DIGITAL INDIA LAND RECORDS MODERNIZATION PROGRAMME

INTRODUCTION

Land survey is the science of applying calculations and making accurate measurement of spatial positions of natural or man-made features on the surface of the earth. In India survey of land is successfully conducted by department of survey and land records. In order to make the survey process more accurate and easily accessible one, we are entering into the era of digitalization. In our project we are going to discuss about Digital India Land Records Modernization Programme (DILRMP).

HISTORY OF INDIAN SURVEY:

The history of land record is as old as the Indian civilization. Maintenance of these records has gone through the process of evaluation as it passed through various administrative system and socio-economic compulsions. Present system of maintaining land records originated from Mughal period and reached its scientific form during the British rule.

INITIATIVES AFTER INDEPENDENCE

Since the first five year plan planners have been advocating “proper maintenance of land records as the basis for good administration”. Eighth and ninth plan have also envisaged the fulfillment of all five year principles of national land reform policies that’s are

- Abolition of Intermediaries.
- Tenancy reforms with security to actual cultivators.
- Redistributions of ceiling.
- Surplus land consolidation of holding.
- Updating of land records.
MAIN COMPONENTS OF LAND RECORDS IN A VILLAGE

A – REGISTER

- Survey field number and subdivision
- Old survey number
- Classification
- Unassessed (or) Poramboke
- Source of Irrigation
- Class and sort of soil
- Taram
- Rate per acre
- Extent and assessment of each subdivision
- Registered land holder
- Remarks

CHITTA

- Total Extend of Land for a Single Owner

FMB

- Boundary/Sub division
- Measurement
- Topo Details
- Area
- Adjacent Field

LAND RECORDS

Cadastral Survey

A- Register
Field measurement book
(Records of rights)
village map
RECORDS OF RIGHTS (ROR)

- Name of tenure –holder/land holder.
- Survey or plot number.
- Area of plot.
- Nature and extend of interest.
- Conditions or reliabilities attaching.
- Revenue payable.
- Particulars of land belonging to or vested in state government, grama Sabha or local authority.

FIELD MESUREMENT BOOK

- Surface details.
- Details of land, soil, crop, irrigation, cultivation.

CADASTRAL MAP

- Village map.
- Survey numbers and Topo details.

COMPUTERIZATION OF LAND RECORDS

The centrally-sponsored scheme on computerization of land records was started in 1988-89 with 100% financial assistance as a pilot project in the eight districts/states mentioned above was with a view to removing the problems inherent in the manual system of maintenance and updating of land records and to meet the requirements of various groups of users. It was decided that efforts should be made to computerize the CORE DATA contained in land records, so as to assist development planning and to make records accessible to
people/planners/administrators. By 1991-92, the scheme had been extended to 24
districts in different in different states viz., Haryana, H.P., J&K, Karnataka, Kerala,
Manipur, Punjab, Tamil Nadu, Tripura, Sikkim, Uttar Pradesh, West Bengal and
Delhi UT. During the Eight Plan, the scheme was approved as a separate centrally-
sponsored scheme on computerization of land records.

The scheme is being implemented since 1994-95 in collaboration with the
National Informatics Centre (NIC) which is responsible for the supply, installation
and maintenance of hardware, software and other peripherals, NIC is also
responsible for providing training to the revenue officials and technical support for
proper implementation. The main objective of CLR scheme is that land owner’s
should get computerized copies of Records of Rights (ROR) at a reasonable price.
The ultimate objective of the scheme is on-line management of land records in the
country.

THE MAIN OBJECTIVES

- Providing computerized copies of the ROR to the land owners at nominal rates
  on demand.
- Ensuring speed, accuracy, transparency and dispute resolution.
- Information empowerment of land owners and freeing them from the clothes of
  colonial systems-paradigm shift from tax based approach to manage of land
  administration.
- Proving fast and efficient retrieval of information for decision making.
- Achieving low cost and easily reproducible basic land record data for reliable
  and durable preservation. Value addition and modernization in land
  administration.
MAJOR INITIATIVES BY GOVERNMENT OF INDIA FOR COMPUTERIZATION OF LAND RECORD

- The conference of revenue ministers of states/UT-(1985) advocated the computerization of land records.
- A study of groups 1985 comprising representatives from ministry of agriculture, the central statistical organization and from ministry the governments of Karnataka, MP, Maharashtra, TN and UP also recommended computerization of core data in land records to assist developmental planning and make this records more accessible to people.
- A workshop on computerization of land records (1987) recommended that the government of India should fund this programme on a pilot project basis.

Karnataka was the first state in India to computerizing land records under the “Bhoomi project” followed by Andhra Pradesh and Tamilnadu. These three states got their entire property records computerized during the year 2007. Subsequently the government introduced the digital India land records modernization programme in 2008. In Karnataka, Andhra Pradesh, Telangana, Kerala, Delhi, Assam and Tamil Nadu. However the city property records are still not fully computerized and hence can’t be verified online. Maharashtra has computerized its entire city property records for all cities except Mumbai.

As of September 2017, six states/union territories have completed computerization of land records 100%. As of September 2017, 86% of land records have been computerized. This implies that the current land record on paper has been digitized and uploaded on system from which citizens can access this information. However only 47% of the mutation records (recording the transfer of ownership) computerized.
ABOUT DILRMP

The digital India land records modernization programme is launched by government of India in August 2008, aimed to modernize management of land records, minimize scope of land/property disputes, enhance transparency in the land records maintenance system and facilitate moving eventually towards guaranteed conclusive titles to immovable properties in the country.

PREVIOUS HISTORY OF DILRMP

The government of India has decided to implement the Centrally-Sponsored scheme in the shape of the National Land Records Modernization Programme (NLRMP) by merging two existing Centrally-Sponsored Schemes of Computerization of Land Records (SRA&ULR) in the Department of Land Resources (DoLR), Ministry of Rural Development.

OBJECTIVE

- The objective of DILRMP is to develop a modern comprehensive and transparent land records management system in the country, which will be based on four basic principles
- Single window to handle land records (Including the maintenance and updating of textual records, maps, registration of immovable properties etc)
- The mirror principle which refers to the fact that cadastral records mirror the ground reality.
- The curtain principle which indicates that the record of title is a true depiction of the ownership status, mutation is automated and automatic following registration and the reference to past records is not necessary.
- Title insurance which guarantees the title for its correctness and intimates the title holder against loss arising on account of any defect there in.
COMPONENTS OF DILRMP

The DILRMP has 3 major components
- Computerization of land record
- Survey/re-survey
- Computerization of Registration

ALL INDIA LEVEL PROGRAMME

<table>
<thead>
<tr>
<th>SL. No</th>
<th>WORK COMPLETED</th>
<th>% COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Computerized of land records</td>
<td>86%</td>
</tr>
<tr>
<td>2.</td>
<td>Mutation computerized</td>
<td>47%</td>
</tr>
<tr>
<td>3.</td>
<td>Issuance of digitally signed ROR</td>
<td>28%</td>
</tr>
<tr>
<td>4.</td>
<td>Cadastral Maps digitized</td>
<td>46%</td>
</tr>
<tr>
<td>5.</td>
<td>Spatial data verified</td>
<td>39%</td>
</tr>
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<td>6.</td>
<td>Cadastral Maps lined ROR</td>
<td>26%</td>
</tr>
<tr>
<td>7.</td>
<td>Real time updating ROR and Maps</td>
<td>15%</td>
</tr>
<tr>
<td>8.</td>
<td>Number of village where survey / resurvey work completed</td>
<td>9%</td>
</tr>
<tr>
<td>9.</td>
<td>Area surveyed</td>
<td>35%</td>
</tr>
<tr>
<td>Sl. No</td>
<td>Department(s)</td>
<td>Responsible for the land administration in the country</td>
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<tr>
<td>-------</td>
<td>------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1.</td>
<td>Revenue</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Survey and settlement</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Registration and stamp</td>
<td></td>
</tr>
<tr>
<td></td>
<td>revenue</td>
<td></td>
</tr>
</tbody>
</table>

**SURVEY/RE-SURVEY & UPDATING OF THE SURVEY AND SETTLEMENT RECORDS**

Pure ground method using Electronics Total Station (ETS) and Global Positioning System (GPS). Hybrid methodology used in aerial photography, High resolution satellite Imaginary (HRSI) and ground truthing by ETS and GPS.
MODERN RECORD ROOMS/LAND RECORDS MANAGEMENT CENTRES

Generally, central funding will not be provided to the states/UTs under the NLRMP for construction and allied activities such as renovation of buildings, purchase of furniture, furnishings, etc. However, support may be provided for such activities directly connected with physical security of the computer and IT infrastructure, storage and retrieval of the records, and citizen service delivery.

In this connection, after detailed discussions with the states and UTs, it has been decided that support for modern record rooms with compactors and other necessary infrastructure as storage area with compactors, operational area with computers, printers, storage area network(SAN), etc., and public service area with arrangements for reception, waiting, etc. at tehsil(or equivalent)level may be provided. Although the actual fund requirements may vary from location to location.

MODEL OF MODERN RECORD ROOM

<table>
<thead>
<tr>
<th>Watch area</th>
<th>Counter 1</th>
<th>Counter 2</th>
<th>Physical storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server room scanner and index</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TALUK LEVEL RECORD ROOMS

SINGLE WINDOW    COMPUTER

SCANNED

TALUK 1
TALUK 2
TALUK 3
STABLISHMENT OF MODERN RECORD ROOM

- Records to be cleaned and stored in the compactors.
- All legacy records to be scanned.
- Computerized system to be installed for cataloging.
- Software for cataloging.
- Software for identification of records using RFID/barcode.

FEATURES OF COMPACTORS

- Provide flexible and efficient storage of files etc.
- Made up of the durable and long lasting materials.
- Bodies are bolted to under carriages and can be moved along channels.
- A safety locking system to ensure authorized access.
- Provide label holders to ensure easy identification and classification of files etc.
- Units can be expanded easily and also facilitate easy movement of shelves.

Modern record rooms/Land records management centers at level
COMPUTERIZATION OF THE REGISTRATION PROCESS

Registration is one of the major components of the NLRMP. This component was not covered under the schemes of CLR or SRA&ULR. Computerization of registration is necessary not only for making property registration efficient and hassle-free but also for integrating land records and registration. The manual (non-computerized) registration process involves maintenance of paper copies of all the registered documents. This procedure of maintaining and registering property documents often results in misclassification of documents, misrepresentation of facts, and other such losses. Searching of reports, records and issuance of non-encumbrance certificates also take long time and turn out to be cumbersome tasks.

Under the NLRMP, all the SROs will be fully computerized with adequate hardware, software, process re-engineering, staff training and connectivity with the revenue records maintenance system, banks, treasuries, etc.

AWARD GIVEN TO SURVEY DEPARTMENT FOR LAND RECORDS BROUGHT TO ONLINE
DILRMP IN URBAN AREAS

In February 2017 the ministry of rural development clarified that under DILRMP computerization of record of rights and digitization of cadastral maps will include urban areas in addition to rural areas 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 computerizing record of rights and digitizing cadastral maps in rural area only.

It has been estimated that surveys are required for approximately 55 million urban households. 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 multistoried buildings. The expert committees on land titling (2015) had recommended that in the absence of accurate description of the boundaries and location of properties, large scale cadastral surveys and needed to be undertaken in urban areas.

With regard to giving titles to immovable properties in urban areas, the committee suggested that for properties such as newly constructed multistory apartments, a first time occupant can get a clear title from 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 urbanization, and more people opting to live in multistoried housing in urban areas such a method could cover up to 50% of urban properties in the next twenty 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 transaction prohibition (amendment) bill, 2015 noted that amendments to the transfer of property act, 1882 and registration act, 1908 may be named 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.

DIGITIZATION OF FMB INAUGURATION BY TAMILNADU CHIEF MINISTER

FMB is a sketch showing measurement boundaries of the survey number. It is a rough sketch and not to scale. It provides a record of measurement and boundaries. Field Measurement Book contains several field measurement sheets covering measurements of all lands in a village. In some cases it is drawn to a scale of 1: 1000 or 1: 2000 showing all field and subdivision boundaries and their measurements. It is also called the atlas of field maps.
A record of measurement of individual fields and subdivisions is thus provided, which will enable any inspecting officer to identify the boundaries, and whatever is required for investigation of boundary disputes, detection of encroachments, and for the measurement of further sub-divisions, etc.

Digitization of FMB Results in faster processing of the FMB sketches including creation of new sub-divisions, modification of existing sketches, portability of data, facility to draw the FMB sketches to different scales leading to higher clarity, and quicker delivery of copies of FMBs to land-owners.
## PROGRAMME FOR DIGITIZATION OF FMS AND INTEGRATION OF MAP WITH ROR

<table>
<thead>
<tr>
<th>SL. NO</th>
<th>DISTRICT</th>
<th>TALUK</th>
<th>TOTAL NO. OF ROR</th>
<th>REVENUE VILLAGES (NO)</th>
<th>TOTAL NUMBER OF FMS</th>
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<tbody>
<tr>
<td>1</td>
<td>Ariyalur</td>
<td>3</td>
<td>314420</td>
<td>175</td>
<td>76654</td>
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<tr>
<td>4</td>
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<td>373224</td>
<td>883</td>
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<tr>
<td>5</td>
<td>Dharmapuri</td>
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<td>280419</td>
<td>470</td>
<td>144195</td>
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<td>6</td>
<td>Dindigul</td>
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<td>821092</td>
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<td>Erode</td>
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<tr>
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<td>Kancheepuram</td>
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<td>78911</td>
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<td>Kanyakumari</td>
<td>4</td>
<td>1224551</td>
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<td>Karur</td>
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<td>174</td>
<td>134569</td>
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<td>Krishnagiri</td>
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<td>373571</td>
<td>636</td>
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<td>412987</td>
<td>501</td>
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<td>754956</td>
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<td>29</td>
<td>Tiruvannamalai</td>
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<td>1124455</td>
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<td><strong>Total</strong></td>
<td><strong>148</strong></td>
<td><strong>16721</strong></td>
<td><strong>19807530</strong></td>
<td><strong>5544796</strong></td>
<td></td>
</tr>
</tbody>
</table>
Digitization of FMS and integration of map with ROR is almost 95% completed. It is proposal to complete the entire digitization on or before 31\textsuperscript{st} August 2018.

**DIGITAL METHOD**

![Diagram showing the flow of ROR, FMB, and CHITTA through online mode to issuance to land holders]
TN to launch mobile app to check land records

PTI

September 14, 2015 | UPDATED 21:15 IST

Chennai, Sep 14 (PTI) In a significant step that simplifies checking land records using technology, Tamil Nadu government today announced that a mobile application would be launched enabling verification of land documents. Tamil Nadu Revenue Minister R B Udhayakumar told the State Assembly that "AMMA e-service of Land Records," an improved web based system to check land documents would be launched. Under the improved facility, a Mobile Application "AMMA" (Access and Manage through Mobile from Anywhere e-service of Land Records) could be downloaded. It would enable verification of details like land classification, and patta number, he said. "By using the facility, the Patta and Chitta copies can be downloaded and by utilising the Q R Code, the authenticity of such documents can be verified through the mobile phone," he said. Visiting the taluk office for getting such records certified by authorities there will not be needed, he added. Tamil Nadu government already has "Anytime, Anywhere e-services of Land Records," facility through which the land documents may be checked. PTI VGN BN DBS MVV
CONCLUSION:

DILRMP is formulated to modernize the land records and to move towards the land titling system. The mirror principle of this system necessitates a reflection of ground situation in records and vice versa, for which the preparation of accurate and continuously updated survey records is the prime requirement, which could not be achieved only in a digital environment. DILRMP providing conclusive titles to land owners and speeding up the process of land acquisition also could lead to a buildup of local revenues through improved property tax billing and collection. Despite of the challenges and issue faced by the government still a positive approach is seen in digitization of land records and implementation is going on successfully in all states.