, in several cities, new housing is now being provided at the city boundaries. Unclear land titles mean several of these new housing projects may get into land ownership disputes.

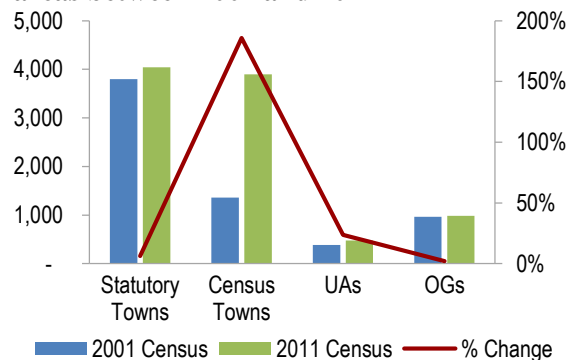
The scarcity of affordable housing in urban areas drives the urban poor to live in slums or unauthorised colonies.<sup>13</sup> These slum dwellers do not have access to a clear land title, or any ownership rights. Such slums may occupy prime land in urban areas. However, since the slum dwellers do not have any ownership rights, they do not pay any taxes on the property they occupy. This results in urban local bodies (ULBs) losing out on property tax, an important source of revenue for them. Further, since such colonies are unauthorised, it is difficult for the ULBs to provide basic services (water supply, sewerage, electricity, etc.) in them.

**Figure 2: Share of sectors in GDP (at 2004-05 prices, in %)**



Sources: Central Statistics Office; PRS.

**Figure 3: Growth in the number of urban areas between 2001 and 2011**



Note: UA is Urban Agglomeration, OG is Out Growth of a city.

Sources: Census of India; PRS.



Under new schemes for urban development (Smart Cities Mission, AMRUT), cities are trying to raise their own revenue through property taxes and land based financing. This further necessitates the importance of providing a system of clear land titles in urban areas.

**Benami transactions:** A benami transaction is one where a property is held by or transferred to a person, but has been provided for or paid by another person. The White Paper on Black Money (2012) had noted that black money generated in the country gets invested in benami properties. Unclear titles and non-updated land records enable carrying out property transactions in a non-transparent way. The Standing Committee on Finance (2015) examining the Benami Transactions Prohibition (Amendment) Bill, 2015 noted that generation of black money through benami transactions could be pre-empted and eliminated by digitisation of land records and their regular updation.<sup>14</sup>

## WHY ARE LAND TITLES IN INDIA UNCLEAR?

As discussed above, poor or unclear land records can have wide-reaching impact across sectors. Therefore, it becomes important to have clarity on land ownership through these records. Land titles in India are unclear because of various reasons. The system of land records was inherited from the zamindari system, the legal framework in India does not provide for guaranteed ownership, and the manner in which information pertaining to land records is collected and maintained further exacerbates the gaps in these records. In this section we discuss how these various factors have led to unclear land titles.

### Legal framework

#### *Land titles are presumptive*

The current system of land records was inherited from the pre-independence days (zamindari system), and has not changed much since then.<sup>15</sup> These land records provided, in addition to other details, information on who is in possession of land, and not who the owner is (see Box 1). This has resulted in a system, where ownership is established based on who is in current possession of the land. Such possession is determined through a sequence of past transactions of the land or property in question.

The transfer of land or property between a buyer and seller is recorded through a sale deed, which needs to be registered according to the current legal framework. Therefore, such registration of land refers to the registration of the transaction, and not the land title.<sup>16</sup> Such registration does not guarantee the title by the government. This implies that even bonafide property transactions may not always guarantee ownership as an earlier transfer of the title could be challenged.

### Box 1: The evolution of land records

Prior to independence, land was mostly concentrated with the landlords or zamindars, who had permanent property rights. The zamindars collected land rent from a given territory, and paid a fixed sum as land revenue to the government. This land revenue formed a key source of government income. However, the rent that was to be paid by the cultivator tenants was unregulated, and was subject to the discretion of the landlords. This allowed the landlords to make profits by charging rents in excess of the amount to be paid as revenue.

Since the landlords were primarily interested in maximising rent collection, a system of land records was created and maintained to facilitate this process. These land records furnished information important for land revenue assessment such as area of the property, and details of the person in possession of the property. Post-independence, the zamindari system was abolished, but land ownership continued to be determined through a combination of these records.

Post-independence, the responsibility for land administration was transferred to states. All the records were collected and maintained manually by the respective revenue department. Further, with the abolition of the zamindari system, a few land reforms were implemented. These included policies on redistribution of land, and tenancy reforms.

The land redistribution reforms sought to put a cap on the amount of land a person could hold, and consolidation of such extra land with the government. These were known as land ceiling laws, which were later repealed in urban areas (mostly because they were not successful, and resulted in unused land banks with the government). The tenancy reforms broadly aimed at: (i) conferring security of tenure on tenant cultivators (to provide them some form of land rights), and (ii) fixing fair rents for tenants. However, these were also mostly unsuccessful. Currently, most states have either legally banned or imposed restrictions on agricultural land leasing, which has led to informal tenancy across the country.

Sources: Committee on State Agrarian Relations and the Unfinished Task in Land Reforms, Ministry of Rural Development; PRS.

Currently, land can be transferred from one party to another through sale, purchase, gift, inheritance, mortgage, and tenancy.<sup>17</sup> The Transfer of Property Act, 1882 provides that the right, title, or interest in an immovable property (or land) can be transferred only by a registered instrument. The Registration Act, 1908, is the primary law that regulates the registration of land related documents. Therefore, currently, all sale deeds relating to land or immovable property transfer are registered under the Registration Act, 1908.

As per the Registration Act, 1908, when registering a property sale deed, the identity of the buyer and the seller needs to be checked, and whether the last sale deed was registered. While the identity of the buyer and the seller is verified through various identity proof documents, the physical location and attributes of the land being sold may not always be cross-checked physically by the registrar (district official responsible for registration). Further, only checking the identity of the sellers may not necessarily mean that they are the rightful owners of such land or property.

Registration of a sale deed makes the document of transfer a permanent public record. From these records, any person interested in purchasing that property can verify in whose name the deed was last registered. If a deed of land transfer for which registration is compulsory under the Registration Act, 1908 is not registered, then it is not admissible as evidence of ownership in courts.

The onus of checking the validity of the title (or rightful ownership of the property) is on the buyer, and not on the government. Such verification requires delving into past ownerships and transactions to establish non-encumbrance. It is difficult to carry out this process if past transactions are not recorded properly and there are gaps between the records with the government and the actual state of land ownership. Gaps or mistakes in old land records also make it easier to question the ownership.

The Committee on Financial Sector Reforms (FSRC) in 2009 had recommended moving from a presumptive to a conclusive titling system. Conclusive titles are state guaranteed titles, where the state guarantees the title for its correctness and provides for compensation in case of any disputes. Guaranteed title systems have been developed and adopted in countries such as Australia, New Zealand, United Kingdom, and Singapore (see Box 2).

### **Box 2: Torrens System**

The Torrens System of land titling was originally established in Australia in 1858, and was later adopted by other countries including England, Ireland, Malaysia, Singapore, and Canada. The Torrens system is a method of recording and registering land ownership, and is often used as an example for conclusive titling. Under the Torrens system, the state provides guaranteed titles to all property owners. The system works on three principles:

1. The land titles register accurately, and completely reflect the current ownership and rights of a person in a particular piece of land.
2. Ownership and other interests do not have to be proved by documents such as title deeds.
3. Government guarantee provides for compensation to a person who suffers loss of land.

The Torrens system has created a central registry where all transfers of land are recorded in one register, thereby producing a single title with a unique number that also records easements, mortgages, and discharges of mortgages.

Several committees have referred to the Torrens System as an example when suggesting moving to the conclusive titling system.

In India, Rajasthan passed a law in 2016 that seeks to provide state guaranteed land titles in urban areas.

The central government's scheme on modernisation of land records (Digital India Land Records Modernisation Programme, (or DILRMP) also seeks to create a system that will help move towards conclusive titling. The FSRC had also recommended providing reasonable rules to allocate the liability for any loss or damage caused by an error in the administration of the registration and record search system.<sup>18</sup>

### ***Registration of property is not mandatory for all transactions***

Under the Registration Act, 1908, registration of property is not mandatory for all transactions.<sup>19</sup> These include acquisition of land by the government, court decrees, land orders, heirship partitions, and property that is leased for less than one year. Since heirship partitions do not require registration, several property divisions are not recorded, and hence, do not correctly reflect who is in possession of the property. This often leads to litigation related to rightful owner among heirs.

The FSRC (2009) had observed that compulsory registration of lease-holds (where the property has been taken on lease from the state for a longer duration, typically 99 years) and title would provide protection to tenants.<sup>18</sup> It had recommended that registration fees should be minimal and registration procedures should be simple, to not discourage people from registering property transfers. The Registration (Amendment) Bill, 2013, that is currently pending in Parliament, made registration compulsory irrespective of the term of the lease of the property.<sup>20</sup>

### ***The cost of registering property is high***

While registering a property transaction, the buyer has to pay a registration fee along with stamp duty. The rates of registration and stamp duties vary across states. India used to have among the highest rates of stamp duty in the world.<sup>18</sup> Around 2002-07, the stamp duty rates across states was between 12% and 15%. Note that stamp duties in other countries range between 1% and 4%.<sup>18</sup> Further, stamp duty is calculated on the cost of the property, and in cases with high property values, could end up being a fairly big amount.

In addition to stamp duty, registration fee is an additional 0.5% to 2% on average. This raises the cost of property transactions, leading to people avoiding registering them. Since all registered documents on the transfer of property require the payment of stamp duty and registration fee, in several cases, people avoid getting heirship partitions or transfers within the family registered. Because of this, several such transfers do not get registered, and hence, records show outdated data. As mentioned above, heirship partitions do not require compulsory registration under the Registration Act, 1908. It may be noted that if heirship partitions required compulsory registration, they would attract stamp duty and registration fees as is required with all other property related transactions. This could act as a form of inheritance tax.

Under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), one of the mandatory state level reforms was to rationalise stamp duty and bring it down to less than 5% by 2018.<sup>21</sup> Following this some states have reduced their stamp duties. For example, stamp duty in Delhi and Mumbai is 6% and 5%, respectively.<sup>22</sup> The Standing Committee on Commerce on Ease of Doing Business (2015) had recommended that stamp duty should be reduced to 2%.<sup>30</sup>

The FSRC had recommended that the Indian Stamp Act, 1899 and the Registration Act, 1908 should be amended to not require the payment of stamp duty for registration of certain property transactions.<sup>18</sup> Further, the stamp duty rates should be reduced to reduce the cost of transactions. States should reduce stamp duties from the present range of 15% to the level of three to five percent.<sup>18</sup> Some states, such as Andhra Pradesh, Jharkhand, and Maharashtra have reduced stamp duties. The FSRC had also recommended to keep the stamp duty rates uniform across states.<sup>18</sup>

However, reducing stamp duty would adversely affect the revenue of states, as it is a key source of income for the states. Currently, the percentage of tax revenue from stamp duty ranges from 16% in Maharashtra and Uttar Pradesh to 1-3% in the north-eastern states. The JNNURM guidelines had recommended that the reduction be carried out with adequate preparation and in a systematic manner. The loss in stamp duty revenues could be reduced if there is increased disclosure of property sales and the correct value of the property transacted. In order to ensure revenue neutrality, the FSRC had recommended to reduce stamp duty and increase land or property tax. Currently, land revenue contributes up to 5% of a state's own tax revenue.<sup>23</sup> Details on revenue from stamp duty, and other forms of land revenue for all states can be found in Table 8 in the Annexure.<sup>23</sup>

## Maintenance of land records

Land administration essentially involves recording, processing and dissemination of information about the ownership, value, and use of land. The system of land records management varies across states, depending on factors such as historical evolution and local traditions. Broadly, such information can be classified as details of the property (such as tax documents, rental documents), spatial records (such as maps, boundary limits), and transaction records (registered sale deeds).

Today, land ownership can be determined through a set of documents. These include: (i) the record of rights (RoR), which captures details such as the name of the land holder, the number and size of the plot area, and revenue rate (for agricultural land), (ii) the registered sale deed to prove that the property has been sold from one person to the other, and the taxes on the sale have been paid, (iii) survey documents to record a property's boundaries and area, and prove that the property is listed in government records, and (iv) property tax receipts.

Typically, across states, these land records are stored and managed in the following manner:

### *Land data*

**Sale deed:** At the time of purchase of an immovable property (land or property), both the seller and buyer sign a sale deed (a non-judicial stamp paper of a prescribed amount). Typically, a sale deed contains details of the property, market price of the property, and details of past transactions on the property.<sup>24</sup> The sale deed is registered under the Registration Act, 1908. It is registered on a stamp paper, and the value of the stamp paper is known as stamp duty.

Once the deed is registered, details about the transaction are sent to the tehsil/taluka office to start the process of mutation (recording the transfer or change of title of a property in the land records) and reflect this change in the record of rights. Once the mutation/transfer comes into effect, the state government (through the tehsil/taluka office) provides documentary evidence of right over land in the form of a *patta*. This *patta* is then provided to the buyer as an evidence of land right.

The sale deed only captures information on the transfer of ownership, and few property details such as the area and cost of land.<sup>24</sup> Other information related to land, property records, and related transactions is collected and maintained across various documents. These include:

**Record of Rights (RoR):** The RoR is the primary record that shows how rights on land are derived for the land owner, and records the property's transactions from time to time. The structure of the document, and the information it provides differs across states.<sup>25</sup> Typically, it provides (i) names of all persons who have acquired some rights with regard to the land, (ii) the nature and limits of their rights, and (iii) the rent or revenue to be paid by them. These rights could be ownership, long-term lease-holds, or tenancy related. The RoR may also capture information regarding loans taken by the occupant, details on the rights of the owner or occupant of the land, and any community or government rights on the land.<sup>26</sup>

**Spatial land records:** Spatial land records contain details of a property sketched on a map. These include land boundaries, plot area, connectivity with roads, presence of water bodies, details of surrounding areas, land use (agricultural, residential, commercial, etc), and land topology. The property-level sketch must be updated every time a new entry is made in the RoR document. Periodic surveys by the Survey and Settlement department are used to update these spatial land records.

### *Poor maintenance of land records*

Historically, land registration, and the maintenance of records has been done manually. Documents are usually kept with the Revenue Department and are not easily accessible to the public. This makes it difficult and cumbersome to access land related data when trying to engage in a property sale. An individual has to go back several years of documents, including manual records, to find any ownership claims on a piece of property. Such a process is inefficient and causes time delays. While programs to digitise land records have been around since late 1980s, the progress has been slow due to the large volume of land records (for details see page 10). The Committee on State Agrarian Relations and the Unfinished Task of Land Reforms (2009) observed that the average age of



village/cadastral maps in most states is more than 50 years, and most of them were prepared during the British regime.<sup>27</sup>

The FSRC (2009) had recommended providing remote and easy access to registration procedures and to land records. It had noted that the use of internet kiosks to access land records had proved very useful in increasing transactions in states where it had been tried, such as Andhra Pradesh. In addition, it was suggested that online documentation of land records can be linked with court registries of the corresponding district or the state, through which a buyer can get immediate information of any pending litigations with regard to a property.

### ***Records do not reflect the position on the ground***

Poor maintenance of land records has also led to inaccuracy in them. In the past, states have neglected updating the records through surveys. Maps have not been used to establish actual boundaries on the ground. This has resulted in the spatial records not matching textual records. The discrepancy between spatial and textual records also arises because transfer and partition of land, either through inheritance or sale are not captured through surveys. For example, when a property owner dies, records may not be updated when land is transferred to the heir.

The FSRC (2009) had suggested that there was a need to integrate cadastral maps with textual data in order to ensure that complete information in relation to a land parcel is available and updated at the time of registration and subsequent mutation/transfer. It noted that cadastral maps are mostly limited to agricultural land, with the inhabited portions of villages largely remaining unsurveyed. Further, the agricultural land surveys are outdated. It also noted that while complete cadastral mapping can be a huge expense for states, India has not yet taken complete advantage of the modern low cost technology available in surveying and mapping. It had recommended that a low cost method could be to combine satellite imagery with existing village maps and other readily available spatial products.

### **Administrative entities**

Typically, the information mentioned above is documented and maintained primarily across three departments.

- *The Registration Department* is responsible for registration of sale deeds, and collection of stamp duty. The Sub-Registrar’s office is responsible for carrying out the process of registration.
- *The Revenue Department* is responsible for maintaining the RoR and mutations register (any changes in titles). It also maintains tax registers for collection of revenue from land.
- *The Survey and Settlement Department* maintains spatial data (through maps) and executes surveys to collect land related data, and updates the maps.

While these are typically the functions of the three departments, it may vary across states. Details of the various departments have been summarised in Table 2.

**Table 2: State Departments responsible for land administration in the country**

Department	Functions	Documents maintained	Officers
Revenue	<ul style="list-style-type: none"> <li>▪ Collection of land revenue</li> <li>▪ Updating and maintaining revenue records</li> </ul>	<ul style="list-style-type: none"> <li>▪ Record of Rights (RoR)</li> <li>▪ Mutation register</li> </ul>	<ul style="list-style-type: none"> <li>▪ District - Collector</li> <li>▪ Block - Tehsildar</li> <li>▪ Village - Patwari</li> </ul>
Survey and Settlement	<ul style="list-style-type: none"> <li>▪ Maintaining spatial land records</li> </ul>	<ul style="list-style-type: none"> <li>▪ Village map</li> <li>▪ City survey maps</li> </ul>	<ul style="list-style-type: none"> <li>▪ District - Deputy inspector</li> <li>▪ Block - Town surveyor</li> <li>▪ Village - Village Administrative Officer</li> </ul>
Registration and Stamp Revenue	<ul style="list-style-type: none"> <li>▪ Registration of property documents and deeds</li> <li>▪ Evaluation and collection of stamp duty</li> </ul>	<ul style="list-style-type: none"> <li>▪ Encumbrance certificate</li> <li>▪ Sale deed</li> </ul>	<ul style="list-style-type: none"> <li>▪ District - Registrar</li> <li>▪ Block - Sub-registrar</li> </ul>

Sources: Land administration departments of various states; PRS.

### ***Multiple entities deal with land registration and records***

Land records are a combination of three types of data records: (i) textual (RoR), (ii) spatial (maps), and (iii) transaction details (sale deeds). Three different state departments are responsible for each of this data on land records. In the presence of multiple agencies responsible for registration and maintenance of records, it is difficult to ensure that survey maps, textual data, and registration records match with each other and are updated. In addition, citizens have to approach several agencies to get complete information on land records.<sup>28</sup> Most of these departments work in silos, and updating of records by any one of them makes the records of the others outdated.<sup>29</sup>

This discrepancy in property data builds in inefficiencies into the land market and affects infrastructure related projects. The Report of the Parliamentary Standing Committee on Commerce on Ease of Doing Business (2015) had recommended integration of land records in a database.<sup>30</sup> The integration must be done in a manner that all mortgage data against these lands can be seen online. It had also recommended the creation of a unique property identification code by linking city survey numbers to municipal bodies so that all data in the context of a particular property is available online. The FSRC (2009) had recommended standardisation of forms and computerisation of land offices.<sup>18</sup> This would help reduce corruption, loss of records, and delay in transactions.

The FSRC (2009) had also noted that for creditors to be interested in a property, they should be able to establish a secured claim to it, and secure all information around it. This would require a well-organised system of property records and registration process. Further, a central body should be set up that would establish a regulatory framework and enforce technical benchmarks and standards for cadastral mapping.<sup>18</sup> The draft Land Reforms Policy (2013) had also recommended setting up national and state authorities for the computerisation of land records.<sup>31</sup>

## **CHALLENGES TO ESTABLISHING CLEAR LAND TITLES**

Several committees have suggested that moving to a conclusive titling system will help address the issues around unclear land titles. The Ministry of Rural Development has undertaken a land records digitisation and modernisation scheme, the National Land Records Modernisation Programme (NLRMP) which seeks to move to a conclusive system of titles. While moving to a conclusive land titling system is desirable, it poses several challenges.

Firstly, it would require ensuring that all existing land records are accurate and free of any encumbrances. Currently, land records are incomplete, inaccurate and do not reflect the position on ground. Cross checking all these records against all past transactions, and with the existing position of ground would be time consuming, and resource intensive process.

Secondly, it would require that all information around land is available through a single window. Currently, land records are dispersed across various departments. Changes in land records in one department are not always reflected in the records in the other departments. Integration of information across departments would require integrating such information, updating these records, and ensuring that the information across the departments matches.<sup>28</sup> It would also require creating systems where any new information is recorded and updated through a single window, and that gets reflected across all the departments. Note that in municipal areas, some property related data is also stored in other departments such as electricity, and water supply. These would also need to reflect the updated property information.

Thirdly, with regard to the legal framework, land, registration of documents, and contracts are regulated across both centre and states. Moving to conclusive titling would require amending these central and state laws, and creating a unified legal framework that provides for government guaranteed land ownership.

In light of such challenges, the next section discusses the reforms that the government has undertaken to resolve the issues around land records, and maps the progress so far.

## REFORMS UNDERTAKEN TO IMPROVE THE SYSTEM OF LAND RECORDS

In the last three decades, in an attempt to improve the quality of land records, and make them more accessible, the central government has implemented various schemes for the modernisation of land records. Around 1988-89, the central government started the Computerisation of Land Records scheme to computerise all land records. Other schemes to improve land records and administration that were introduced around the same time were the Strengthening of Revenue Administration and the Updating of Land Records schemes. In 2008, all these schemes were merged into a centrally sponsored scheme, the National Land Records Modernization Programme (NLRMP).

The scheme has now been renamed as the Digital India Land Records Modernization Programme (DILRMP) and is a part of the Digital India initiative.<sup>32</sup> The scheme was changed into a Central Sector Scheme in April 2016.<sup>33</sup> With this change, the scheme will now be implemented by the central government with 100% of the grants coming from the centre. Between 2009 and 2016, about Rs 946 crore was sanctioned by the central government under NLRMP, of which Rs 412 crore was released.<sup>34</sup>

The major components of NLRMP/DILRMP are the following:

- (i) computerisation of all existing land records including mutations (or transfers);
- (ii) digitization of maps, and integration of textual and spatial data;
- (iii) survey/ re-survey, and updating of all survey and settlement records including creation of original cadastral records (record of the area, ownership and value of land) wherever necessary;
- (iv) computerisation of registration and its integration with the land records maintenance system; and
- (v) development of core Geospatial Information System (GIS) and capacity building.

NLRMP (now DILRMP) intends to eventually move from the existing system of presumptive titles to conclusive and state guaranteed titles. The conclusive title system is based on four basic principles:

- (i) A single window system for land records which will provide for the maintenance and updating of textual records, maps, survey and settlement operations and registration of immovable property.
- (ii) The cadastral records reflect all the significant and factual details of the property titles.
- (iii) The record of title is a true depiction of the ownership status, mutation is automatic following registration, and the reference to past records is not necessary.
- (iv) Title insurance, which means that the government guarantees the title for its correctness, and will compensate the title holder against losses arising due to defects in the title.

### Box 3: Bhoomi Project, Karnataka<sup>35,36</sup>

Bhoomi is the project for the online delivery and management of land records in Karnataka. The project was implemented by the Karnataka state government based on the funding received from the Computerisation of Land Records scheme in 2000. Under the project, all the manual Record of Rights (RoR), Tenancy and Crops (RTCs) which prevailed at the time of data entry were digitised and made available to the citizen through kiosk centres. The RTC is a document needed for several things such as obtaining bank loans, selling properties, creating partition deeds, etc. Under the project, the Revenue Department in Karnataka has computerised 20 million records of land ownership of 6.7 million farmers in the state.

Earlier, farmers were dependent on the village accountant to get a copy of the RTC. This led to delays, cases of harassment, and bribery. Bhoomi reduced the discretion of public officials by enabling mutation and data requests to be made online. All the ownership or any other changes in the RTCs are carried out through mutation as per Karnataka Land Revenue Act, 1964, and using the land records database. A printed copy of the RTC can be obtained online at computerised land record kiosks (Bhoomi centers) in taluk offices for a fee of Rs 10. If the mutation is not completed within 15 days by the revenue officer, farmers can approach a senior officer person with their grievance.

Currently, all the taluk databases are being uploaded to a web-enabled central database. RTCs are now available to view online for free and are also being issued from rural tele-centres.

Sources: Revenue Department, Government of Karnataka; Success stories on National Land Records Modernization Program, Ministry of Rural Development; PRS.

## ***Progress under DILRMP***

DILRMP is currently being implemented in all states, but with differential progress.<sup>37</sup>

**Computerisation:** As of September 2017, six states/ union territories (UTs) have completed computerisation of land records (100% complete), 10 states/ UTs have completed between 95% - 99%, and five states/ UTs have not started (see Table 4 in the Annexure). 19 states/ UTs have started issuing digitally signed RoRs. Of these, in five states, more than 95% of the villages have been issuing digitally signed RoRs (see Table 5 in the Annexure). 18 states/ UTs have started linking cadastral maps to the RoRs. Out of these, two states (Odisha and Tripura) have almost completed this process (see Table 6 in the Annexure).

As the above data suggests, implementation of NLRMP/DILRMP has been a challenging task. Most states use their local language and different terminologies in their textual and spatial land records. As of September 2017, 86% of land records have been computerised. This implies that the current land record on paper has been digitised and uploaded on system, from which citizens can access this information. However, only 47% of the mutation records (recording the transfer of ownership) have been computerised. This means that the remaining 53% of the records have not been updated with the current data on ownership. If the intent of digitising records is to have easy access to correct data, real time updating of property records becomes essential. However, real time updation of RoR and maps has been done for only 15% of the land records.

About 46% of the cadastral maps have been digitised so far. Further, only 39% of the spatial data has been verified. This could mean that the digitised records are still incomplete, as 61% of the records would not have updated spatial data. Further, this could imply that spatial records of land are at variance from the information in RoRs. Consequently, one can see that only 26% of cadastral maps have been linked to RoRs. As has been noted by various expert committees, most spatial records date back several years, implying that they may not reflect changes in property records. Under the DILRMP, re-survey and survey work has been carried out in only 9% of the villages. The financial and physical progress of DILRMP can be found in Tables 3-7 in the Annexure.

**Survey and re-surveys:** In December 2016, certain changes were made to DILRMP.<sup>38</sup> As per the changes, survey or re-survey operations will be conducted only when the RoR, or field book or map are not available or are destroyed/ damaged/ outdated. Further, if there is a difference between the area recorded in both the documents, the area recorded in the RoR will prevail. Note that 20 states/ UTs have not started the process of survey/ re-survey (see Table 7 in the Annexure).

Note that most of the 6.4 lakh villages in the country were surveyed and their cadastral maps prepared during the late 19<sup>th</sup> and early 20<sup>th</sup> century. In rural areas, more than 140 million land owners have more than 430 million records.<sup>39</sup> There are about 92 million ownership holdings, each with four to six parcels of holdings. The survey/ re-survey has to be done for each plot of land. Further, the government and each land owner must arrive at an agreement certifying that the owner is satisfied with the survey.<sup>39</sup> This further necessitates the need to undertake surveys on a periodic basis to update information in cadastral maps. The Expert Committee on Land Titling (2014) had recommended that for a guaranteed titling system, it is essential that the spatial and textual records are integrated and unified, so that there is no gap between the two.<sup>40</sup>

**DILRMP in urban areas:** In February 2017, the Ministry of Rural Development clarified that under DILRMP, computerisation of record of rights and digitisation of cadastral maps will include urban areas in addition to rural areas.<sup>41</sup> Further, details of immovable property (or the constructed house) will not be recorded under DILRMP, and it will be restricted to land only. Note that presently, the Ministry puts out information on the progress made in computerising record of rights and digitising cadastral maps in rural areas only.

It has been estimated that surveys are required for approximately 55 million urban households.<sup>39</sup> Further, it has been noted that urban areas require new surveys, as urban local bodies merely update data for purposes of taxation, and not for ownership. A door to door survey would be needed which gets cumbersome in multi-storied buildings. The Expert Committee on Land Titling (2014) had

recommended that in the absence of accurate description of the boundaries and location of properties, large scale cadastral surveys and re-surveys needed to be undertaken in urban areas.<sup>40</sup>

With regard to giving titles to immovable properties in urban areas, the Committee suggested that for properties such as newly constructed multi-story apartments, a first time occupant can get a clear title from the government. Since such property has no past history, consequently, there will be no defects in the title. The Committee noted that with an increase in urbanisation, and more people opting to live in multi-storeyed housing in urban areas, such a method could cover up to 50% of urban properties in the next 20 years.

The White Paper on Black Money (2012) had recommended the introduction of property title verification system in urban areas for the real estate market to function efficiently. The Standing Committee on Finance (2015) examining the Benami Transactions Prohibition (Amendment) Bill, 2015 noted that amendments to the Transfer of Property Act, 1882 and Registration Act, 1908 may be made to provide for: (i) online registration of all immovable properties, (ii) linkage of Aadhar and PAN numbers of all parties involved in purchase of a property, and (iii) sharing of data by the registration authorities with tax authorities.

**Capacity building:** The entire process of data collection and storage with regard to land records happens at the village, city, or block level. The Committee on State Agrarian Relations (2009) had observed that for updating land records and strengthening land management, there is a need to build capacity among officials at all levels. It recommended that, with the introduction of new technology such as GIS, GPS and use of satellite imagery to update land records, manpower responsible for upgradation, registration, and maintenance of land records should be adequately trained and skilled. This training should include understanding revenue records, surveying, creation of the record of rights and their maintenance. The training exercise should also include development of skills such as computer operation, maintaining records, and data management.

Estimates suggest that this training exercise has to be carried out for one-two lakh *patwaris*, over 50,000 survey staff, and in approximately 5,000 tehsils, and 4,000 registration offices.<sup>39</sup> The Standing Committee on Rural Development in 2016 also recommended the need to enhance the capacity at the level of *patwari* and *tehsildar* for effective implementation of NLRMP.<sup>42</sup>

The land record computerisation and modernisation schemes have been in process for the last 30 years. The Ease of Doing Business report (2015) observed that the pace of modernisation of records and bringing them to an online platform has been slow.<sup>30</sup> Other measures that could encourage and improve the computerisation of land records include: (i) clarifying the policy and establishing clear criteria and accountability mechanisms for allocation of central funds on this; (ii) identifying and publicising best practices on technical and legal issues, and promoting exchange and communication among technical staff across states; and (iii) prioritising full functional integration between records and registry.<sup>18</sup>

#### **Box 4: Rajasthan Urban Land (Certification of Titles) Bill, 2016**

In April 2016, Rajasthan passed the Rajasthan Urban Land (Certification of Titles) Bill, 2016. The Bill provides for certification of urban land titles. The Bill establishes the Urban Land Title Certification Authority. Certification of title will be voluntary and persons interested in getting clear titles to their property will approach the Authority. The Authority will receive applications, scrutinise documents, verify information and issue the certificate of title.

The owner of a land that has been surveyed will have to pay a survey fee not exceeding one third of the total cost of the survey. To obtain a certificate of title, the applicant will have to submit relevant document and a fee equal to 0.5% of the price of land.

A provisional certificate will be provided for two years, and if there are no disputes to the title during this time, a permanent certificate will be awarded.



## SUMMING UP

While conclusive titling has been suggested as the solution to solve the problem around land records in India, several steps need to be completed before the government starts giving out guaranteed land titles. These steps include: (i) amending laws across centre and states, (ii) administrative changes at the state level that streamline the collection and maintenance of land data, and (iii) ensuring that all data is regularly updated and easily accessible (on a digital platform).

DILRMP has so far been focusing on the last aspect of digitising and updating of records. Further, the programme's progress has been slow. Processes such as surveys and re-surveys, which would help update the spatial records have been going on at a slow pace due to the huge volume of records. Recently, Rajasthan started the process of giving guaranteed land titles in urban areas by introducing the Rajasthan Urban Land (Certification of Titles) Act, 2016. However, it remains to be seen how successful the new law is in providing people with guaranteed property titles.

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<sup>13</sup> "Report on Indian Infrastructure and Services", High Powered Expert Committee for estimating the investment requirement for urban infrastructure services, March 2011, <http://icrier.org/pdf/FinalReport-hpec.pdf>.

<sup>14</sup> "28<sup>th</sup> Report: The Benami Transactions Prohibition (Amendment) Bill, 2015", Standing Committee on Finance, April 2016, [http://164.100.47.134/lssccommittee/Finance/16\\_Finance\\_28.pdf](http://164.100.47.134/lssccommittee/Finance/16_Finance_28.pdf).

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## ANNEXURES

### Glossary of key terms and concepts

*Cadastral map* is a record of the area, ownership and value of land. Such maps were originally used for the purpose of taxation. These maps provide description and identification of a piece of land and the record of rights associated with it.

*Encumbrance certificate* is a document used as an evidence to prove that a property is free from any monetary and legal liabilities. Such a property can be transacted, that is brought and sold between a buyer and a seller.

*Freehold property* means a property that has a clear owner and is free from any other claims to it. The title to such a property is clear and its sale does not require consent from the state. It can be inherited and there are no restrictions on the sale or transfer of such property (in accordance with the land policies).

*Land administration* means the implementation of land policies and the rules of land tenure. Land administration could exist in both formal and informal structures.

*Land ceiling* is a mode of land rationing, which attempts to control the quantity of land available with a land owner.

*Land tenure* primarily means the access to land by means of ownership or tenancy and the responsibilities associated with the form of access. In India, land tenure is of two types: freehold and leasehold.

*Land title* means having ownership of land or an immovable property. Having a clear land title protects the rights of the title holder against other claims to the property.

*Land-use* means the function for which land is being used. Most planning documents mark out the usage of land to regulate physical development.

*Land-use regulation* is the enforcement and implementation of land-use planning and the adjudication of conflicts related to land-use patterns.

*Leasehold property* typically is one where the property has been taken on lease from the state. The person using such a property has no ownership over it which means they cannot sell or transfer it to someone else. Usually, such leases are for a duration of 99 years.

*Mortgage* is a legal agreement that conveys the conditional right of ownership on a property by its owner (the mortgager) to a lender (the mortgagee) as security for a loan.

*Mutation* is recording the transfer or change of title of a property in the land records. The change in title could occur due to inheritance or succession.

*Sale deed* is a document that contains details about the location and market price of the land that is being purchased/sold.

*Security of tenure* is the certainty that a person's rights to land will be recognised by others and protected in case of a challenge.

*Torrens system* is a titling system under which the government registers the land and guarantees a conclusive title. It covers various forms of land registration such as transfer, mortgage, lease, etc.

## The draft Land Titling Bill, 2011

Under the Constitution, land falls within the jurisdiction of states (Item 18 in the State List). The central government had released a draft Land Titling Bill in 2011 as a model law for the consideration of all states. Key features of the draft Bill include:

- The draft Bill provides for the registration of all immovable property to establish a system of conclusive, electronically recorded titles. It also provides for a mechanism to invite objections and for the resolution of disputes through special tribunals. The property record will be considered as conclusive ownership by the person mentioned. This will help resolve uncertainties in property transactions.
- The Bill establishes a Land Titling Authority at the state level. The Authority's task will be to prepare a record of all immovable properties in its jurisdiction.
- Each property's record will contain: (a) survey data of boundaries of that property; (b) a unique identification number, which may be linked to the UID number; (c) any record created by an officer of the state or Union Territory (UT) government authorised by the laws of that state to make such records; and (d) a record of title.
- The Bill provides for the state or UT government to create Title Registration Offices at various places, and for a Title Registration Officer (TRO) to function under the supervision of the Land Titling Authority. The TRO will have powers of a civil court and is charged with the task of creating a Register of Titles.
- After completion of records is notified by the Authority, the Register of Titles is prepared and maintained by the Authority. For each property, the Register will include: (i) general description, map, and locational details of the immovable property; (ii) descriptive data such as a unique identification number, plot number, total area, built up and vacant area, address, site area, and undivided share in the land; (iii) detail of survey entry, provisional title record, conclusive title record and status, mortgage, charges, other rights and interests in the property; and (iv) details of transfer of the property and past transactions; and (v) disputes pertaining to the property.
- Entries in the Register of Titles will serve as conclusive evidence of ownership. These entries will be maintained in electronic form, indemnified, and kept in the public domain.

Sources: The Draft Land Titling Bill, 2011, Ministry of Rural Development,  
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PRS.

## Modernisation of Land Records: Cadastral mapping

In India, states conduct surveys to map information with regard to land such as property boundaries, land use, ownership, etc. A cadastral map is a record of the area, ownership, and value of land. These maps provide description and identification of a piece of land, and the record of rights associated with it. Such maps were originally used for the purpose of taxation. The cadastral survey of an area which has already been surveyed earlier is known as re-survey. Surveys are conducted in several ways depending on the factors such as terrain conditions, vegetative cover, built-up areas, timeliness, cost, etc. Some of the survey methods currently being used include:

- **Pure ground method:** This technology is suitable for small land parcels. It is adopted in areas where photos from aerial photography or high resolution satellite imagery (HRSI) are not available. Ground surveys that capture land boundaries, and other attributes such as land use, irrigation status are carried out by the survey agency. The land boundaries are linked with data attributes in a GIS format to create a digital database. This method gives the most accurate measurement and is the costliest to implement.

Gujarat has undertaken surveys/re-surveys using this method.

- **Hybrid technology using aerial photography along with ground trothing:** Ground truthing involves collecting data on ground/ location. This is done in order to get reference points for positioning aerial imagery data (or data traced from it). In this process, aerial photographs are generated by the agency undertaking the survey. The creation of the digital database follows similar process as the pure ground method. This method is suitable for medium size land parcels and plain areas with less vegetation.

Bihar and Odisha have undertaken surveys/re-surveys using this method.

- **High resolution satellite imagery (HRSI) along with ground trothing:** In this process, the GPS coordinates for each ground control point (point used to reference satellite data with ground boundary) of a land parcel are collected and processed. Cadastral maps along with the ground control points are overlaid on high-resolution satellite images. After due validation, a single mosaic of all land parcels in a village is generated. The creation of the digital database follows similar process as pure ground method.

Haryana has undertaken surveys/re-surveys using this method.

The hybrid methodology is more preferable than the pure ground method because it saves time significantly. The HRSI option may not be suitable for original cadastral surveys because of its wider margin of error.

Sources: Guidelines, Technical Manuals and MIS 2008-09, The National Land Records Modernization Program); National Level Monitoring of Digital India Land Records Modernization Program, January 2016; "Cadastral maps", Cadastral surveys and records of rights in land, FAO Land Tenure Studies, Food and Agriculture Organisation; PRS.



**Table 3: Fund utilisation under DILRMP (as of September 2017, in Rs crore)**

State/UT	Funds sanctioned by centre	Funds released by centre	Utilised Amount	Unspent Balance	Districts covered (in %)
Andhra Pradesh	65.2	65.2	21.6	43.6	100%
Arunachal Pradesh	20.9	12.1	4.2	7.9	14%
Assam	44.3	36.6	16.7	19.9	82%
Bihar	160.2	77.7	51.8	25.9	100%
Chhattisgarh	94.8	33.5	19.4	14.1	81%
Goa	6.6	4.0	0.5	3.5	100%
Gujarat	184.1	143.0	96.2	46.8	100%
Haryana	61.4	41.4	24.9	16.5	95%
Himachal Pradesh	69.3	43.4	0.4	43.0	100%
Jammu & Kashmir	15.9	9.9	8.5	1.4	32%
Jharkhand	41.8	30.1	35.1	-5.0	83%
Karnataka	40.6	24.5	0.2	24.3	97%
Kerala	40.9	28.1	15.6	12.5	100%
Madhya Pradesh	137.5	83.2	85.8	-2.5	53%
Maharashtra	104.3	65.4	16.7	48.7	67%
Manipur	2.3	1.7	-	-	25%
Meghalaya	8.3	6.2	0.8	5.5	45%
Mizoram	24.1	13.2	18.1	-4.9	50%
Nagaland	17.2	15.5	15.5	-	8%
Odisha	151.7	96.3	67.5	28.8	100%
Punjab	43.0	28.0	10.5	17.5	100%
Rajasthan	193.2	41.4	91.0	-49.6	33%
Sikkim	11.1	8.5	9.4	-0.8	100%
Tamil Nadu	48.0	32.1	6.6	25.5	100%
Telangana	139.8	83.9	11.1	72.7	29%
Tripura	32.6	23.0	22.9	0.1	100%
Uttarakhand	15.2	7.7	2.7	5.1	100%
Uttar Pradesh	32.1	18.5	5.4	13.1	32%
West Bengal	102.6	75.3	80.4	-5.1	90%
Andaman & Nicobar Islands	1.0	0.7	0.5	0.2	67%
Chandigarh	4.3	0.7	0.4	0.3	100%
Dadra & Nagar Haveli	0.5	0.4	0.4	-0.03	100%
Daman & Diu	1.4		0.7		100%
Lakshadweep	2.2	2.2	1.7	0.5	100%
NCT of Delhi	3.1	1.3	-	-	9%
Puducherry	5.0	3.4	2.7	0.7	50%
<b>Total</b>	<b>1,926.5</b>	<b>1,157.8</b>	<b>745.8</b>	<b>409.7</b>	<b>69%</b>

Note: Negative unspent balance could indicate that states have spent amount higher than the funds released by the centre. Districts covered indicates all those districts where money released from the centre has been allocated.

Sources: DILRMP MIS, Ministry of Rural Development; PRS.

**Table 4: Status of computerisation of land records (CLR)**

State	Number of villages	CLR Completed (%)	CLR Ongoing (%)	CLR not started (%)	Mutation computerised (%)
Andhra Pradesh	17,563	97%	1%	2%	98%
Arunachal Pradesh	5,590	0%	0%	100%	0%
Assam	26,777	52%	0%	48%	62%
Bihar	46,368	65%	19%	16%	2%
Chhattisgarh	20,401	89%	6%	5%	90%
Goa	425	0%	33%	66%	34%
Gujarat	18,531	96%	0%	4%	83%
Haryana	7,088	93%	4%	3%	93%
Himachal Pradesh	20,694	100%	0%	0%	2%
Jammu & Kashmir	5,733	9%	0%	91%	0%
Jharkhand	32,752	44%	24%	32%	32%
Karnataka	29,523	100%	0%	0%	0%
Kerala	1,674	44%	1%	55%	44%
Madhya Pradesh	55,070	99%	0%	1%	31%
Maharashtra	44,855	99%	1%	0%	99%
Manipur	2,743	9%	3%	88%	8%
Meghalaya	6,822	0%	0%	100%	0%
Mizoram	826	0%	0%	100%	0%
Nagaland	1,601	0%	0%	100%	0%
Odisha	51,681	100%	0%	0%	0%
Punjab	12,894	94%	0%	6%	30%
Rajasthan	47,921	97%	0%	3%	8%
Sikkim	417	93%	0%	7%	67%
Tamil Nadu	16,721	78%	0%	22%	74%
Telangana	10,829	99%	0%	1%	99%
Tripura	891	100%	0%	0%	100%
Uttarakhand	17,126	87%	0%	13%	37%
Uttar Pradesh	1,09,109	96%	0%	4%	73%
West Bengal	42,191	97%	1%	2%	96%
Andaman & Nicobar Islands	209	98%	2%	0%	98%
Chandigarh	16	38%	6%	56%	6%
Dadra & Nagar Haveli	72	100%	0%	0%	100%
Daman & Diu	28	79%	14%	7%	93%
Lakshadweep	24	100%	0%	0%	0%
NCT of Delhi	207	0%	0%	100%	0%
Puducherry	130	98%	0%	2%	98%
<b>Total</b>	<b>6,55,502</b>	<b>86%</b>	<b>3%</b>	<b>11%</b>	<b>47%</b>

Sources: DILRMP MIS, Ministry of Rural Development; PRS.

**Table 5: Progress on Record of Rights (RoR)**

State	Total Number of ROR	Number of villages	Issuance of digitally signed ROR (% of villages)	ROR Linkage With Aadhaar Completed (% of Villages)	ROR Linkage With Aadhaar Completed (% of ROR)
Andhra Pradesh	87,08,469	17,563	98.0%	94.3%	97.2%
Arunachal Pradesh	-	5,590	0.0%	0.0%	0.0%
Assam	16,654	26,777	0.0%	0.0%	0.0%
Bihar	3,46,38,283	46,368	0.2%	0.0%	0.0%
Chhattisgarh	1,88,39,626	20,401	3.4%	0.3%	0.4%
Goa	72,880	425	0.0%	0.0%	0.0%
Gujarat	1,04,13,822	18,531	30.5%	0.8%	1.0%
Haryana	17,75,941	7,088	2.9%	1.0%	1.1%
Himachal Pradesh	20,256	20,694	86.3%	0.2%	0.2%
Jammu & Kashmir	528	5,733	0.0%	0.0%	0.0%
Jharkhand	5,74,191	32,752	3.7%	0.9%	1.9%
Karnataka	-	29,523	0.0%	0.0%	0.0%
Kerala	81,66,375	1,674	0.0%	0.0%	0.0%
Madhya Pradesh	3,86,83,821	55,070	31.3%	0.0%	0.0%
Maharashtra	2,27,69,497	44,855	0.0%	0.0%	0.0%
Manipur	3,34,879	2,743	0.0%	0.0%	0.0%
Meghalaya	-	6,822	0.0%	0.0%	0.0%
Mizoram	2,400	826	0.0%	0.0%	0.0%
Nagaland	-	1,601	0.0%	0.0%	0.0%
Odisha	1,45,39,180	51,681	0.0%	0.0%	0.0%
Punjab	38,32,120	12,894	0.2%	0.2%	0.2%
Rajasthan	97,79,242	47,921	7.9%	0.0%	0.0%
Sikkim	1,29,655	417	0.0%	0.0%	0.0%
Tamil Nadu	1,94,45,769	16,721	76.4%	0.1%	0.2%
Telangana	1,32,80,649	10,829	99.2%	91.1%	95.4%
Tripura	10,99,422	891	68.2%	0.2%	0.2%
Uttarakhand	12,91,212	17,126	0.2%	0.0%	0.1%
Uttar Pradesh	1,91,72,512	1,09,109	79.0%	1.4%	0.5%
West Bengal	3,57,17,489	42,191	13.4%	0.0%	0.0%
Andaman & Nicobar Islands	93,007	209	98.1%	0.0%	0.0%
Chandigarh	1,080	16	0.0%	0.0%	0.0%
Dadra & Nagar Haveli	45,437	72	100.0%	0.0%	0.0%
Daman & Diu	48,508	28	0.0%	0.0%	0.0%
Lakshadweep	72,425	24	0.0%	0.0%	0.0%
NCT of Delhi	-	207	0.0%	0.0%	0.0%
Puducherry	2,88,481	130	97.7%	0.8%	5.8%
<b>Total</b>	<b>26,48,53,810</b>	<b>6,55,502</b>	<b>28%</b>	<b>4%</b>	<b>8%</b>

Sources: DILRMP MIS, Ministry of Rural Development; PRS.

**Table 6: Status of map digitisation**

State/UT	Number of villages	Total number of maps	Maps in good condition (% of maps)	Maps digitised (% of maps)	Spatial data verified (% of villages)	Cadastral Maps linked to RoR (% of villages)	Real time updation of RoR and Maps (% of villages)
Andhra Pradesh	17,563	3,15,798	91.5%	56.6%	1.8%	1.9%	1.9%
Arunachal Pradesh	5,590	-	-	-	-	-	-
Assam	26,777	13,426	100.0%	99.9%	50.1%	50.1%	50.1%
Bihar	46,368	70,669	99.9%	99.7%	89.8%	0.0%	0.0%
Chhattisgarh	20,401	45,447	97.3%	92.4%	90.3%	89.4%	88.9%
Goa	425	-	-	-	0.2%	0.2%	0.2%
Gujarat	18,531	7,32,256	90.3%	12.1%	41.5%	24.0%	8.9%
Haryana	7,088	56,095	93.8%	91.8%	0.4%	0.0%	0.8%
Himachal Pradesh	20,694	1,40,524	99.9%	99.8%	0.0%	34.3%	34.3%
Jammu & Kashmir	5,733	-	-	-	0.0%	0.0%	0.0%
Jharkhand	32,752	43,558	65.1%	64.7%	58.0%	1.1%	0.0%
Karnataka	29,523	-	-	-	0.0%	0.0%	0.0%
Kerala	1,674	1,04,560	100.0%	94.5%	0.0%	0.0%	0.0%
Madhya Pradesh	55,070	1,14,194	97.8%	97.8%	87.0%	86.8%	87.0%
Maharashtra	44,855	49,26,291	86.7%	3.6%	3.8%	0.0%	0.0%
Manipur	2,743	-	-	-	-	-	-
Meghalaya	6,822	-	-	-	-	-	-
Mizoram	826	-	-	-	-	-	-
Nagaland	1,601	-	-	-	-	-	-
Odisha	51,681	1,14,779	100.0%	100.0%	99.7%	99.7%	0.0%
Punjab	12,894	14,386	96.6%	90.9%	16.7%	0.0%	0.0%
Rajasthan	47,921	1,06,810	85.7%	15.0%	2.0%	0.3%	0.8%
Sikkim	417	2,549	100.0%	100.0%	97.1%	8.2%	8.2%
Tamil Nadu	16,721	43,25,180	94.7%	91.2%	23.9%	5.6%	8.3%
Telangana	10,829	18,040	97.3%	86.5%	85.1%	0.8%	0.7%
Tripura	891	5,266	100.0%	100.0%	99.8%	99.7%	0.0%
Uttarakhand	17,126	33,713	52.3%	0.0%	7.0%	0.0%	0.0%
Uttar Pradesh	1,09,109	97,970	78.0%	14.8%	12.1%	6.5%	4.0%
West Bengal	42,191	65,619	96.6%	90.7%	54.9%	48.4%	2.4%
Andaman & Nicobar Islands	209	1,408	50.8%	13.1%	84.2%	43.5%	43.5%
Chandigarh	16	-	-	-	-	-	-
Dadra & Nagar Haveli	72	2,271	100.0%	100.0%	100.0%	4.2%	4.2%
Daman & Diu	28	758	99.9%	-	-	-	-
Lakshadweep	24	-	-	-	0.0%	0.0%	0.0%
NCT of Delhi	207	-	-	-	-	-	-
Puducherry	130	4,044	100.0%	100.0%	66.2%	0.0%	0.0%
<b>Total</b>	<b>6,55,502</b>	<b>1,13,65,611</b>	<b>91%</b>	<b>46%</b>	<b>39%</b>	<b>26%</b>	<b>15%</b>

Sources: DILRMP MIS, Ministry of Rural Development; PRS.

**Table 7: Status of survey/re-survey**

State/UT	No. of Tehsils	Net area (sq. km.)	Number of Villages	% of Area Surveyed	% of Villages where Survey/Re-survey Work		
					Completed	Ongoing	Not Started
Andhra Pradesh	767	1,31,641	17,563	0.6%	0.7%	0.0%	99.3%
Arunachal Pradesh	189	-	5,590	0.0%	0.0%	0.0%	100.0%
Assam	185	-	26,777	0.0%	0.0%	0.0%	100.0%
Bihar	534	4,160	46,368	5.1%	0.1%	3.6%	96.3%
Chhattisgarh	164	81,78,051	20,401	89.3%	33.6%	1.2%	65.2%
Goa	12	-	425	0.0%	0.0%	0.0%	100.0%
Gujarat	252	2,20,348	18,531	58.0%	97.1%	0.4%	2.5%
Haryana	142	8,02,169	7,088	0.0%	2.1%	0.0%	97.9%
Himachal Pradesh	136	55,839	20,694	0.1%	0.1%	0.2%	99.7%
Jammu & Kashmir	87	-	5,733	0.2%	0.0%	0.0%	100.0%
Jharkhand	268	2,94,285	32,752	0.2%	1.5%	0.0%	98.5%
Karnataka	203	-	29,523	0.2%	0.0%	0.0%	100.0%
Kerala	77	35,943	1,674	49.2%	50.1%	3.6%	46.3%
Madhya Pradesh	347	2,85,231	55,070	0.0%	0.0%	0.0%	100.0%
Maharashtra	358	3,08,306	44,855	0.0%	0.0%	0.0%	100.0%
Manipur	91	-	2,743	0.0%	0.0%	0.0%	100.0%
Meghalaya	43	-	6,822	0.0%	0.0%	0.0%	100.0%
Mizoram	29	-	826	0.0%	0.0%	0.0%	100.0%
Nagaland	121	-	1,601	0.1%	0.0%	0.0%	100.0%
Odisha	317	549	51,681	0.1%	0.0%	0.0%	100.0%
Punjab	87	-	12,894	0.1%	0.0%	0.0%	100.0%
Rajasthan	314	1,07,61,088	47,921	3.3%	7.8%	4.6%	87.6%
Sikkim	75	1,792	417	0.0%	0.0%	0.0%	100.0%
Tamil Nadu	287	1,42,725	16,721	3.0%	3.7%	0.0%	96.3%
Telangana	460	1,53,749	10,829	3.6%	8.4%	0.0%	91.6%
Tripura	47	10,587	891	91.3%	98.1%	1.9%	0.0%
Uttarakhand	129	1,22,327	17,126	0.0%	0.0%	0.0%	100.0%
Uttar Pradesh	342	9,03,096	1,09,109	0.4%	1.8%	0.4%	97.8%
West Bengal	343	84,135	42,191	44.7%	49.9%	1.4%	48.7%
Andaman & Nicobar Islands	7	836	209	66.9%	79.4%	3.8%	16.8%
Chandigarh	1	-	16	0.0%	0.0%	0.0%	100.0%
Dadra & Nagar Haveli	11	489	72	100.0%	100.0%	0.0%	0.0%
Daman & Diu	3	112	28	0.0%	0.0%	0.0%	100.0%
Lakshadweep	10	-	24	0.0%	0.0%	0.0%	100.0%
NCT of Delhi	33	-	207	0.1%	0.0%	0.0%	100.0%
Puducherry	8	-	130	0.1%	0.0%	0.0%	100.0%
<b>Total</b>	<b>6,479</b>	<b>2,24,97,457</b>	<b>6,55,502</b>	<b>35.0%</b>	<b>8.5%</b>	<b>0.8%</b>	<b>90.7%</b>

Sources: DILRMP MIS, Ministry of Rural Development; PRS.



**Table 8: Stamp duty and land revenue in states (Budget Estimates 2016-17)**

State Name	Total Revenue (Rs crore)	Own Tax Revenue (Rs crore)	Stamps, Registration Revenue (Rs crore)	Land Revenue (Rs crore)	Urban Immovable Property Tax (Rs crore)	Stamp duty as % of own tax revenue	Land revenue as % of own tax revenue
Andhra Pradesh	1,09,300	52,318	5,180	631	2,00	10%	1%
Arunachal Pradesh	12,774	671	8	9	-	1%	1%
Assam	66,180	15,634	479	396	-	3%	3%
Bihar	1,24,590	29,730	3,800	330	-	13%	1%
Chhattisgarh	61,427	21,964	1,485	550	-	7%	3%
Delhi	41,391	36,525	4,000	0	-	11%	0%
Goa	10,642	4,916	678	156	-	14%	3%
Gujarat	1,16,366	71,370	6,550	2,665	518	9%	4%
Haryana	62,956	40,200	3,700	18	-	9%	0%
Himachal Pradesh	26,270	7,469	248	18	-	3%	0%
Jammu and Kashmir	50,460	9,220	325	9	-	4%	0%
Jharkhand	55,756	17,050	900	400	-	5%	2%
Karnataka	1,30,758	83,864	9,100	236	-	11%	0%
Kerala	84,617	47,614	3,469	206	164	7%	0%
Madhya Pradesh	1,26,095	46,500	4,500	500	698	10%	1%
Maharashtra	2,20,810	1,44,157	23,548	3,200	-	16%	2%
Manipur	9,368	667	11	3	-	2%	0%
Meghalaya	8,981	1,269	14	5	-	1%	0%
Mizoram	7,672	331	9	12	-	3%	4%
Nagaland	10,569	515	2	1	-	0%	0%
Odisha	78,127	23,200	1,035	590	-	4%	3%
Puducherry	5,768	2,560	100	2	-	4%	0%
Punjab	50,181	30,547	2,700	68	-	9%	0%
Rajasthan	1,23,251	53,300	4,200	400	50	8%	1%
Sikkim	4,885	646	8	7	-	1%	1%
Tamil Nadu	1,48,175	90,692	9,858	315	18	11%	0%
Telangana	1,00,925	54,870	4,292	16	78	8%	0%
Tripura	12,886	1,441	38	10	1	3%	1%
Uttarakhand	32,276	12,117	1,202	27	-	10%	0%
Uttar Pradesh	2,81,555	1,01,257	16,320	660	-	16%	1%
West Bengal	1,29,530	50,774	5,199	2,643	0	10%	5%
<b>All states and UTs with legislature</b>	<b>22,57,382</b>	<b>10,14,302</b>	<b>1,08,858</b>	<b>14,081</b>	<b>1,726</b>	<b>11%</b>	<b>1%</b>

Sources: State-Finances: A Study of Budgets, RBI; PRS.