ULPIN

or

Bhu-Aadhar

UNIQUE LAND PARCEL IDENTIFICATION NUMBER

GOVERNMENT OF INDIA
MINISTRY OF RURAL DEVELOPMENT
DEPARTMNT OF LAND RESOURCES

2023

BHU-AADHAR or UNIQUE LAND PARCEL IDENTIFICATION NUMBER (ULPIN)

A CONCEPT PAPER

(Section –A)

1. VISION

The Unique Land Parcel Identification Number (ULPIN) or Bhu-Aadhar shall be a **Single, Authoritative Source of Truth** of information on any parcel of land or property to provide **Integrated Land Services** to the citizens as well as all stake holders.

2. MISSION

(i)   Identify departments which provide land related services

(ii) Identify services of these land departments

(iii) Assign a unique Id to each parcel

(iv) Set up a federated Land information system which works in collaborative manner

3. Digital India Land Records Modernization Programme (DILRMP) and Unique Land Parcel Identification Number (ULPIN or Bhu-Aadhar)

The National Land Record Modernization Programme (NLRMP) was approved by the Cabinet on 21.8.2008 as a Centrally Sponsored Scheme and later revamped under the Digital India initiative and renamed as Digital India Land Records Modernization Programme (DILRMP) and is being implemented as a Central Sector Scheme with effect from 1st April, 2016 with 100% funding by the Centre. The programme has been extended up to 2021-22 to 2025-26 with an outlay of Rs.875 crore.

Components of the programme include:

- Computerization of Land Records (Data entry/re-entry, Digitization of Cadastral Maps/FMBs/Tippans, State Level Data Centre)
- Computerization of Registration
- Survey / Re-survey and innovative initiatives
- Modern record rooms at Tehsil level
- Project Management Unit (PMU)

- DILRMP Cell

- Evaluation Studies, IEC and Training

- Core GIS/Software Applications

- Computerization of Revenue Courts and their integration with land records

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

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

4. OBJECTIVES of Bhu-Aadhar or ULPIN

The finer goals and objectives of the proposed system would be:

(i)   To identify departments dealing with land that are regulating and rendering Land related services to the citizens

(Ex: Revenue, Municipal, Panchayat, Forest, Registration, Surveyetc)

(ii) To identify the services of such departments, including that are multi-departmental in nature
(Ex: Mutation of Land, Land use conversion from Agricultural to Non-Agricultural, etc)

(iii) To Work out a strategy and develop a system to assign Unique ID for each Land parcel by the respective States/UTs

(iv) To create online Land Information System with open standards APIs (Application Programming Interface) that is based on GIS and OGC compliant so that other stakeholders could use them online to generate further value.

(v)   To provide comprehensive information on land and properties, consisting of textual and spatial data

(vi) To maintain the **consistency of core data** across all departments and agencies of the Government countrywide

5. APPROACH/ METHODOLOGY

(i) Board of Revenue/Department of Revenue and like concerned departments of the States/UTs is to take lead initiative

(ii) Identify all departments dealing with Land Resources

(iii) List the services being rendered by these departments/agencies single-handedly or multi-departmentally in a collaborative manner.

(iv) Identify common data sets being maintained by these Departments about Land Resources, Ownership etc from database schema used by departmental e-Applications

(v) Standardise common data attributes

(vi) Finalise the protocol (process-flow, role of each work flow player, access rights etc) to guide inter-departmental-database transactions to maintain consistency.

(vii) Prepare collaborative applications in order to manage the multi-departmental work-flow, core data and transactions (Create/Update/View) etc to be performed by different stakeholders

(viii) Strategy for assigning UniqueID for each Land Parcel can be worked out based on the following situations:

(a) Where Land has Geo-Referenced Lat/Long Coordinates:

(i) There is a formula to generate and assign ECCMA Standard prescribed Unique 14-digit Unique ID (PNIU) using the parcel Geo Referenced coordinate of vertices

(ii) This computationally generated Unique ID,would be organically dependent on Parcel vertices expressed in Lat/Long coordinates (PNIL)#and Unique ID(PNIU)## would spatially be pointing to the surface of the parcel.

(iii) A new Unique ID would be generated by the System itself as and when mutation takes place as Lat/Long of Mutated Parcel would be different.

(iv) This Unique ID of Parcel, being very precise & accurate, should not be shared in public domain due to their strategic and accurate locational & security values and hence may be mapped with another Unique random number with prefix state code, which can be shared with Owner and in public domain for all practical purposes.

However, sharing of the Unique ID with the land owners or keeping it in public domain **before mapping it to another Unique random number with prefix State code** is in the purview of the respective State Revenue Departments of the States/UTs as the ownership

of the land records data is vested in the respective Revenue Departments of the States/UTs Administration.

[Property Natural Identifier Lot (PNIL#): The modern survey equipment and technologies has made the geospatial representation of boundaries and features commonplace in everything from websites to mobile devices. It is technically feasible to translate the coordinates of a polygon representing a property boundary into a string in such a way that the string can be resolved back to the polygon within the Earth coordinate system

Property Natural Identifier Unit (PNIU#) is a globally unique identifier. It is created through the application of a reversible algorithm to the position and elevation of the midpoint of the plane representing the primary point of entry to a legally delineated unit space within a building. It is natural as it can be derived from the characteristics of the property, without relying on a third party such as a central property registry, to mint and manage IDs.]

(b) Where presently   Land Parcels do not have Geo Referenced Coordinates:

(i)   There are many States which have assigned UniqueIDs to Land Parcels that are composite in nature and dependent on Administrative Unit codes such as District code, Tehsil Code, Village code etc.

1.   Such codes face issuese.g.in case of reorganisation of boundaries that is quite a common practice now though it can be managed from the IT angle

(ii)   State of Andhra Pradesh adopted a strategy and assigned random code to each land parcel with first two digits for State code

1.   This would remain unaffected during delimitation of boundaries of Administrative units

2.   Would change only when mutation happens

(iii)   State of Uttar Pradesh adopted another strategy and assigned16 digit unique code for each land parcel as

1.   First 6 digits is revenue village code, 7th digit to 10th digit is BhukandGhata code (Plot No.), 11th digit to 14th digit is subdivision number (bata, ka, kha, gha, min jumla), 15th and 16th digit for land type.

6.   VALUE PROPOSITION

(i)   The Single source of truth on Land will stand as authoritative reference to authenticate the ownership and the other land parameters.

(ii)   Unique Categorization of Govt Lands would benefit in instant identification and prevention of transfer of such lands to individuals during transactions such as Registration

(iii) A Unified ID (viz., uniformity in assignment like Aadhaar number) would in future lead to Certificate-less governance

(iv) Standardization at Data and Application level would bring in effective integration and interoperability across Departments and other Stakeholders/ Service Providers

(v) Assigning UniqueID to each Land Parcel in State, irrespective of the Department dealing with land, would help Unified system to track the Land, its reconciliation etc and to bring higher values to all stakeholders

7. CASE STUDIES

NIC has taken up case studies in:

(i) Bihar-The geo-referenced cadastral map data of Saidpur revenue village-Katrisarai revenue circle-Rajgir subdivision-Nalanda district were taken as a case study to test the concept.

(ii) Haryana-The geo-referenced cadastral map data of Sirsi village of Karnal District was taken for study.

8. CONCLUSION

The Proposed approach/ methodology to build a Integrated Land Information and Management system (ILIMS) is expected to provide quality services to users through single portal on one hand and achieve transparency in land transactions. The Architecture shall be generic enough to include more department/agencies as and when they become a stakeholder as per criteria. Department of Land Resources (DoLR) in collaboration with NIC may take pilot project in the States/UTs that are at advanced stage of digitization of land records (cadastral maps) with geo-referenced coordinates in consultation with them to generate Unique ID. After successful implementation of pilot, State/UTs as per their preparedness may approach NIC team/other agencies to roll out the system in their respective States/UTs.

For implementation of ULPIN, administrative and financial support shall be extended by DoLR according to guidelines of DILRMP and technical support for roll out the system will be facilitated by NIC, Survey of India, Department of Science and Technology and National Remote sensing centre.

(Section –B)

I) Status of Implementation as on 27th March, 2023

The status of implementation of ULPIN as on 27th March, 2023, is that it has been adopted in 26 States / UTs namely; Andhra Pradesh, Jharkhand, Goa, Bihar, Odisha, Sikkim, Gujarat, Maharashtra, Rajasthan, Haryana, Tripura, Chhattisgarh, Jammu & Kashmir, Assam, Madhya Pradesh, Nagaland, Mizoram, Tamil Nadu, Punjab, Dadara and Nagar Haveli & Daman and Diu, Himachal Pradesh, West Bengal, Uttar Pradesh, Uttarakhand, Kerala and Ladakh. A total number of 9.026 crore land parcels have been assigned Bhu-Aadhar or ULPIN as on 15th March 2023.

Further, pilot testing has been done in 7 States / UTs namely; Karnataka, Puducherry, Telangana, Manipur, Andaman and Nicobar, Delhi and Chandigarh and work is in progress in 2 States / UTs namely; Arunachal Pradesh and Lakshadweep.

However, in Meghalaya, the computerization and digitization of land records are yet to take places.

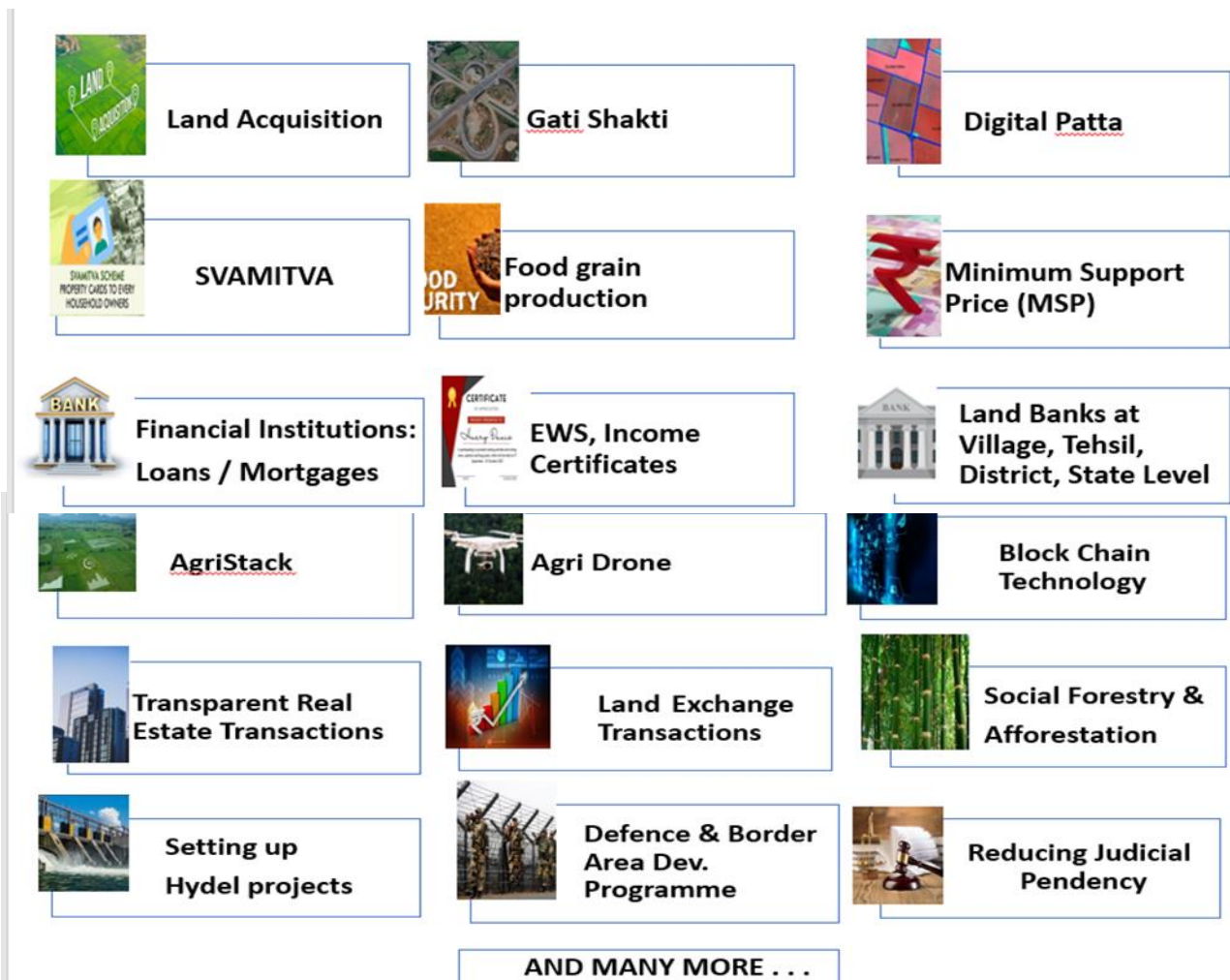| Status	States/UTs	Total Nos.
Pilot and Rolled Out	Andhra Pradesh, Assam, Bihar, Chhattisgarh, DNH & DD, Goa, Gujarat, Haryana, Jammu & Kashmir, Jharkhand, Madhya Pradesh, Maharashtra, Mizoram, Nagaland, Odisha, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Himachal Pradesh, West Bengal, Uttar Pradesh, Uttarakhand, Kerala and Ladakh	26
Pilot	Andaman & Nicobar Island, Karnataka,, Manipur, NCT of Delhi, Puducherry, Telangana and Chandigarh	7
Under Process	Arunachal Pradesh	1
Yet to Take up	Lakshadweep and Meghalaya	2

II) Benefits,Challenges/Gaps:

Challenges /Gaps: Lack of geo-referencing of cadastral maps / land parcel by the States / UTs is major issue and challenges in rolling out and expansion of ULPIN or Bhu-Aadhar.

Benefits include:

- Unique Number across country, No duplicity
- Cross validation and Auto Updation of Land related information across sectors
- Establishes farmer – land relationship authoritatively
- Single window service delivery – ULPIN can be used any kind of services where land record is required,
- Enforces uniqueness of all transactions
- Link of all property transactions gets established
- Power and Push Geo Spatial Applications and Policy - ULPIN would prove and important milestone for furtherance of Geospatial Policy 2022 of the Government.

III) Multi-Sectoral Applications of Bhu-Aadhar or ULPIN:

Land Acquisition | Gati Shakti | Digital Patta

SVAMITVA | Food grain production | Minimum Support Price (MSP)

Financial Institutions: Loans / Mortgages | EWS, Income Certificates | Land Banks at Village, Tehsil, District, State Level

AgriStack | Agri Drone | Block Chain Technology

Transparent Real Estate Transactions | Land Exchange Transactions | Social Forestry & Afforestation

Setting up Hydel projects | Defence & Border Area Dev. Programme | Reducing Judicial Pendency

AND MANY MORE . . .

IV) **Bhu-Aadhaar or ULPIN: Redefining Governance :**

> **Bhu-Aadhaar** or **ULPIN** will trigger and unleash Pan India reforms :
> - Targeted with Precision
> - Impactful
> - Multi Sectoral and pervasive
>
> *. . . and redefine Governance in Amrit Kaal !!*

V) **Webinar/BhoomiSamvaad /Publicity campaign for Bhu-Aadhar or ULPIN :**

Post Budget Webinar 2022-23

Launch of eBook on Land Governance Reforms in Budget Announcement-Empowering Citizens Powering India

A Ripple Effect Reform -An Article by Shri Ajay Tirkey, Secretary, Department of Land Resources*(The Indian Express : 18th March 2022)*

A ripple effect reform
Land resource management measures in budget will impact larger economy

AJAY TIRKEY

IN HER BUDGET speech, the Finance Minister talked of land resource management. Any reform or initiative that strengthens land governance, impacts the economy positively and has a ripple effect across sectors.

Consider this: The computerisation and digitisation of land records, undertaken in the recent past, has enabled the e-procurement of wheat and paddy in the states through the minimum support price scheme. It is extremely convenient now for the mandi administration to make an assessment of the food crop sown and the foodgrain produced by individual farmers on the basis of *khasra* entries. All that the mandi administration has to do now is to plan the arrival of farmers to the mandi by staggering them village wise. And on arrival, check whether the food crop in the *khasra* entry matches the quantum brought to the mandi by the individual farmer. On satisfaction, payment as per the MSP is credited to the individual farmer's account.

Most states now use computerised land records for e-procurement. While transactional efficiencies are evident, there are other benefits as well. The staggered arrival plan of farmers' produce at the mandis can be conveniently planned on the basis of data related to total acreage under cultivation in the villages. The long queues of tractors crowding the mandis, once a common sight, is not seen these days. The ease of living of the farming community has thus been positively impacted.

Similarly, payments under the Pradhan Mantri Kisan Samman Nidhi Yojana (PM-Kisan) in the states are being done on the basis of computerised land records. Also, take the case of land acquisition for setting up an industry or infrastructural facilities like highways or railway lines. Proper and updated computerised land records are extremely essential for relief and rehabilitation.

The budget speech included three land governance initiatives. It is apparent that the initiatives are technological at their core. It is the most pragmatic way of implementing central schemes in the states. Technology cuts across geographical, regional and state policy barriers and integrates the nation by preparing all relevant sectors of the national economy to avail of the intended spin-off benefits. These three initiatives will impact the citizen and the national economy. Let us examine each of them.

First, the Unique Land Parcel Identification Number (ULPIN). In plain language, this is an Aadhaar-like identification for a land parcel or plot. Each land parcel or plot is assigned a unique identification number. And therefore, like Aadhaar, the agencies and services can use the land database from anywhere in the country to authenticate a farmer or the beneficiary's identity for the purpose of delivery of services. The land-farmer relationship will be strengthened and authenticated. For the farmer and the individual land holder, it would facilitate and enable access to information relating to his entitlements through various means like kiosks and mobile phones. Benami and fraudulent transfers of land especially in urban areas is a big concern for states. This framework, integrated with Aadhaar, will put a check on such irregular and illegal transfers.

Second, the National Generic Document Registry System (NGDRS) — One Nation One Registration Software System — is undoubtedly a major initiative for urban property registration. It is a software application platform that facilitates online registration of immovable properties and documents as compared to the manual registration process used earlier. The entire process, right from applying for registration to paying the stamp duty and furnishing encumbrance certificates, is online. States/UTs can conveniently make use of the software. Frequent visits to various offices and institutions like banks and local bodies are not required anymore. Utility bills from local bodies and encumbrance certificates from banks are now submitted online. It is only at the time of the final execution of the registration document that the physical presence of the buyer and seller is mandatory as per Section 32A of the Registration Act. Since the processes are online, there is a higher degree of transparency in the transaction of these properties which reduces disputes and fraudulent transactions as well. NGDRS, therefore, is a major convenience for buyers and sellers of immovable property. It cuts into the costs, time and processes in registration drastically.

The third initiative is transliterating the land records in any language under Schedule VIII of the Constitution. The objective is to break the linguistic barriers in land records. Presently, land records are largely in regional languages. These linguistic barriers need to be overcome in order to open up the national economy. A prospective property buyer from Maharashtra should conveniently get access to land records of Tamil Nadu in his language. It is time that all forms of unintended barriers, including linguistic ones, which impede economic growth, be dismantled.

To conclude, the budget speech has underscored the significant role land resource management and governance is expected to play in the resurgence of the national economy in the years to come. It has strengthened the belief that the use of technology for land governance is pragmatic and a strategically convenient and acceptable approach when states are implementing schemes. And it has also emphasised that reformative land governance initiatives will positively impact and benefit the citizen as well as various other sectors of the economy in more ways than one. Land resource management and governance, like the keel of a ship, will provide the right balance and float to the national economy despite one of the worst economic downturns induced by the pandemic. How smooth the sail will be will depend on how readily and effectively states take up the land governance initiatives.

The writer is Secretary, Department of Land Resources, Government of India. Views expressed are personal

Bhumi- Samvaad– Presided over by Shri Giriraj Singh Hon'ble Minister of Rural Development and PanchayatiRaj , Minister of State of Steel and Rural Development also present

Bhumi Samvaad: National Conference on Digitizing and Georeferencing India with Bhu-Aadhaar (ULPIN)

ULPIN Rollout by States

यूनिक लैंड पार्सल आइडेंटिफिकेशन की शुरुआत, राजस्व मंत्री हरीश चौधरी ने वर्चुअल उद्घाटन किया

निहारिका टाइम्स . बाड़मेर . राजस्व मंत्री हरीश चौधरी ने मंगलवार को बायतु तहसील मुख्यालय से भूमि के खसरा संख्या के यूनिक लैंड पार्सल आइडेंटिफिकेशन नंबर सिस्टम का वर्चुअल उद्घाटन किया । इस अवसर पर राजस्व मंत्री हरीश चौधरी ने कहा कि यूनिक लैंड पार्सल आइडेंटिफिकेशन नंबर सिस्टम से हरेक खसरे की अलग पहचान होगी। साथ ही आम आदमी को सहूलियत होगी। उसको ऑन लाईन जमीन संबंधित जानकारी मिल सकेगी। उन्होंने बताया कि फ़िलहाल यह सुविधा ऑन लाइन वाली तहसीलों में शुरू की जा रही है। इधर, वर्चुअल उदघाटन के दौरान राजस्व विभाग के प्रमुख शासन सचिव आनंद कुमार,एनआईसी जयपुर से तरुण तोषनीवाल एवं टीम, बाड़मेर जिला मुख्यालय पर जिला कलक्टर विश्राम मीणा, उपखंड अधिकारी रोहित चौहान, जिला सुचना एवं विज्ञान अधिकारी दिलीप जैन , बायतु में तहसीलदार सजना राम, गिड़ा तहसीलदार शिवजीराम बावरी समेत विभागीय अधिकारी उपस्थित रहे। यूनिक लैंड पार्सल आइडेंटिफिकेशन नंबर सिस्टम से ऑनलाइन गूगल मैप पर पर्टिकुलर खसरे की लोकेशन देखी जा सकेगी। ऑनलाइन तहसीलों में यह व्यवस्था काश्तकारों को राज्य सरकार उपलब्ध करवा रही हैं। अब कहीं भी भूमि संबंधी जानकारी हासिल करने के लिए लोगों को राजस्व विभाग के चक्कर नहीं लगाने पड़ेंगे। राजस्व विभाग की वेबसाइट पर यूनिक नंबर डालते ही उस जमीन से संबंधित सभी जानकारी कंप्यूटर पर ही मिल जाएगी।

'आधार' की तर्ज पर हर रकबे का होगा यूनिक नंबर

■ अंक के साथ अक्षर भी रहेंगे शामिल

■ अलपिन नंबर से ही भू-स्वामियों की मिलेगी जानकारी

पटना/विशेष संवाददाता। राज्य सरकार भूमि विवादों में कमी लाने के लिए लगातार सुधार प्रक्रिया को गति दे रही है। अब 'आधार' की तर्ज पर हर प्लॉट(रकबा) का यूनिक नंबर होगा। यूनिक लैंड पार्सल आइडेंटिफिकेशन नंबर(अलपिन) से सॉफ्टवेयर के जरिये भू-स्वामियों के बारे में जानकारी हासिल हो जायेगी। इसके साथ ही 'अलपिन' के जरिये भूमि सुधार की प्रक्रिया को गति देने वाला बिहार सातवां राज्य हो जायेगा। कई राज्यों में इसके जरिये भूमि सुधार कार्यक्रम को गति दी जा रही है। राजस्व एवं भूमि सुधार मंत्री रामसूरत कुमार ने भी भूमि विवादों में कमी लाने के लिए कई कदम उठाये हैं और अधिकारियों को पारदर्शी तरीके से दाखिल-खारिज सहित अन्य मामलों के समाधान के निर्देश दिये है। राजस्व एवं भूमि सुधार विभाग के अपर मुख्य सचिव विवेक कुमार सिंह ने भी कहा कि रियल टाइम में हर प्लॉट का नक्शा बनाना सरकार का लक्ष्य है। उन्होंने वीडियो कॉन्फ्रेंसिंग के जरिये शुरुआत की। इस मौके पर केंद्र सरकार के भी कई अधिकारी मौजूद थे। बताते चलें कि हर प्लॉट का यूनिक नंबर 14 डिजिट का होगा जो अल्फा न्यूमेरिक होगा। इसमें अंक के साथ अक्षर भी मौजूद रहेंगे। पूरे देश में सभी राज्यों के सभी खेसरा को यूनिक नंबर दिया जायेगा। हरेक खेसरा की पहचान दो नंबरों से होगी। एक नंबर, भूमि सर्वेक्षण के बाद हरेक मौजा में हर खेसरा को मैनुअल सर्वेक्षण अमीन द्वारा किया जायेगा। वहीं, दूसरा नंबर सॉफ्टवेयर के जरिये आर्टिफिशियल इंटेलिजेंस द्वारा दिया जायेगा। इसतरह हर प्लॉट का यूनिक अलपिन नंबर होगा। सॉफ्टवेयर के जरिये प्लॉट का यूनिक नंबर दिया जायेगा। साथ ही सॉफ्टवेयर पर भू-नक्शा अपलोड किया जायेगा। गांवों के सभी खेसरों में भूमि सर्वे के दौरान आवंटित नंबर के अतिरिक्त 14 डिजिट का एक और नंबर स्वतः मिल जायेगा। इससे दाखिल-खारिज कराने में भी सहूलियत होगी। अलपिन नंबर डालते ही प्लॉट की चौहद्दी, रकबा, स्वामित्व सहित जमीन की पूरी हिस्ट्री मिल जायेगी। गौरतलब है कि बिहार देश का पहला राज्य है, जहां सभी गांवों के कैडेस्ट्रल मैप डिजिटाइज्ड है। ऑनलाइन म्यूटेशन सहित लगान और परिमार्जन पोर्टल के जरिये लोगों को भूमि संबंधी समस्याओं को सुलझाने में सहूलियत हो रही है।