

**Working Paper 308**

**Urban Property Ownership  
Records in Karnataka:  
Computerized Land  
Registration System for  
Urban Properties**

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ISBN 978-81-7791-164-0

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Bangalore

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# URBAN PROPERTY OWNERSHIP RECORDS (UPOR) IN KARNATAKA *COMPUTERIZED LAND REGISTRATION SYSTEM FOR URBAN PROPERTIES*<sup>1</sup>

**S Manasi, K C Smitha, R G Nadadur, N Sivanna, P G Chengappa\***

## **Abstract**

*Effective land governance mechanism has been long overdue initiative in India. The challenges posed by the recent global developments, especially rapid urbanization, unregulated migration to urban centres, ineffective land management practices, institutional fragmentation, decentralized reforms and lacuna in the legal system to guarantee land titles, etc. have increased the complexity of land administration in the country. It is with the intention of addressing these problems that the UPOR has been initiated in Karnataka. It is expected that UPOR will promote efficiency in service delivery and enable citizen interface with the digital management of land records throughout the state.*

## **Background**

The smooth functioning of an economic system requires accurate and efficient maintenance of the land records in order to authenticate land related transactions and eliminate spurious land deals. Increased urbanization has created complex land transaction-related issues. Some of the problems associated with urban land transactions include unnatural increase in the demand for urban property, creation of fake documents, 'benami' and fraudulent land transactions, etc., and most of these maladies can be traced to insufficient checks/control at various official levels for monitoring irregularities in land transactions. Putting in place appropriate mechanisms to check these ills will go a long way in reducing public insecurity. A study conducted by Mckinsey<sup>2</sup> in India has shown that India loses 1.3 percent of its potential growth due to poorly maintained land records. Much of the registration process in India does not result in valid ownership titles. Hence, more than 70 per cent of all legal disputes are regarding land. The paper throws light on the initiation Urban Property Ownership Records (UPOR), in Karnataka State, which is a computerized process of land title registration system for urban areas meant to ensure authentication of property titles. The paper is divided into three sections: Section one provides historical perspective on the concept of city survey in Karnataka and recent development in urban centres of Karnataka. Section two gives details regarding the UPOR initiative and the stages of its implementation. Finally, Section three presents the different set of stakeholders and the complexities involved in the implementation of this programme.

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<sup>1</sup> This paper is based on a larger study supported by The World Bank, USA, carried out by the Centre for Ecological Economics and Natural Resources, Institute for Social and Economic Change, Bangalore, India in 2011 and 2012.

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<sup>2</sup> Mckinsey (2001). India the Growth Imperative, Washington DC: Mckinsey Global Institute

## Section I

### Concept of City Survey - A Historical Perspective

Historically, the first formal and recorded urban mapping or city survey in the country was introduced during the year 1900-10. Such a measurement was first carried out in the Bombay Presidency and it later spread to other major cities so that, by 1918, the system had become a full-fledged one. The Karnataka Survey Settlement and Land Records (KSSLR) Department is one of oldest survey departments established under the Bombay Revenue Act and Karnataka Land Revenue Act (KLR Act, 1964). At present, urban mapping exists in 48 urban centres of Karnataka, even though the records are not fully updated. Across 42 sectors of Belgaum, it has been completed by continuing the system that prevailed in the Bombay Province. The city survey concept was introduced in 6 more districts of Karnataka, between 1969 and 1975. These districts are Bellary, Gulbarga, Kolar Gold Fields (in Kolar district), Mysore, Bangalore and Davangere. As many as 112 villages of Belgaum had been notified for mapping and measurement much earlier to 1969. Similarly, 137 sq. kms of Bangalore core city was measured and mapped, barring new extensions and fringe areas. As per the available records, in Karnataka, survey was carried out during different periods as described below -

**Table 1: Survey Carried during Different Periods**

Sl.No.	Survey in Different Periods
1	Original Survey carried out between 1863 and 1890. All the documents prepared during original survey are in <i>modi</i> Marathi language.
2	Re-survey carried out between 1900 to 1920.
3	<i>Hissa</i> survey carried out between 1926 and 1940.
4	Second Re-classification carried out between 1955 to 1966

**Source:** The Survey, Settlement and Land Records Department, Government of Karnataka (GOK).

Though there has been a manifold increase in property rates in urban India in the past few years, urban land management practices have not witnessed commensurate up-dating and still remain unplanned and unorganized. This has been further accentuated by the rise in the middle class population, large scale migration to cities of south Karnataka particularly to Bangalore, and rise in income levels of the educated and employed middle class in cities. Hence, the need for a well maintained land record system for urban areas cannot be over emphasized, particularly in the context of soaring land market prices and a competitive urban economy that contributes a large share of the gross domestic product (GDP).

In the light of a very significant increase in disposable incomes, the property transactions also have increased substantially as evidenced by the spurt in the number of property registrations especially in Bangalore in the recent years. Moreover, in the absence of authentic property documents, there is a misconception among the urban citizens that the municipal 'Khata' is the legal property document indicating the title status. This apart, most of them do not register their property transactions with the

authorities concerned for many years unless it is a sale or partition of the property. . Most people are not aware that the sale deed and 'Khata' are not considered legally valid and they do not guarantee title/ownership of a property. These documents serve as simple proxies for land title. . A sub-registrar authenticates only transactions, not titles.

## **Recent Developments in Urban Centres of Karnataka**

In recent years, though the state of Karnataka has experienced a slower growth rate, the state's GSDP (Gross State Domestic Product) is estimated to grow at 6.4 per cent (according to the Economic Survey of Karnataka) in the year 2011-12 and reach Rs 2,97,964 Crore as against Rs 2,79,932 Crore in 2010-11. This can be attributed to the growth in manufacturing (4.1 per cent) and service sectors (10.6 in 2011-12)<sup>3</sup>. Manifold increase in public sector investment followed by private sector investment as a result of liberalization policies and urban sector reforms<sup>4</sup> since two decades it has substantially impacted the land rights profile of urban citizens. Given the impact of such macro policies, there is a need for proper implementation of Karnataka's urban land legislation and regulations. This need is made more urgent by a number of recent developments such as rapid urbanization, poor urban land management, increased private investment, unprecedented demand for urban land, reforms brought in like decentralization lacuna in existing legal system, etc.

### **1. Rapid Urbanization**

The process of rapid urbanization<sup>5</sup> in Indian cities has shaped the pattern of economic growth; the massive migration<sup>6</sup> from rural areas to urban centres commenced in the decade 1990-2000 continues till date. As a result, cities have become major centres of industrial development and have contributed to a boom in construction and service sector industries. The expansion of these sectors has created enormous job and investment opportunities and urban sprawl. By 2025, 50 per cent of Karnataka's<sup>7</sup> population (40 million) is expected to live in urban areas. However, existing urban planning instruments are inadequate to deal with the ongoing haphazard development, and may lead to serious regional imbalance in the days to come. In addition, much of official attention and resources are being bestowed on other large cities in Karnataka than Bangalore, so there is less 'Bangalore-centric' development. Besides, the rate of urban poverty is more than rural poverty in the state. Urban poverty constitutes

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<sup>3</sup> The Businessline, Hindu (2012). Karnataka's economic growth to slow down to 6.4% in 2011-12, March 20<sup>th</sup>. [www.thehindubusinessline.com](http://www.thehindubusinessline.com)

<sup>4</sup> Urban sector reforms are initiated by government of India through JNNURM Project (2005)-Jawaharlal Nehru Urban Renewal Mission. The mission insists on optional land reforms for both rural and urban areas through computerisation.

<sup>5</sup> Nearly 28 per cent of total population live in urban areas in India (UDP 2009:3).

<sup>6</sup> Migration towards the higher order of urban centres has the effect of 66 per cent of the urban population concentrated in 23 Class I cities. Mysore and Hubli-Dharwad constitute emerging metropolitan cities in Karnataka (UDP 2009:3).

<sup>7</sup> Urban settlement structure in Karnataka is highly dense with 67 per cent of urban population living in 24 cities (UDP 2009: 5).

32.6 per cent in Karnataka which is high compared to the other states. The fundamental need is to accelerate orderly urban development in towns and cities other than Bangalore, to act as counter-magnets to attract migrants as also to regulate the allocation and use of land in a fair and equitable manner in urban areas.

## **2. Private Investment and Demand for Urban Land**

Demand for urban land is the result of several factors like macro level liberalization policies in promoting private investment in the delivery of basic services, development of service sector in the form of establishing IT (Information Technology)/BT (Biotechnology) industries, rural-urban divide resulting in mass exodus of migrants from rural areas to cities in search of job opportunities and opportunities in the mining sector (iron ore) in districts like Bellary region in Karnataka. As a result, great demand for urban land is created by both informal communities and investors have given rise to conversion of land from agricultural land to non-agricultural uses. As this is most often done without clear land titles, such dubious land transactions and land litigations have changed the very concept of land use (Wadhwa 2002). This is further aggravated by the absence of updated land records, which often lead to time and cost overruns in several development projects. The state finds itself unable to protect its own land rights as well as that of its citizens, from large scale encroachments, court litigations and land mafia. The lacuna in the existing legal framework concerning ownership of land is far too apparent. Hence, the need for a system of state guarantee for land title or property rights.

## **3. Decentralized Reforms**

Decentralized reforms were ushered through 73<sup>rd</sup> and 74<sup>th</sup> constitutional amendments. This has increased the number of players in the land sector with more opportunities to access services, and has necessitated a comprehensive land policy. Decentralized governance has transferred authority to local governments to mobilize resources besides managing land and delivering titles. Urban land constitutes a very important asset of the local government, generating significant financial resources through land management and taxation (Burns 2007). Local land management practices have assumed greater significance through development process in terms of facilitating infrastructure, access to basic amenities and facilitating sustainable natural resource management. At the same time, danger exists in terms of local institutional overlapping, and conflicting agendas that increase the cost and, thus, harmfully affect long-term development. Emergence of decentralized local governance has facilitated greater development in land administration.

## **4. Urban Land Management Practices**

Effective urban land management is critical to urban development. The absence of well planned urban land management results in spiraling land prices, speculation and inflation, and growth of informal settlements that adversely impact social welfare and overall development. Inadequate land management framework in urban areas also results in violation of land use regulations and in encroachments (UDP 2009: 9; Dowall and Clark 1996: 5). Typically, urban land regulations are

influenced by zoning, regulated densities, building by-laws, master plan and comprehensive city development plans.

Violation of urban land use regulations is due to lack of valid cadastral, registration, and approved records; it results in haphazard and unconstrained land use and seriously impact the efficiency of the city governance. Further, increase in the volume of urban land transactions due to rapid industrialization, and changes in land use pattern due to urbanization, have further complicated the formal process of land registration. The situation is aggravated by informal settlements such as slums<sup>8</sup> and encroachments on urban land. Lack of formal security of land tenure causing disjunction in planning if the informal settlements need to be recognized in the planning instruments (Ramanathan 2009). Under such developments, the city administration has less control over land regulation, allocation and management.

## **5. Lacuna in Legal System to Guarantee Land Titles**

Time and again, uncoordinated, disintegrated and outdated land related legislation has lead to critical situations in many developing countries (Burns 2007). Lack of effective implementation, and predominance of deeds<sup>9</sup> system over title registration system, in the existing land transfer system in India, mean that the title is not backed by any state guarantee (Wadhwa 2002). There are instances of land related conflicts leading to court litigation involving social cost and disrupting societal harmony.

Though the constitution of India had originally guaranteed right to property as a fundamental right, by the 44<sup>th</sup> constitutional amendment in 1978, the right to property was reduced to the status of legal right and is no longer a fundamental right with constitutional remedies. In Karnataka, land use is regulated by Karnataka Land Reforms Act of 1964 and Indian Registration Act of 1908. While these acts envisage compulsory registration of sale of land, they do not provide for registration of title, but only result in registration of a deed of transaction. Registration process merely acts as a fiscal instrument of the state to collect a 'fee', but does not provide statutory guarantee<sup>10</sup> to the land title. Further, Section 18 of the Registration Act does not stipulate compulsory registration of all land-related transactions<sup>11</sup> (Wadhwa 1989, Ramanathan 2009). As a result, existing legal titles do not reflect any changes resulting in succession or transfer, or more broadly the customary rights recognized in the community (like slums/informal settlements), and these differences add to the existing complexities in urban land dynamics.

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<sup>8</sup> Nearly 7.8 per cent of the urban population lives in slums in 35 towns of Karnataka state. According to the NSSO, 58<sup>th</sup> round (2002), the number of slums in Karnataka is estimated to be 1983 with 4,83,828 households (UDP 2009: 10).

<sup>9</sup> A deed does not in itself prove title; it is merely a record of an isolated transaction.

<sup>10</sup> State laws does not entertain any suit against the state government or any officer of the state government in respect of a claim to have any entry made in any record or register maintained by the government or to have any entry omitted or amended (Wadhwa 2002).

<sup>11</sup> Such as state acquisition of land, court decrees, land orders, partitions, mortgages, agreements to sell the land etc.

## Section II

### Initiation of 'Urban Property Ownership Records' (UPOR) in Karnataka

Urban local bodies (ULBs)<sup>12</sup> in Karnataka have been maintaining property tax details through a property tax record called "Khata"<sup>13</sup>. 'Khata' document is presumed to be a property ownership record. Moreover, as ULBs are not authorized to create and maintain property ownership records, they maintain only "Khatas" for the purpose of tax collection from urban citizens, and Khata is not a Record of Rights (RoR) issued in respect of revenue or agricultural land. Therefore, having Khata *per se* does not indicate legal status.

The existing city survey system is now being extended to all the major cities of the state as the Urban Property Ownership Rights (UPOR). Initially, pilot projects are being carried out in the cities of Mysore, Hubli-Dharwad, Shimoga, Mangalore and Bellary in order to cover all the municipal and urban properties in stages, in accordance with the provisions of KLR Act. The Act requires the creation of property ownership cards for areas with more than 5000 population.

The purpose of property ownership records is to improve liquidity and increase transactions while enabling the property owner to readily monetize his assets. In addition, the creation of urban property record system aims at reducing cost and time involved in land related litigations. Further the goal of the UPOR is to enhance and promote efficiency in service delivery while promoting citizen interface with the digitized management of land records throughout the state.

The UPOR is also intended to ensure transparency in land administration procedures, simplify the process of registration, provide greater access to information, centralize land records data and thereby improve accountability. It is expected that UPOR will result in the elimination of corruption and middlemen in the realm and promote good governance. One of the primary aims of UPOR is to create an approved land record system of documents by a statutory authority in urban areas in order to enable the other stakeholders to make use of this database.

The state government is also examining a proposal to make the property card mandatory for sale and purchase of property, home loans and other land related transactions. The government believes that the card will help individuals and organizations in buying and selling land, as records will be accurate and appear both on the map and in the ownership data. The property record created through this project will be evidence of property ownership for all regulatory and legal purposes. Property record over the years is expected to be updated regularly and will, therefore be current relevancy.

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<sup>12</sup> There are 213 ULBs in Karnataka varying in size based on population from 10,000 to almost a million. Bangalore city, the state capital, has almost reached 9 million.

<sup>13</sup> Khata means an account maintained by city municipal council (CMC) for collecting property tax from property owners and it is not an ownership document.

## **1. Mandates of Survey Settlement and Land Records (SSLR)<sup>14</sup>**

The Survey, Settlement and Land Records Department, Government of Karnataka (GOK), has been mandated under the Karnataka Land Revenue Act of 1964, and KLR Rules of 1966 to prepare, maintain and preserve spatial and non-spatial data relating to ownership of land for properties in urban areas of Karnataka. The specific sections of the KLR Act 1964 governing the implementation of UPOR in Karnataka include (a) Chapter 1 – Section 1(2) and Section 2(2, 6, 38), and (b) Chapter XIII – All Sections (148 to 156) popularly known as “City Survey”.

The main objective of city survey is to initiate the process of an accurate survey of private and government properties (like buildings, houses, roads, playgrounds, parks etc.); generate a survey sketch including other property related documents in cities and towns and accord a specific and permanent identification number to each property. This process is mainly related to administrative, legal and economic aspects of land based transactions. City survey maps are the main source of information for city planning like roads, road numbers, railway lines, parks, playgrounds, individual and government properties, and institutional properties with specific numbers and sketch details.

This information in turn is used by other departments like, electricity companies, water supply department, municipal corporations and ULBs for tax assessment purposes, while police department, urban land development bodies, census department use it for their developmental planning and projects. Thus, the survey department renders services like, supply of survey maps and sketches, certified copies of property details like buildings, lands and property register cards.

It is important and essential, for every land-owner, to have proper and legally acceptable documents related to property. Without the city survey process, there can be no proper and specific document related to area, survey numbers, details of owner and mode of acquisition, possession rights encumbrance etc. As mentioned earlier, 'Khata' issued by a Municipality or Corporation for the purpose of paying revenue tax is considered as property right certificate by citizen but the fact is that it does not legally constitute a document attesting ownership of property. Property cards that are proposed to be issued to all land-owners will be ownership records with legal sanction as per section 133 of Karnataka Land Revenue Act 1964, and would replace the existing records of presumptive ownership. The records will be maintained in the form of maps and sketches depicting boundaries and the extent of individual properties and text relating to ownership, land use and other land related particulars.

In order to make the process citizen-friendly, as per the Karnataka Land Revenue (KLR) Act 1964, the Survey, Settlement and Land Records Department (SSLR) introduced Urban Property Ownership Records (UPOR), a comprehensive framework, for the creation and management of urban property records in December 2009. The Work Order was issued on 2nd December 2009, while Master Services Agreement was signed on 11th January 2010.

Although SSLR maintains urban property records in Bangalore, Mysore and 41 other towns of Karnataka, due to insufficient manpower and financial crunch, the records are not getting updated, on a regular basis. On the lines of the successful implementation of Bhoomi, in rural Karnataka, the need for a similar property records system was felt for urban centres also (Mukerji 2011). Form 2013 Property Card (PC) will become a statutory requirement and would be made mandatory for transactions like bank

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<sup>14</sup> Based on the extracts from the Concept Note of UPOR.

loans or selling property in all urban centres where the records are up-to-date and accessible for official used.

The UPOR property ownership records are legally authenticated documents, finalized through a statutory enquiry process as per law including ascertaining the ownership of properties and measurements, and used as legal and primary references for resolving any kind of legal disputes related to ownership, location, dimensions and areas of urban properties.

UPOR is being implemented in five cities of Karnataka since December 2009. It is a process of confirming the presumptive property title and providing a conclusive property title of all “urban properties” as mandated under the Land Revenue Act and 1964 and Rules 1966. The project aims to create a comprehensive database, both spatial and non-spatial, of all properties of urban centres in Karnataka. It is planned to extent UPOR to other cities and towns after the results of these pilot projects are known and studied.

## **2. Objectives of UPOR**

The main objective of UPOR is to issue ownership title to urban households and the creation of a fresh data base for urban mapping. It is important to note here that the generation of revenue is not the sole purpose of urban mapping under UPOR. The sub-objectives of UPOR include:

- Measurement and mapping of all non agricultural lands and urban properties
- Creating and maintaining Record of Rights (RR) for all non agricultural lands.
- The preservation of existing land records by the revenue department.

A robust system of UPOR is created for every property with a view to documenting accurately both spatial characteristics of properties and record of rights data in respect of (i) land parcels (ii) structures /buildings (iii) roads etc. This property record will serve as a trusted record for all land related transactions. The property card created under UPOR would serve as evidence for property ownership for regulatory and legal purposes. The property card issued will continue to remain valid and will not become obsolete or inaccurate. All the property record related transactions and services are intended to be fulfilled through this project (UPOR webpage)<sup>15</sup>.

## **3. Outline and Scope of the UPOR<sup>16</sup>**

Under UPOR, property records will be recreated for urban areas under the provisions of Karnataka Land Revenue Act 1964. UPOR was initiated to create and maintain property ownership records in five urban bodies within a framework for management of land records in urban centres. Five cities were selected on a pilot basis - Mangalore, Bellary, Mysore, Hubli-Dharwad and Shimoga. The Revenue Department has been working on making the land records of the state, both cadastral as well as textual data, more accurate across cities. Another interesting feature of the project is that UPOR is being implemented

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<sup>15</sup> UPOR objectives are listed out in City Survey Department-UPOR webpage [www.upor.karnataka.gov.in](http://www.upor.karnataka.gov.in) .

<sup>16</sup> UPOR outline and scope are presented in Request for Proposal (2009).

through Public-Private-Partnership (PPP) mode, in particular BOOT<sup>17</sup>. Government of Karnataka has teamed up with private sector partners in the area of land administration and records. The UPOR authorities, led by the Deputy Commissioner of the District concerned have set up Citizen Facilitation Centres for receiving relevant documents from property owners for ascertaining their ownership claims.

The task of creating and maintaining the property records for urban areas involves 4 distinct steps.

1. Creation of Property records which includes (i) survey and mapping of all properties in the cities, and (ii) verification of ownership claims.
2. Continuous management and maintenance of property records includes (a) creation of property records for new extensions of cities (b) Documenting changes in property records in the context of new constructions, and (c) Updating changes in land use and mutation of property records in case of sale/partition
3. Operation and Maintenance of service delivery channels through 'Bangalore One' centres to deliver various property record related services to citizens. These service centres are established by the Survey Department. The above three tasks are performed by the service provider, and finally
4. Creation of IT infrastructure that will enable the storage of property records and delivery of various property record related services like (i) Title Enquiry; (ii) Certifying Transactions and (iii) Changes in property records. The IT infrastructure comprises (a) Software application; (b) Various COTS software products; (c) Servers, Storage and other IT hardware. These activities are carried out by technical service providers.

The first three tasks are performed by service providers (SP), and while the fourth by Technical Service Providers (TSP).

#### **4. Benefits of City Survey/ UPOR Property Card**

Some of the benefits that are expected to accrue to the owners of properties are

- (i) Security for property
- (ii) Protection from unauthorized acquisition
- (iii) Exact property details and also other relevant survey numbers
- (iv) Facilitates seeking of legal assistance from courts in case of disputes
- (v) Enables in availing bank loans by submitting the survey documents
- (vi) Facilitates access to water and electricity services
- (vii) Provides information on transfer/ mutation of properties
- (viii) Allotment of a permanent and specific number to each individual property prevents the occurrence of frauds in the process of buying and leasing of properties
- (ix) Helps in obtaining building plan approval
- (x) Protection from unauthorized encroachment of Government lands
- (xi) Property record over the years will remain current and accurate

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<sup>17</sup> Build, Own, Operate, and Transfer (BOOT) model followed for the implementation of UPOR

## 5. List of Services 'Expected to be Delivered' by UPOR<sup>18</sup>

The following services are expected to be delivered by the UPOR project.

1. Information Services which includes:
  - Search for various types of properties and related documents like sale deeds,
  - History of transactions of various properties post UPOR project;
  - Various thematic layers of Maps (for example roads, public amenities, government properties etc), and
  - Search for the entire city based list of properties based on the parameters of the property database.
2. Information to owners/power of attorney holder or lessee, bank etc. on transaction initiated in respect of property.
3. Search and Print (Certified Copies) which includes: (i) Certified copies of ownership record and (ii) Certified copies of transaction recorded in the UPOR database.
4. Map Services include: (i) Maps of the properties with the adjacent properties mapped, (ii) Maps of the locality like sector 7 HSR layout and (iii) Division of the city into different squares of 1 km to 1 km and mapping of all properties in the maps.
5. Transaction Services include (i) Transfer of ownership through registration and without registration. (ii) Charge details consist of (a) Creation of Charge (b) Release of Charge and (c) Reducing charges on the repayment of the loan by the property owner. (iii) Details on recording of any transactions include: Power of Attorney, long term lease and (iv) Details on sub-division of property.
6. Survey Management Process for (a) resurvey (b) sub-division and (c) amalgamation cases - these could include special cases such as (i) the acquisition of land by government for public works (ii) purchase of 2 adjacent properties by a private individual and the creation of a single commercial/residential building (d) *hudbust*-refixation of properties and (e) additional services/Survey on demand on instructions from courts/agencies and other government departments.
7. Appeal provision includes handling cases related to courts and court commissions/partitions.
8. Services related to the municipal department include: the Dept of Survey Settlement and Land Records, by networking with urban development departments and the City Municipal Corporation (CMC), maintains details on property taxes, accepts applications for building plan permits and grant permission. While delivering such services through UPOR following services are offered:
  - Statements of tax dues on property;
  - retrieval of building plan on the property;
  - application for building plan permission;
  - payment of property taxes;
  - preparation of demand notices for the municipalities;
  - generation of overdue notice for the municipality;
  - any change in the land use pattern and
  - layout approval.

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<sup>18</sup> Notes collected from RFP (2009: 9-10).

## 6. Implementation of UPOR: Public-Private Partnership Model (PPP)

The public-private-partnership (PPP) model has been followed for the city survey, wherein private agencies were selected through bidding, and they have to implement the UPOR activities in a phased manner across five pilot cities (Mysore, Mangalore, Bellary, Hubli-Dharwad and Shimoga) in Karnataka. The PPP would ensure the UPOR implementation within a fixed time frame, while following business model of cost maintenance. The initiative of PPP in geospatial industry is considered as the most ideal model in the context of Karnataka (Geospatialtoday.com)<sup>19</sup>. However, this model is constantly being reviewed and re-examined in the light of the experience in the earliest project area, i.e.Mysore. At present, the PPP (Public-Private Partnership) BOOT (Built-Own-Operate and Transfer) model for urban mapping is being implemented in 5 cities.

**Table 2: List of Selected Service Providers for Five Pilot Cities of Karnataka for UPOR Implementation**

Name of the City	Name of the Service Provider
Mysore	M/s. SECON Pvt Ltd
Mangalore	M/s. CMS Computers Ltd and Navayuga Spatial Technologies Pvt. Ltd
Hubli-Dharwad	M/s. CMS Computers Ltd and Navayuga Spatial Technologies Pvt. Ltd
Shimoga	M/s. InfoTech Geospatial (India) Ltd & HCL Infosystems Ltd
Bellary	M/s Navayuga InfoTech Pvt. Ltd & Map World Technologies Ltd

**Source:** UPOR Concept Note

### 1. Subcontracting through PPP model<sup>20</sup>

The implementation work has been sub-contracted to two categories of vendors namely Service Providers (SP) and Technical Service Providers (TSP). While SP is in charge of the creation of both spatial and non-spatial data base under the supervision of the department staff, TSP is in charge of the creation of software, not only for pilot cities but also for the entire state. TSP is responsible for storage and continuous online updation of property details.

The selection of both SP and TSP was done through a tender notification for carrying out the survey work, creation and maintenance of UPOR project records. The Technical Scrutiny Committee, duly assisted by a subcommittee constituted for scrutinizing the bids submitted for UPOR project, evaluated all the bids received.

The overall cost of the project was incurred by the SSLR department, but the vendors are to share a portion of the project cost. The vendors are to recover their share of cost through user charges imposed on property cards issued to property owners. The central decision-making process remains with the SSLR. No sub-contracting is allowed unless specifically mentioned in the bidding process.

The respective Deputy Directors of Land Records (DDLRs)<sup>21</sup> have been appointed as Project Officers (POs) who would be in charge of the projects at the local level. Apart from the DDLRs, 30

<sup>19</sup> Visit [www.geospatialtoday.com](http://www.geospatialtoday.com) for more details on UPOR project in Mysore.

<sup>20</sup> Notes from UPOR- Concept Note, page 5.

surveyors have been identified for each location. The surveyors are required to accompany the vendors and monitor and guide them at all the stages, considering that the ongoing initiative is quite unique and in a way the first of its kind. In all 150 surveyors and 5 DDLRs have been imparted training at the Survey Training Institute (STI) in Mysore for a month. Citizen Service centers have also been constituted in all the cities where the project is being implemented for the collection of documents from property owners where the project is being implemented.

## **7. Duration of the Project**

The time frame fixed for the project was 6 years for both SP and TSP starting 270 days from the issue of order to the service provider. The date of commencement of operations was as mentioned in Volume III of the RFP for SP and TSP.

## **8. Governance Structure: Project Monitoring**

The progress of each UPOR project was to be monitored by different committees constituted for the purpose. The monitoring activity comprises of four prime execution stages of UPOR project which include: (i) Constituting Project Monitoring Committee (ii) Constituting Project Management Unit (PMU) and (iii) Inter-departmental Coordination and Coordination between Vendors.

The Project Monitoring Committee (PMC) has been set up for reviewing the progress of the project and also for resolving any disputes between vendors during the implementation of the project. The PMU is in-charge of core regulatory responsibilities besides supporting the implementation of the project with its expertise. In fact, PMU facilitates inter-departmental coordination with other local bodies like Municipalities and Urban Development Departments (UDD) for passing on the required information to the vendors for the smooth implementation of the project objectives. In addition, DDLRs are appointed as project officers in charge of the following tasks in each city:

- for monitoring day-to-day work and submitting daily progress reports;
- coordinating with other agencies and departments (like DC office, AC office, Taluk office, Municipality, Housing board etc) for receiving property related data;
- providing day-to-day guidance to vendors;
- arranging press meets on the progress achieved;
- promoting awareness and publicity regarding UPOR;
- validating of data at various stages and submitting reports to the Commissionerate and
- attending periodic meetings at Commissionerate office in Bangalore.

## **9. Coordination between Vendors**

Largely, all specificities were worked out. The UPOR project being complex in terms of scale, conflicts might arise between the two types of vendors (SP and TSP) and between the department and vendors during the implementation process. RFP serves as a guide for conflict resolution in respect of any differences; however, in case RFP is not able to resolve the differences, then PMU convenes a meeting

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<sup>21</sup> Sourced from UPOR webpage please visit UPOR webpage [www.upor.karnataka.gov.in](http://www.upor.karnataka.gov.in) for more details

of the parties for an amicable settlement with minimum financial loss to either party. If the issue is not resolved at the PMU level then, the parties in conflicts are referred to the Project Monitoring Committee (PMC).

## **10. The City Survey**

The city survey work under UPOR relates to both spatial and non-spatial data. The spatial data involves the establishment of control networks via primary, secondary and tertiary control points and maps, while non-spatial data includes:

- collection of data and verification of documents;
- measurement of properties;
- preparation of index mapping;
- creation of a master data base (data entry);
- collection of original documents;
- scanning of the documents and
- preparation of draft property cards.

The four stages of city survey include: (a) Establishing control networks (b) Conducting a detailed survey of each property (c) Title Enquiry Process and preparation of Property Cards and (d) Citizen Service Delivery.

### **1. Establishment of Control Networks<sup>22</sup>**

One of the major tasks of the project is to establish control networks which include (i) Primary control point; (ii) Secondary control point; and (iii) Tertiary control point. These control points are established for fixing coordinates, linked to each other for accuracy. The Town Planning Authority (TPA) in the respective to cities has already established PCPs and SCPs. But the main area of interest under UPOR was to establish a robust control point network covering 100 per cent of developed area as well as 50 per cent of buffer area. Considering future developments, additional PCPs (one for every 4 kms) and SCPs (for every 1 sq km) were to be established. The coordinates for these points are satellite based and obtained using DGPS, and observation is carried out as per the identified accuracy points. The obtained coordinates are processed in house. Based on the instruments of Town Planning in Mysore, the Survey of India and Town Planning Authority have together established 67 PCPs, 160 SCPs and 8,340 TCPs in Mysore city.

### **2. Use of ETS instrument**

A Base Map on a scale 1:20,000 was compiled for Mysore City, using Survey of India (SOI) Maps and updated Satellite Image. The Base Map is on WGS 84 Datum and Universal Traverse Mercator (UTM) Projection. Survey of India (SOI) had established Primary Control Points (PCP), and the additional PCPs

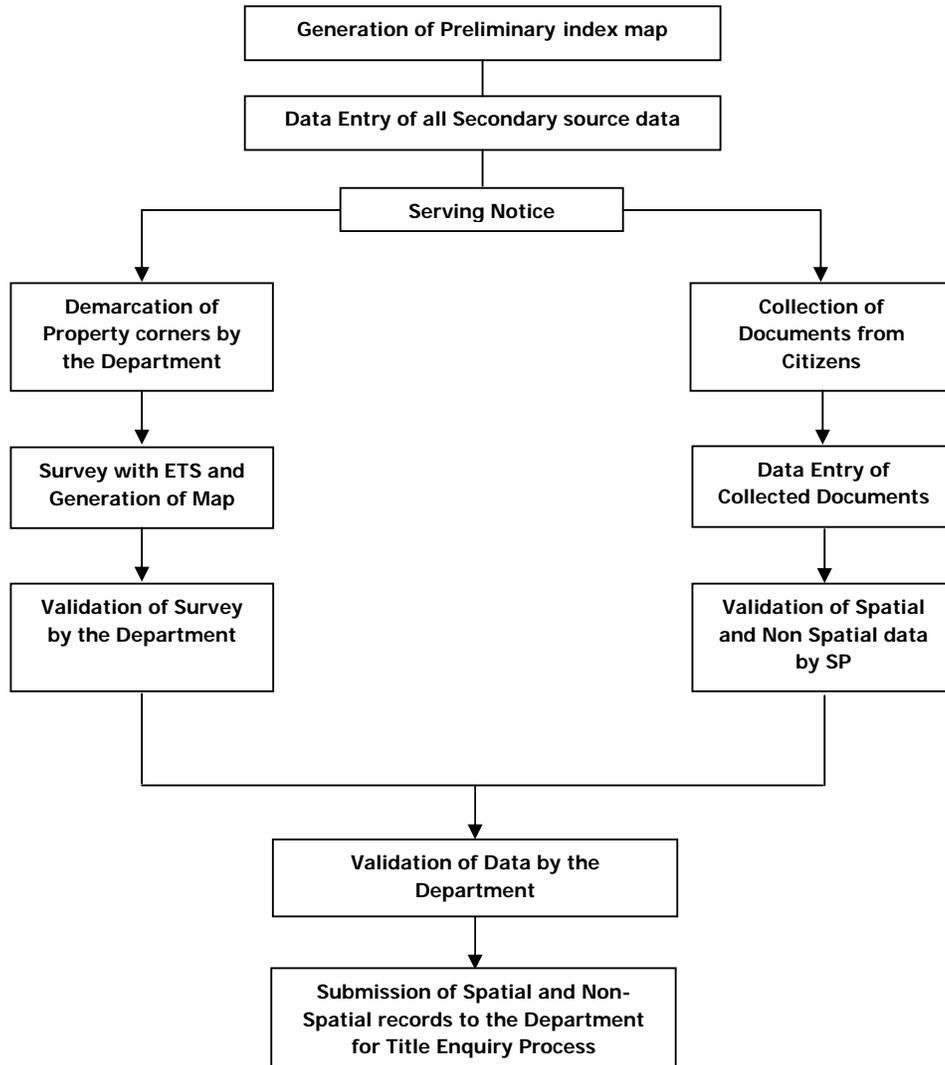
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<sup>22</sup> Regarding control points, a note is taken from UPOR-Concept Note and UPOR webpage [www.upor.karnataka.gov.in](http://www.upor.karnataka.gov.in).

established subsequently have been plotted on the base map. The established PCP and SCP points have been further extended to Main Line Traverse (MT) and Secondary Line Traverse (ST) by providing Tertiary Control Points (TCPs). Main Line Traverses commence from PCP & SCP and converge on closed-in PCP & SCP using ETS, for achieving a high degree of accuracy. TCPs having 03 cm positional accuracy have been established on permanent structures (see Flow chart 1).

All the TCPs have been established in such a way that there is at least one TCP within a range of 100 metres from the other one and with fair inter-visibility, using TCP Points. The total station readings are taken as per the requirements.

**Flow Chart I: UPOR Second Stage UPOR- Implementation Process in Mysore city**



Source: UPOR Office, Mysore

### **3. Index Mapping: UPOR**

After establishing control networks, the next stage is index mapping. There are three steps involved in index mapping. They are: (i) dividing the entire city area into sectors and zones; (ii) giving numbers to all the properties; and (iii) geo-referencing of village maps.

### **11. Survey: Non-Spatial Survey**

The second and third stages of UPOR implementation relate to a non-spatial survey. There are seven steps involved in a non-spatial survey. They are (i) collection of data and verification of documents; (ii) measurement of properties; (iii) preparation of index mapping; (iv) creation of a master data base; (v) collection of original documents; (vi) scanning of the documents; and (vii) preparation of draft property cards.

#### **1. Second Stage of UPOR Implementation: Activities Involved**

During the second stage of UPOR implementation, as the first step, different sets of stakeholders are informed of the survey through a notice from the department of city survey. Stakeholders are requested to<sup>23</sup> produce relevant ownership documents for scanning and verification. The list of documents depends on property type and category of stakeholders. Table 3 presents details of stakeholder's categories and list of documents collected by the SSLR in Mysore city. The UPOR office in Mysore city has received about 90,000 documents (files)<sup>24</sup>. The second step is the detailed spatial planning to be carried out for demarcating and categorizing the properties in the city (see Table 3).

As each individual property is unique, in terms of coordinate<sup>25</sup> measurements, the entire city is divided into zones, sectors and village properties. The city of Mysore is divided into 11 zones, 50 sectors, and 42 villages. As the survey knowledge of service providers is inadequate, 32 surveyors have been appointed by the department for the measurement of individual properties in the city.

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<sup>23</sup> Quantifiable details are collected from UPOR office, Mysore.

<sup>24</sup> Quantifiable details presented in this chapter for Mysore is up to December 2011.

<sup>25</sup> Coordinates for each property is fixed based on easting, westing, southing and northing measurements in the city.

**Table 3: Stakeholder categories and a List of Minimum Documents Collected for Mysore**

<b>CATEGORY TYPE</b>	<b>LIST OF MINIMUM DOCUMENTS</b>
Mysore Urban Development Authority (MUDA)	<ul style="list-style-type: none"> <li>a) Sale deed from MUDA to the allottee</li> <li>b) In case the present owner is not an allottee, the sale deed* from original owner</li> <li>c) In case some of the sale deeds are missing, then EC to cover the period of missing deeds</li> <li>d) Possession certificate issued by MUDA</li> <li>e) Approved layout plan</li> <li>f) Khatha certificate</li> <li>g) Latest tax paid receipt</li> </ul>
Gramathana Ashraya layouts, Janatha Colony properties	<ul style="list-style-type: none"> <li>a) First sale deed after the conversion of land</li> <li>b) Second sale deed from private person/agencies to the site allottee, EC</li> <li>c) Present owners sale deed*</li> <li>d) Possession certificate(Hakku patra)</li> <li>e) Tax paid receipt</li> <li>f) Khatha certificate</li> </ul>
Layouts developed by private persons /Agencies	<ul style="list-style-type: none"> <li>a) First sale deed after the conversion of land</li> <li>b) Second sale deed from private person./ agencies to the site allottee</li> <li>c) Present owner sale deed*, EC</li> <li>d) Conversion order (if conversion order for the layout already exists then this document is not required)</li> <li>e) Approved layout plan (if a layout plan for the layout already exists, then this document is not required)</li> <li>f) Municipality Khatha</li> <li>g) Tax paid receipt</li> </ul>
Housing Board Layouts (KHB)	<ul style="list-style-type: none"> <li>a) Allotment letter</li> <li>b) Sale deed from KHB to allottee</li> <li>c) In case the present owner is not allottee, the sale deed* from the original owner to the present owner</li> <li>d) In case some of the sale deeds* are missing, then EC to cover the period of missing deeds</li> <li>e) Possession certificate issued by KHB</li> <li>f) Khatha and tax paid receipt</li> </ul>
Properties in Alienated lands but layout plan not approved	<ul style="list-style-type: none"> <li>a) RTC in the name of the owner</li> <li>b) Mutation and present RTC, EC</li> <li>c) Conversion order</li> <li>d) Conversion Sketch</li> <li>e) Sale deed from land owner to the first buyer site</li> <li>f) Latest sale deed* if the present owner is not the first buyer</li> <li>g) Khatha and tax paid receipt</li> </ul>
Properties in agriculture survey numbers-revenue sites	<ul style="list-style-type: none"> <li>a) RTC in the name of the owner</li> <li>b) Mutation and present RTC</li> <li>c) Sale deed*from the owner as per RTC to the present owner of the site</li> </ul>
Properties in government land with survey numbers	<ul style="list-style-type: none"> <li>a) Grant order in the name of original grantee</li> <li>b) Saguvali chit in the name of the original grantee</li> <li>c) Conversion order</li> <li>d) Conversion Sketch</li> <li>e) Sale deed* from grantee to first buyer after conversion</li> <li>f) Latest sale deed* in case multiple transactions have taken place and EC</li> </ul>
Agriculture lands	<ul style="list-style-type: none"> <li>a) Latest RTC in the name of the owner</li> <li>b) Mutation</li> </ul>

**Source:** UPOR office, Mysore

- OR All other supporting documents showing property ownership.

In the third step, government surveyors identify property corners which are critical to determining the boundaries of properties. The discretion of private agency is not considered for this critical activity. Here, all the three control points network (PCPs, SCPs and TCPs) and assign a 'value' for each property. These values are fixed for all the properties including roads, lakes and public establishments in the city and used as coordinates for measuring individual plots/sites and households. As the fourth step, boundaries are fixed using Electronic Total Stations (ETS) to arrive at coordinates.

As the work proceeds, in the fifth step, using UPOR vectorization software, property maps are prepared, also referred to as 'Index Mapping'. Maps are generated for the entire city survey jurisdiction. A Detailed survey map is generated depicting roads, public establishments and households. Complete details are collected block, compound and plinth area wise. A relevant notice is issued regarding the survey date to the individual property owners in the city. Lastly, the survey has to be validated by the SSLR department as the final step in this process.

## 2. Departmental Validation of Survey

The department selects 5,000 properties randomly (20 per cent of the work) from each sector and checks for validation. Going by the coordinates drawn using ETS, a variation between 1 per cent minimum and 2 per cent maximum is ignored. However, if the difference is 10 per cent for each sector, then the entire sector is resurveyed.

After mapping of the city properties, in the sixth step, a master data base is generated by collecting documents from urban authorities, municipalities and individual property owners. For example municipal data, alienation data, government land, data city survey details (Mysore, Bellary and Hubli-Dharwad) are collected. Vendors (SP) collect relevant documents from property owners (citizens) in the city. These documents are scanned using UPOR software before porting the same. Households without documents are left out. Finally, exception reports are prepared.

## 3. Entry in Master Data Base Using UPOR Software

After submission of the data and the subsequent porting of the same using the UPOR software, details are incorporated in the Master Data base. These details include: **Basic data entry:** (i) Municipal Data; (ii) Alienation Data; (iii) City Survey Data; (iv) Government Land Data; and (v) Land Acquisition Data.

- **Culled out Information :** (i) *Chalta* Number<sup>26</sup>, (ii) Holder/GPA Details, (iii) Lease Details, (iv) Issues and Rights, (v) Property Category and (vi) Shared Property.
- **Quality Control Data:** (i) Municipal Data, (ii) Alienation Data, (iii) City Survey Data, (iv) Government Land Data, (v) QC culled out information Data Entry, (vi)Holder/GPA details, (vii) Lease details, (viii) other details, (ix) Issue and Rights and (x) Property Category.
- **Scanning and Indexing documents.**
- **Operators:** (i) Field Data entry of government surveyor- rejected records or (ii) Re-data entry of government- surveyor rejected records.
- **Survey Supervisor:** (i) Supervisor confirmation

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<sup>26</sup> Chalta number means plot number. Sub-Chalta number sub-plot number.

- **SP Supervisor:** (i) Notice generation for re-survey/document collection (ii) Notice generation for title enquiry and (iii) Date of update notice served
- **Enquiry officer:** (i) Initial approval from EO, (ii) Final approval, (iii) objection entry approval, (iv) Objection enquiry decision and (v) Abstract report.
- **Government Surveyor:** (i) Confirmation of enquiry process, (ii) Objection entry (iii) Notice generation for objection enquiry and (iv) Objection endorsement.
- **Generation of government surveyor reports** and creation of exception reports and
- Final porting status report for preparation of draft PR cards.

Subsequent to the porting of documents by the SP, the UPOR software groups the various *chaltas*<sup>27</sup> into: (i) *Chaltas* with minimum required documents (ii) *Chaltas* not having the minimum documents - categorized as *chaltas* with insufficient documents and (iii) *Chaltas* or properties with other lacunas (for example *chaltas* without owners or notices issued but documents not provided or a single *chalta* number block).

## 12. Third and Final stage of UPOR implementation: Title Enquiry Process (TEP)

In the third and final stage of UPOR implementation, Title Enquiry (TE) process is initiated. The title enquiry process is in progress in three cities out of five UPOR cities. Under TE process, four steps are involved for verifying the ownership claims of properties and the preparation of draft property cards (DPC). They include:

- Based on the data collected during first and second stages, the title enquiry process gets initiated by TE team.
- Confirmation of tenure and boundaries of the properties
- Preparation of draft Property Cards
- Preparation of final Property Card, Enquiry Register and Property Maps

## Compliance with respect to legal aspects of implementation of UPOR project<sup>28</sup>

Efficient service delivery is the essence of UPOR project. To regulate the relationship with various partners such as (i) service providers (ii) department of SSLR (iii) project organization and (iv) key stakeholder departments, a set of Service Level Agreements (SLAs) have been drawnup for (a) time bound implementation of the project and (b) delivery of services to the stakeholders. The RFPs clearly mention the legal and commercial implications of compliance and non-compliance with respect to both SP and TSP as specified in Volume III of RFP. Besides, all the partners and participants design their system of functional requirements to enable compliance with the SLA.

<sup>27</sup> Details collected from Circulars (2010-11), UPOR, Department of Revenue, Bangalore.

<sup>28</sup> Source from UPOR webpage, [www.upor.karnataka.gov](http://www.upor.karnataka.gov) and RFP (2009: 23-24).

## **1. Privacy Protection of UPOR<sup>29</sup>**

There were physical barriers to accessing property records in the pre-UPOR phase. However, with the computerization of property records through UPOR project, SSLR aims to protect the confidentiality of property ownership details which could be shared only by property owners.

Accordingly, some essential security measures have been taken by both SP and TSP for maintaining property confidentiality of records through biometrics/PKI. These are -

- Biometric security: Property owners or those who have interest in the property like GPA holders or lease holders enroll biometric identification unit of the department. Such biometric based identification is considered for only those property owners whose property is worth less than Rs 1.00 crore.
- PKI security: Financial institutions like banks that accept mortgages against property or property owners compulsorily enroll for PKI based identification security with the department.

All the services delivered by UPOR are PKI and biometric enabled and all services of UPOR are certified either through PKI or biometrics by the authorized signatories.

## **2. Provision of Services to External Agencies<sup>30</sup>**

SSLR shares the cadastral data with the public agencies on request free of cost or on case to case basis if such services are not listed in the table. Sometimes it may be chargeable using infrastructure of SP and TSP with the share of revenue being 75 per cent and 15 per cent respectively. If datasets are requested by the private agencies, such requests are studied by SSLR which enjoys the absolute right to accept or reject. Further, such requests are considered on the basis of 75 per cent and 15 per cent share of revenue.

## **3. UPOR project<sup>31</sup> - Expansion Portfolio**

In case of any expansion of portfolio or addition of more services to the UPOR project, both SP and TSP are to comply with by providing additional services without any additional charges. Further, both SP and TSP are to recover the charges only through user charges during provisioning of services, In case of any services that cannot be related to the existing category of services the charges to be paid to both SP and TSP as decided by the PMC on 75:15 share basis.

## **Channels of Service Delivery<sup>32</sup>**

SSLR is expected to deliver UPOR project services through 1-3 citizen service centres in every city. Channels of service delivery or the integration process are developed by UPOR project for enhancing

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<sup>29</sup> Source from RFP (2009:20).

<sup>30</sup> Source from RFP (2009: 21)

<sup>31</sup> Source from RFP (2009: 23).

<sup>32</sup> Notes from RFP (2009:11).

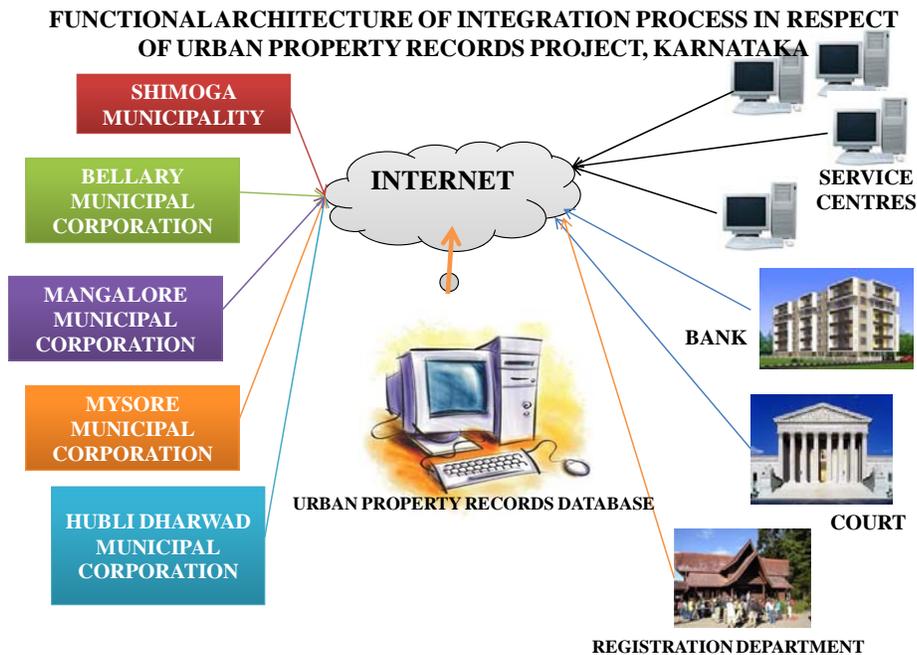
the convenience of citizens and also facilitating efficient service delivery. As on date, one Citizen Facilitation centre each has been set up and functioning at both Mysore and Shimoga.

### 1. Expected Services from UPOR

It is expected that Services under the Urban Property Ownership Records Project will be delivered from Service Centres which may range between one and three in each project area. These centers have already been set up by SSLR in every city. The exact number of service centers is given in Section 1.1. of Vol 1C of the RFP for Selection of Service Providers. In addition to these physical service centers, government would also facilitate delivery of service through:

- Citizen Service Centres (CSCs) are promoted by government agencies like Nemmadi/Bangalore, One/Hubli-Dharwad one for accessing multiple services including UPOR.
- UPOR services are also delivered through Commercial Internet centres.
- Citizens can access some services of UPOR through own service Internet portals.
- UPOR promotes networking with government establishments and banks for accessing information from both the sources (see Chart below).

CHART



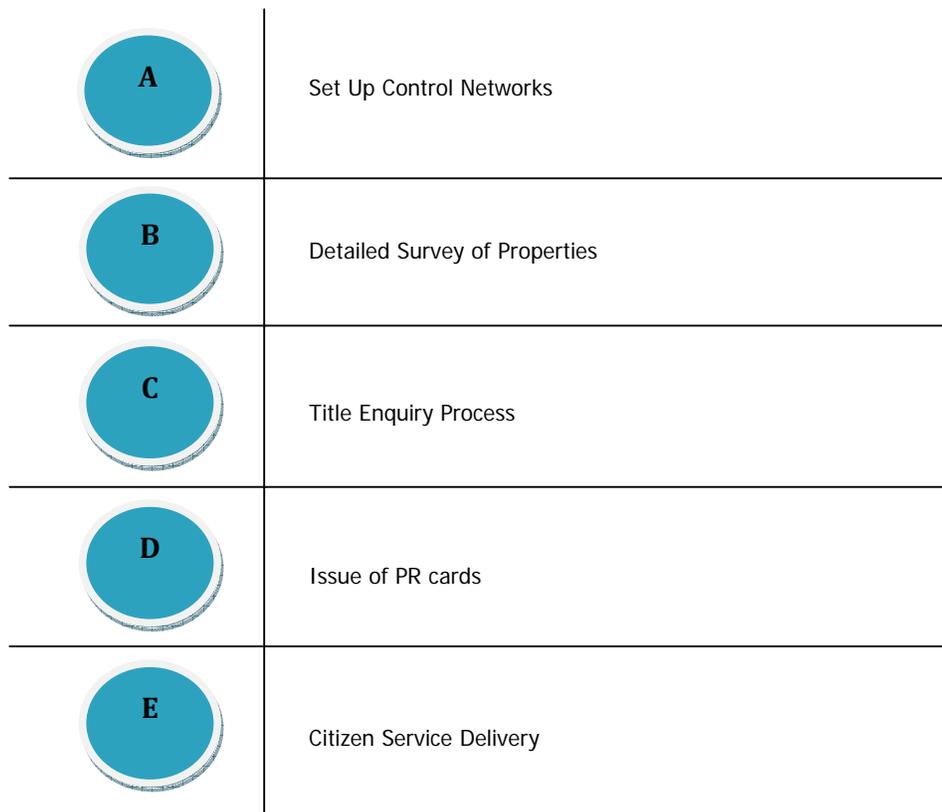
Source: RFP (2009: 11)

## Experiences gained from UPOR Project

As stated in earlier paragraphs, the UPOR project has commenced operation in five cities of the State. However, tangible progress has been achieved only in Mysore with almost 90% of the 2.75 lakh properties having identified and the survey completed.

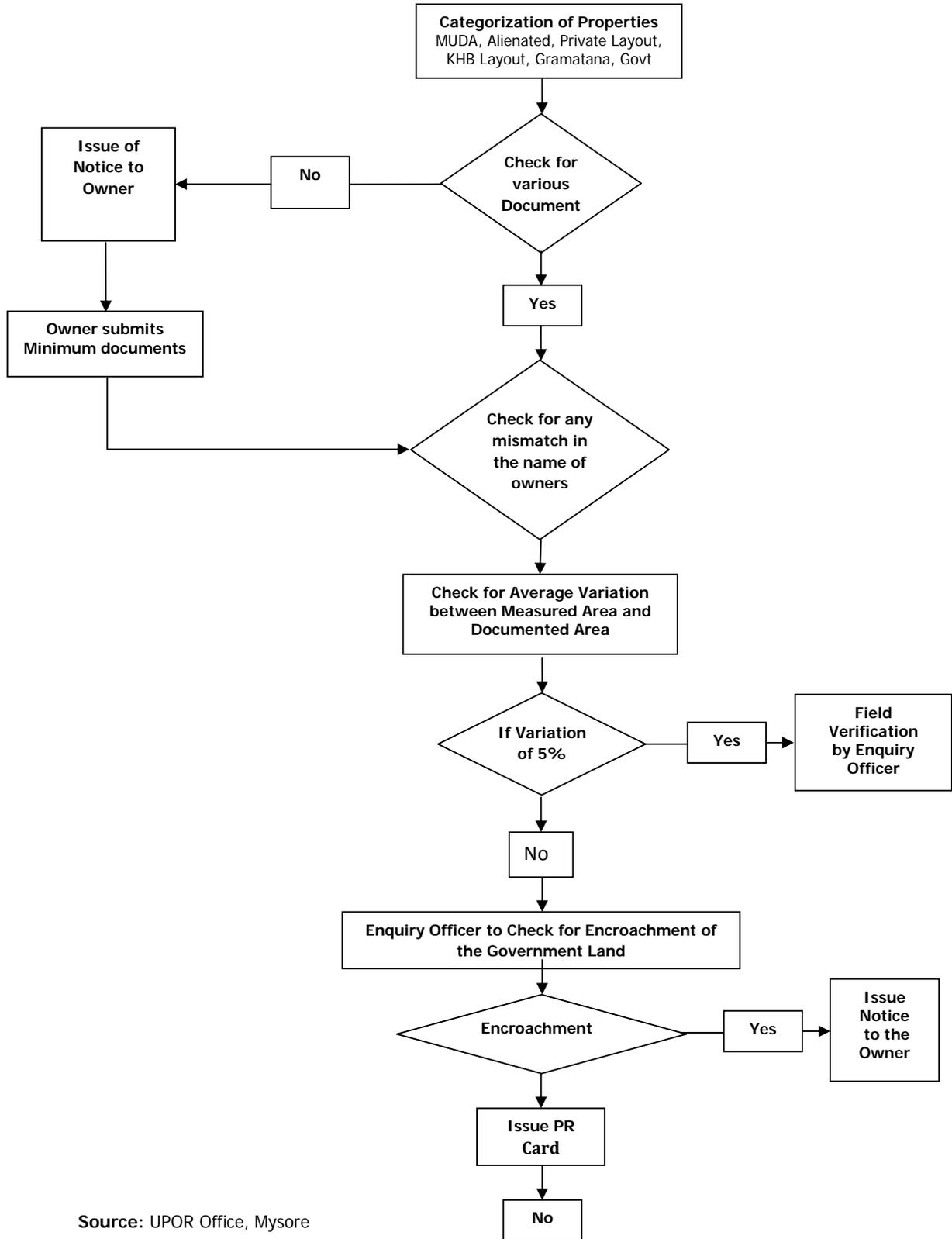
As regards the other cities, Hubli-Dharwad (50 per cent) and Shimoga (70 per cent) have registered good progress. The experience gained in Mysore, Hubli-Dharwad and Shimoga is found relevant for the present analysis as the scale of operation in these cities was considerably bigger operation as compared to other cities (see Flow Chart II and Flow chart III).

**Flow Chart II: Stages of UPOR Implementation Process**



Source: UPOR Office, Mysore

Flow Chart III: UPOR Implementation Process



Source: UPOR Office, Mysore

## **Section III**

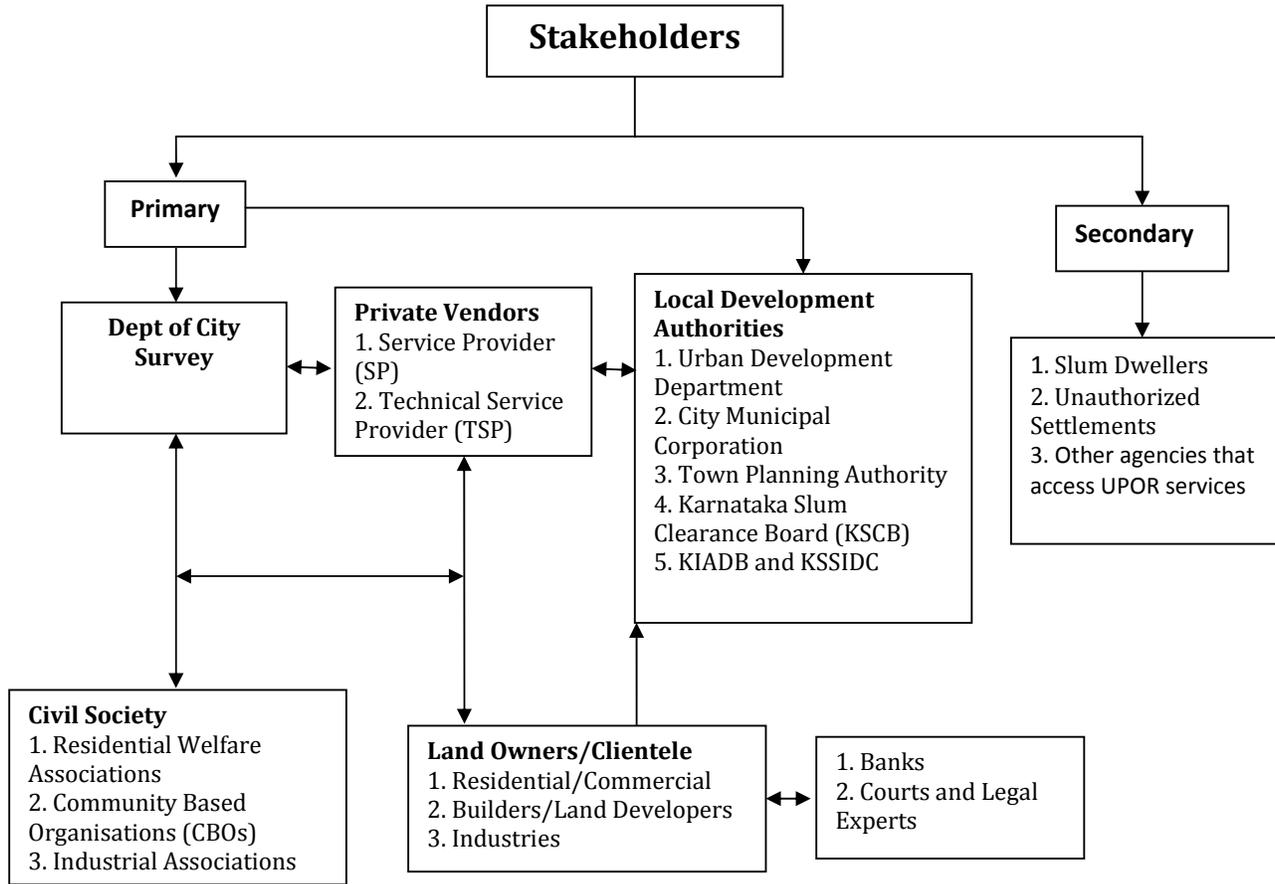
### **Demand for Property Cards from Stakeholders**

A stakeholder, by definition, is one with an interest or concern in something. It can be a person, group or organisation having a direct or indirect stake in an organization or activity. Although in respect of a project like UPOR, all are to be considered as stakeholders, but not all are equal given their differing interests and the roles they play. Therefore, there can be primary level and secondary level stakeholders, but all are to be an integral part of a project. They can be the end users or clients, people from whom requirements are drawn, people who help, organize and influence the design and finally people who reap the benefits of the completed project. Hence, the involvement of all stakeholders is extremely important as it contributes to the success of a project as a concept, besides building confidence in the project, and ultimately resulting in complete acceptance by the target group. These groups can be broadly categorized into executive level, expert level and end user level. An attempt is made to assess the viability of this major intervention in the property titling process after having gained a clear understanding of the problems faced by different types of users of the scheme and demands from these quarters.

#### **1. Key Stakeholders**

The present UPOR project has been launched with the assumption that such an intervention will be useful to citizens. Therefore, an attempt is made here to understand the expectations of different types of users and also to identify the potential users especially of TEP data base. These institutions across society will ultimately play an important role in determining the design of a pricing strategy, extent of coverage, compliance from SPs for the UPOR project and the associated database to remain an economical proposition from the investors' point of view. As a primary stakeholder, the department has finalized a detailed RFP for SPs and TSPs of the UPOR task, inclusive of documents for detailing the roles and responsibilities, functional and technical specifications, commercial terms and bid documents, Master Service Agreement etc. Properties belonging to the ULBs, UDA, KHB, in addition, banks, courts and lawyers, builders, private agencies etc. are major end users of property data. (see Flow Chart IV)

**Flow Chart IV: Classification of Stakeholders**



## 2. Implementation Constraints of UPOR

The implementation of UPOR project in five pilot cities of Karnataka, has thrown up several process related obstacles, challenges and constraints. Many of these are known to the various authorities in government and are being addressed. It is expected that they will be resolved and addressed, else, might adversely affect the UPOR.

These challenges and obstacles may be broadly classified into four categories. These are –

- a) Operational constraints in Government;
- b) Staff constraints in Government;
- c) Demand related issues in respect of PRCs;
- d) Problems in respect of linkages in the UPOR process

Expectedly all these challenges have surfaced during the implementation of UPOR. As observed during the study, that these problems have been identified by the authorities concerned. Also, there have been attempts at resolving them at various levels in government. However, some of the issues and problems still persist. They may have to be taken note of, at higher levels in government and

appropriate decisions taken to resolve them. Otherwise, there is every possibility that they may become hindrances in the speedy and timely completion of the project.

### 3. Slums and UPOR

Slums constitute one of the significant portions of urban centres. At present, these areas have been marked under the UPOR project though individual level titling process is yet to commence. The slum areas are marked as individual blocks in the survey; therefore, UPOR has not processed any individual documents belonging to authorised slums.

Most of the slums are located either on (i) private (ii) vacant or (iii) government land. The slums located on government land will be authorised under city Municipal Corporation or urban development authority regulations. Only authorised slums will receive 'Hakku patras' or 'Possession certificate' or 'Niveshana patra' and these documents will be issued on lease for a period of 20 years. Besides, the slums on authorised land have to pay beneficiary contributions to City Municipal Corporation (CMC) to transfer the land on registration. The number of slums on private land or unauthorised ones is more than that s on government land with authorisation. Most of the slums located on private land and vacant lands are subject to disputes and are categorized as unauthorised or illegal slums. Unauthorized slums do not posses documents to validate their stay it the city; therefore UPOR has processed only documents of authorised slums.

**Table 4: Status of Slums under UPOR**

Details	Hubli- Dharwad	Mysore	Bellary	Shimoga
Authorized slums	73 Hubli 33 Dhawad	86	53	48
Authorized slums identified as blocks	10	86	53	48
No. of unauthorized slums	-	72	11	11
Ashraya Colonies	3	7	-	-

**Source:** Field Survey from Pilot Cities of UPOR

Most of the authorized slums are identified as blocks (see table 4). The table above presents the number of authorised and unauthorised slums in the pilot cities of UPOR. In all the five pilot cities of UPOR, currently the whole area of authorised slum is declared as single chalta and block. Once properties are regularized by the concerned departments like City Corporation or UDA, these properties will later receive single chalta numbers and will become eligible for draft property card. The same procedure is applied to slums/tenements on agriculture land. These slum dwellers receive 'Hakku-Patras' on lease basis for 20 years. They have to make a monthly payment of Rs 10 to City Corporation/UDA for 20 years. UPOR has issued notice to authorized slums r with Hakku-Patras which could make them eligible for draft PR card as 'lease-holders'. In addition, there are certain central government schemes for construction of houses for slum dwellers with beneficiary contributions. Such housing schemes include (i) HUDCO scheme (ii) 3 SCP houses (iii) VAMBAY houses and (iv) NBA toilet

blocks. Four hundred and forty-one houses have already been built under IHSDP housing and infrastructure scheme in Hubli.

## Concluding Remarks

The existing urban land management practices in Karnataka have been analyzed from various contexts, like objectives and effects of urban land tenure and related practices. The objective of this paper is to capture and document the process and implementation of UPOR in five cities. The new and highly innovative solutions to the existing disintegrated land management practices appear to support the need for land reforms and thereby promote effective land governance.

It is hoped that, over a period of time, all these matters will be taken cognizance of, by the concerned authorities in government. Once they are examined and appropriate decisions taken, the UPOR could well revolutionize the systems of land governance in urban areas in Karnataka.

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ISBN 978-81-7791-164-0



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