

A New Land Title Registration System for Delhi: Recommendations

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TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS	iii
ABSTRACT	iv
EXECUTIVE SUMMARY	v
1 INTRODUCTION	1
1.1 The Purpose and Structure of the Study	1
1.2 The Study Team	2
1.3 Structure of the Report	2
2 THE NEED FOR A NEW TITLE REGISTRATION SYSTEM	4
2.1 The Present System of Property Registration	4
2.2 The Consequences	4
2.3 The Need for Change	5
3 THE LONG-RANGE OBJECTIVE	7
3.1 A Delhi Land Title Registry	7
3.2 Delhi Land Cadastre	11
3.3 A Land Information and Regulatory System	11
4 THE LEGAL FRAMEWORK	13
4.1 The Governing Law	13
4.2 The Apartments Act	13
4.3 Other Laws and Regulations	16
5 CADASTRAL SURVEY AND FIRST REGISTRATION	17
5.1 Cadastral Mapping of Delhi	17
5.2 First Registration	18
5.3 Adjudication	19
5.4 The Plot Identifier	20
6 TECHNOLOGIES FOR TITLE REGISTRATION	21
7 INSTITUTIONAL ARRANGEMENTS	24
7.1 The Institutional Home	24
7.2 The Institutional Name	25
7.3 Institutional Structure	25
7.4 Public Information	26
7.5 Private Sector Participation	27
8 TIMING	27
8.1 The Overall Timeframe	28
8.2 Phasing of First Registration	27
9 COSTS	30
9.1 Capital Costs	30
9.2 Financing	30
9.3 Cost Recovery	31
9.4 Stamp Duty	30
9.5 Indemnity Fund	31
10 AN ACTION PLAN TO ESTABLISH A LAND TITLE REGISTRATION SYSTEM	32
11 TENURE IN INFORMAL SETTLEMENTS	36
11.1 The Existing Situation	36
11.2 Long-Term and Intermediate Objectives	37
11.3 Recommendations for Delhi	39

12	WATER AND ELECTRICITY SUPPLY TO INFORMAL SETTLEMENTS	46
12.1	The Existing Situation	46
12.2	Best Practice	46
12.3	Recommendations for Delhi	50
ANNEX 1	ORGANIZATION OF THE DIRECTORATE OF LAND RECORDS, MAHARASHTRA	55
ANNEX 2	ORGANIZATIONAL RESPONSIBILITIES IN THE HONG KONG LAND REGISTRY	56
ANNEX 3	FUNCTIONS OF THE SURVEY AND MAPPING OFFICE, HONG KONG	57
	BIBLIOGRAPHY	63
	PEOPLE MET	70

ACRONYMS, ABBREVIATIONS AND SPECIALIZED TERMS IN COMMON USAGE

BWSSB	Bangalore Water Supply and Sewerage Board
CBO	Community-Based Organization
CSMC	City Survey and Mapping Centre (Delhi Government)
DDA	Delhi Development Authority
Delhi Government	Government of the National Capital Territory of Delhi
DERC	Delhi Electricity Regulatory Commission
DISCOM	Electricity distribution company (i.e. BRPL, BYPL and NDPL, in Delhi)
DJB	Delhi Jal Board (Delhi Water Board)
DLR Act	Delhi Land Revenue Act, 1954
FY	Fiscal Year
ICMA	International City/County Management Association
IFC	International Finance Corporation
JJ Clusters	Jhuggi Jhompri Clusters (squatter settlements in Delhi)
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
MoP	Ministry of Power
NGO	Non-Governmental Organization
NIC	National Informatics Centre
NRSA	National Remote Sensing Agency
PLR Act	Punjab Land Revenue Act, 1887
RBI	Reserve Bank of India
RoR	Record of Rights
Rs	Rupees (very approximately, \$1 = Rs.45)
RWA	Residents' Welfare Associations
SNP	Slum Networking Project (Ahmedabad)
UI	Urban Institute
UNECE	United Nations Economic Commission for Europe
USAID	United States Agency for International Development

ABSTRACT

The purpose of this study is to assist the Delhi authorities to take steps towards achieving long-term reform of the system of land tenure, land titling and land registration in the city. This report covers the last of the three phases of the study – the recommendations for a new land title registration system for Delhi.

The report also covers, in lesser depth, recommendations for tenure improvements in informal settlements, and procedures for improvement in the practice of supply of electricity and water to informal settlements.

ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

The study objectives This is the final report of a study of the system of land tenure and land title in urban Delhi. The study is based on an enquiry into present circumstances and alternative courses of action; its purpose is to recommend methods for Delhi to move towards more transparent, consistent, and efficient land tenure and registration systems. The main part of this report focuses on options for title registration; the final part addresses questions relating to tenure in Delhi's informal settlements.

A DELHI LAND TITLE REGISTRY

The need for a new title registration system There is no present system of title registration in Delhi, and, as a consequence, title (ownership), possessory rights (e.g. leases) and other property rights are not readily verifiable. Although there are some inchoate records of publicly-owned land, there are no central records of land in private ownership, including land recently transferred from leasehold to freehold.

The consequences of the present situation are that:

- Because of the difficulty of proving title, buyers and mortgagors face a small risk that the title to a property may be imperfect or fraudulent; there is a risk to banks and housing finance companies that they may be unable to foreclose a mortgage, or that the property has been used to secure a prior mortgage.
- As many households are unable to prove legitimate ownership, they do not have access to mortgage finance; banks and finance companies are deprived of a significant part of their potential market.
- The property market is inefficient.
- The absence of a verifiable property titling and record system has led to excessive litigation.
- Stamp and Transfer Duties are probably collected on only a minority of transactions.
- There are missed opportunities for 'joined-up' urban management.
- Collections of property tax are sub-optimal.

As a result, the economic growth of Delhi is significantly lower than it might otherwise be.

Change is needed soon: the time to plan for the future is when the current operations are reasonably satisfactory, not when the limits of those operations have been reached, and the pressures for change become more urgent. If the present system of property registration were to be continued without reform, it is reasonable to predict increasing land disputes and frauds; increasing marginalization of the 60 percent of households with no good title to their property; below-trend levels of investment in commerce and industry; little redevelopment of uneconomic areas of housing; and a lower quality of urban management than could otherwise be the case.

The principal objective of implementing a new land title registration system would be to provide certainty of title to land in Delhi, in order to facilitate property transactions, encourage investment and improvement, reduce disputes and uncertainty over the ownership of land, and increase access by the under-served part of the population, though credit, to the wider economy of the city.

The present system of deed registration would be replaced with a system of title registration such as has been adopted by many common law jurisdictions around the world. This would be

achieved by the establishment of a central registry of property, rights and charges. The aim would be to have one of the world's most efficient and effective systems of land registration, as well as to demonstrate the way forward to other States and jurisdictions in India.

The intent would be to create a land registration, mapping and information system that will primarily:

- provide a complete and transparent record of title and other interests in land and immovable property
- establish the legality of title or other interests
- provide constructive notice to third parties of title and other interests
- help avoid conflicts and property disputes
- be self-proving, providing a presumption of accuracy and indemnification for errors
- protect subsequent owners through a complete and transparent chain of title;

and, secondarily, will also:

- collate data about real estate markets
- provide data to help government determine rational land use policies
- allow the rational management of property assets held by public agencies in Delhi
- support the property tax system.

The Land Register would record the attributes of the land parcel; land ownership and possessory rights; non-possessory rights (easements and covenants); mortgages and other charges; and interests in apartments. The price paid at the time of transfer would also be recorded, in the Land Register or in the parallel Cadastral Register. **The present Deed Registry** would be systematically phased out as a registry of property transactions, continuing to exist only as a repository of deeds of property without registered title.

The Governing Law Although it would be desirable to draft and pass a new law to create a land title registration system in Delhi, we believe that the Punjab Land Revenue Act, 1887 ("the PLR Act") can be utilized for this purpose. When adopted for Delhi by the Legislative Assembly, this latter Act would authorize the Financial Commissioner of the Delhi Government to declare as Estates areas which are to be included in the title registry; and then to issue a notification that records-of-rights be made for these areas. The Act allows the definition of records of rights consistent with the specifications of a contemporary land registry.

It would be necessary to amend the PLR Act – in order to comply with the specifications of a land registry as conferring guaranteed legal title – to the effect that if the requirement of registration is not complied with, the transfer, etc becomes void.

Use of the PLR Act should only be viewed as an interim measure – albeit a measure that is probably sufficiently robust to survive several years – until such time as a purpose-drafted Indian (or Delhi) Land Title Registration Act can be drafted and passed.

The Apartments Act Unless and until the Delhi Apartments Ownership Bill is enacted (and modified, if necessary), it will not be feasible to define the rights of individual apartment owners in a title registry. Passage of this legislation is an essential prerequisite for the establishment of a title register.

Land Information System We recommend that the land cadastre (the record of boundaries) be designed and used as the main data base for property taxation. Other data that may appear

in a cadastre include: geometric coordinates, property addresses, land use, property information, tenure, details of construction of buildings and apartments, population. These data can and should be used to support land use planning and management (including development control, and planning for redevelopment), planning for and management of public utilities and services; transport planning; emergency planning and management; and for demographic and other statistical analysis. It can be used to monitor land markets (an important potential source of revenue). The system should be designed in conjunction with potential users in the public, private and academic sectors.

The Institutional Home We recommend that the functional aspects of administering the new services should be the responsibility of the Delhi Government, logically either reporting directly to the Chief Minister, or to any of three existing Departments: Urban Development; Development, Revenue, (etc); or Land & Building. Although there are international precedents for maintaining separate departments of land survey, mapping and cadastre, and land information services, we strongly recommend that these be brought under the responsibility of a single department. The report describes alternative institutional structures, for example with specialist divisions of Legal Services, Business and Financial Services, Title Registration, and IT and Services Development.

The Name In other States of India, a *Survey, Settlements and Land Records Department* prepares and maintains mapping records and property cards (where these exist); a *Revenue Department* prepares and maintains the Records of Rights (generally applicable primarily to agricultural lands); and a *Department of Registration and Stamps* maintains records of land transactions. We use "Department of Lands and Survey" as a generic name of the agency for Delhi.

Indemnity Fund We recommend that properties registered under the new system should be given a government guarantee of good title. It will then be necessary to establish an indemnity or assurance fund to stand behind any claims against errors or omissions. Such a fund will eventually be self-financing, based on a small levy on registration fees.

Access to Information All information contained on Delhi's land register, with the exception of personal identifiers, should be made available to any enquirer, in person and on-line.

Delhi Land Cadastre In order to establish the precise boundaries of each parcel of land in Delhi, it will be of central importance to undertake a (new) cadastral survey. This will form the basis of a cadastre, comprising a series of maps showing the size and location of all land parcels, together with text describing the attributes of the land. The Financial Commissioner would have authority to determine the rules for cadastral mapping. However, no such rules have been determined for cadastral surveys in urban areas of India since 1917, and it will be highly desirable for the Delhi Government (the City Survey and Mapping Centre) to take the lead in establishing a set of regulations appropriate for the twenty-first century.

The Plot Identifier In Delhi, the main plot identifier would probably most easily be based on geographical coordinates to be allocated by NSRA. It is important that the plot address be compatible with the address used in the property tax register if the property taxation system is to be efficient and maintain public support. All land should be allocated an identifier, including public and other Government lands, in order to support good public asset management.

First Registration The process of First Registration authoritatively determines rights in land, identifying owners, the rights associated with the land, and the boundaries of each parcel. This is usually conducted by government officials, perhaps in conjunction with private surveyors, going area-by-area, gathering evidence from existing written records supplemented as necessary by evidence from local officials and landowners.

There are, however, several categories of land which are not presently recognized as having good registered title (notably properties that have changed hands using Power of Attorney, but also including some properties that have changed ownership through inheritance) but which could be eligible for registration. It will be necessary for the Delhi Department of Lands and Survey to draw up comprehensive guidelines on how each of these categories should be included within the process of First Registration.

The registration process should be systematic and compulsory, mapping and registering specific geographic locations or types of settlement in order of priority. Based on proposals that have been made to the team by practitioners in Delhi, we recommend that registers be prepared according to the following order of priority:

- 1) All land in New Delhi
- 2) All other lands allocated, subdivided or regularized after the Notified Date (e.g. the date on which title registration starts)
- 3) Other land and properties (still) held by public authorities: L&DO, DDA, MCD, and other public agencies
- 4) Freehold properties sold by L&DO, DDA and other authorities
- 5) Colonies that were developed pre-1961, with layout plans prepared by MCD
- 6) Colonies that were regularized before the Notified Date
- 7) Urban Villages
- 8) All other urban land considered to be occupied legally (including the Walled City; unauthorized colonies).

Timeframe Introduction of the new system in Delhi and its extension to all parts of the city (except illegal squatter settlements) is likely to take at least a decade.

Private Sector Participation The private sector should be engaged in several aspects of planning and implementation, including involvement in design of the land information system, the survey process, design and management of the IT systems, and specification of components of the land information system. Most other aspects will remain the responsibility of the public sector.

Technologies It is likely that it will be necessary to procure the services of an IT agency, perhaps including the National Informatics Centre, to design (and perhaps also to help specify the design of) a new IT system.

Financing The total capital cost is unlikely to be much less than Rs. 20 crores. Although some of the cost of design and installation of the computer systems may be borne by private companies, most other capital costs will need to be met from public sources, potentially including the JNNURM. We draw attention to the possible willingness of the World Bank and other international agencies to finance and assist land registration projects.

Recurrent Costs It is not likely that the full cost of first registration can be recovered from charges; public investment would be justified by overall economic benefits from improved registration. However, relatively low operational costs can allow land registries to become self-financing after the start-up period, even with modest fees.

Procedures We recommend that the Office of the Chief Minister of the Delhi Government should establish a Steering Committee with the responsibility of drafting a Strategic Plan. The Steering Committee will need to be assisted by a full-time secretariat. Its principal tasks will be:

- To reach a consensus on the principles and broad functional specifications of the new system;
- To create agreement that the Delhi Government is the appropriate authority to take the lead in creating and managing the land title registry and land cadastre;
- To determine in consultation with legal authorities that the Punjab Land Revenue Act, 1887 is applicable to these circumstances, at least for an interim period;
- To determine which Department should take responsibility for the new administrative arrangements;
- To help develop a consensus and mechanisms to enact the Delhi Apartments Ownership Bill;
- To liaise with external bodies.

The Steering Committee should set up a series of working groups: on legal issues; on first Registration procedures; on cadastre and mapping; on the land information system; and finance and administration.

The expertise of land specialists, lawyers, planners, etc, will clearly be needed. We would also urge the appointment by the Delhi Government of an urban economist with a wide-ranging brief, perhaps to provide cross-departmental advice on issues of land policy.

IMPROVEMENT OF TENURE IN INFORMAL SETTLEMENTS

We were also required to examine the tenure of Delhi's informal settlements. We have defined Delhi's informal settlements as having been built outside administrative procedures, classified into four broad groups: Squatters / JJ Clusters (about 3 million people); Resettlement and Relocation Colonies (about 1.8 million people); Unauthorized Colonies (about 3.5 million people); and Rural and Urban Villages (about 1.6 million people). It is taken to be a long-term objective to provide security of tenure to every legal resident of Delhi. Security of tenure, however, is not the same as freehold title to land.

Issuance of titles is expensive, and is not a panacea for poor populations. Titles, however, are undeniably beneficial for middle-income households who are otherwise able and willing to access the credit market for mortgage loans. We therefore recommend early titling for the Unauthorized Colonies, but for the introduction of certain intermediate tenure systems for other settlement types.

Informal Settlement Development Authority In order to coordinate the planning, monitoring and management of informal settlements in Delhi, an *Informal Settlement Development Authority* should be established.

Survey of JJ Clusters It is not possible to plan for the future of JJ Clusters unless and until there is better information on the scale, location and characteristics of these settlements. The Informal Settlements Development Authority should be required to carry out a comprehensive survey as a matter of high priority. It should conduct a "screening and selection exercise" to rank areas that qualify for tenure improvement programs.

Land Pooling Land pooling is a strategy under which the land already occupied by an illegal settlement is "shared" between the community and the landowner; we recommend that it is probably appropriate for redevelopment of some of the JJ Clusters in Delhi. Adoption of this policy would require the formation of a dedicated design and implementation team within the Informal Settlements Development Authority.

Temporary Tenure for JJ Clusters There are probably settlements to which temporary tenure could be granted without prejudice to the public good. There are several such ways in which squatters may be given temporary tenure, short of permanent tenure, including granting of No Objection Certificates or "Possession Certificates".

In-Situ Upgrading The principles of in-situ upgradation should be applied to all of those squatter settlements that meet the screening and selection process.

Upgrading Tenure in Upgraded Colonies We recommend the renewal of licenses in upgraded colonies for a nominal charge, preferably for periods longer than the present ten years.

Resettlement and Relocation Colonies Recognizing a Court ruling that requires that resettled squatters be given land on license "with no right in the licensee to transfer or part with possession of the land in question", we nevertheless urge that a debate on the future of the Resettlement and Relocation Colonies be included in the mandate of the proposed Informal Settlements Development Agency, with a view to enhancing the security of tenure of their residents.

Priority for Regularization of Unauthorized Colonies We broadly concur with the principles set out in the report to the Nanavati Commission for a methodology for regularization of unauthorized colonies. We recommend that regularized colonies should be among the first areas to be offered title registration; for ease of administration and to provide a good demonstration effect, it would probably be appropriate to start with the richer and less densely-settled colonies such as Sainik Farms, Anantram Dairy and Mahendru Enclave.

Urban Villages We recommend that the urban villages be included in the process of First Registration for the purpose of granting secure, registered title to property holders.

WATER AND ELECTRICITY SUPPLY TO INFORMAL SETTLEMENTS

The study was asked to consider the extent to which the supply of water and electricity to informal settlements in Delhi has been constrained by the nature of their tenure. Most informal settlements are poorly served with electricity and water, although there is no legal reason for the utility companies to withhold service. The utility companies are reluctant to invest in informal settlements for a number of reasons, including the following:

- They are unable to calculate future financial returns when the remaining tenure of the settlement is unknown;
- Their officials are unaccustomed to dealing with 'marginal' communities, and with the informal organizations that operate there;
- There is a mistaken perception that poor people are unable and/or unwilling to pay for services; and
- There is a mistaken perception that there is 'not enough water to go round'.

Recommendations for Service Delivery to Informal Settlements A generic four-step process is recommended to develop successful and sustainable delivery of electricity, water, and/or sanitation services to residents of informal settlements:

- *Step One – Screening.* Determine which settlements are suitable to receive which type of services.
- *Step Two – Services Definition.* Once settlements are selected, the level of services should be determined through discussions between the utilities and community-based organizations, with oversight from regulatory agencies.
- *Step Three – Risk Mitigation.* Develop a package that establishes temporary tenure rights to informal settlement residents to provide the utility with an assurance that the period of tenure is adequate to permit them to generate sufficient revenue to justify extension of service.
- *Step Four – Implementation.* Physically perform the connections; remove illegal connections and, as a culture of payment becomes the norm in a settlement, the utility can begin upgrading its most trustworthy customers to individual connections, with the goal of scaling up the individual meters to the entire settlement.

The Informal Settlement Development Authority should work with utility service providers and engage them from a commercial perspective to plan for the delivery of services to informal settlements; develop and implement a program rationale to grant temporary tenure to select squatter settlements and confirm the temporary tenure of other settlements, and involve community groups to interface with selected settlements on key implementation issues.

The Delhi Government should interact with the Delhi Electricity Regulatory Commission to review the Tariff Orders with a view to providing guidelines for electricity service to informal settlements. It should also establish an equivalent independent authority for water regulation, with the primary role of seeking value for customers across all settlements of the city.

The electricity distribution companies and Delhi Jal Board should:

- Understand where losses occur in the system; data is important to convince senior management.
- Address service to slums and informal settlements as part of a holistic program to improve customer service process.
- Get utility buy-in at Board level.
- Set up special units within the utility to coordinate delivery to informal settlements.
- Communicate with stakeholders – before, during and after improvements.

1 INTRODUCTION

1.1 The Purpose and Structure of the Study

This is the final report on a study of the system of land tenure and land title in urban Delhi. The study is based on an enquiry into present circumstances and alternative courses of action; its purpose is to recommend methods for Delhi to move towards more transparent, consistent, and efficient land tenure and land registration systems.

The study covers virtually all systems of land ownership in the city, excepting only agricultural land, and land in the (military) cantonment. It addresses land occupied by squatters, through to land in the planned, formal settlements. It deals most prominently with residential land, but in so doing covers issues that equally affect commercial and industrial land. It focuses primarily on how land systems impact society and the economy, including through the formal credit system, as well as investigating in some detail how present tenure systems impact people's ability to access water and electricity.

The study has been undertaken by the Urban Institute, of Washington, DC, in association with ICMA (South Asia), and was funded by USAID. It was in three parts. The first part defined the problem; the second identified best practices for the solution of similar problems elsewhere. This, the final part presents recommendations for the introduction of a new title registration system, and for changes to practices in the administration of tenure.

The first volume (*Land as Security: Tenure and Title Issues in Delhi*; September 2006) documented the systems that currently exist for land tenure and land title registration in Delhi. To the best of our knowledge, this was the first time that such a study has been undertaken systematically for Delhi. We attempted to explain how the present systems operate, and what their main shortcomings are. This stage of the study was completed with a workshop, in August 2006, at which the main, draft findings were reviewed with a peer group of Delhi's land professionals.

Based on discussions at the workshop and with government officials and practitioners, as well as with USAID, the team decided that the principal focus of attention of the study should be on questions of land title registration, although continuing to examine issues of tenure improvement, and of service provision related to insecurity of tenure.

The second volume (*New Approaches to Land Titling and Registration in Delhi*; December 2006) took the Phase One report and the associated workshop as a starting point, investigating responses in other places to those aspects of the present situation that our interlocutors found to be both in need of improvement in Delhi and with the potential for change. The findings of this stage of the study were presented to a second workshop, in November 2006, at which the findings were debated.

These two reports, and the reports of the two workshops, have been submitted separately, and are available on request.

This phase of the study consolidates the conclusions of the team and the workshop participants, by making concrete and specific recommendations for change.

1.2 The Study Team

The study team comprises the following individuals:

Michael Lee	Urban land policy, task manager
B.N.Banerjee (Fox Mandal Little, Solicitors and Advocates)	Real estate advocate
Amitava Basu (Intercontinental Consultants and Technocrats Pvt. Ltd)	Utilities specialist (Delhi)
Amit Dalal (PA Consulting Group)	Utilities specialist (International best practice)
Debolina Kundu	Urban development consultant (Delhi)
Meghna Malhotra (ICMA South Asia)	Coordinator, India case studies
Carol Rabenhorst (Urban Institute)	Real estate lawyer (International best practice)
Anjali Vohra (Khaitan, Jayakar Sud and Vohra)	Real estate advocate (Delhi)
Sudhir Vohra	Consultant

Ritu Nayyar-Stone is the Urban Institute's Project Manager for USAID's India Urban Initiatives Project, of which this study is a component part. Manvita Baradi is the Director of ICMA South Asia.

1.3 Structure of the Report

The team has attempted to keep this report succinct and brief in order that its findings can be readily absorbed. Accompanying reports have provided additional detail and cross-references, from which more information may be obtained on specific areas of interest.

Following this introduction, Section 2 summarizes the findings of the previous stages of the study with respect to land registration, and thereby provides the arguments for change, in particular for moving from the present inchoate system of deed registration to a comprehensive system of land title registration.

The following sections describe how this may be achieved. Section 3 sets out the long-term vision for a new system of land titling for Delhi. Section 4 discusses the legal framework, and presents the team's view that a new system can be introduced by amending existing laws rather than by the introduction of new laws. Since a title registration system needs to relate to a comprehensive land survey – which has never been carried out in Delhi in recent years – Section 5 describes the steps needed to conduct a new survey. Although there are good international precedents for the introduction of a paper-based title registration system, the team recommends that a new system for Delhi should be computer-based: Section 6 describes the available technologies. Section 7 investigates possible institutional arrangements, with the team's conclusion that a new department should be established by the Government of the National Capital Territory of Delhi (described hereafter as the Delhi Government), and the involvement of the private sector in the introduction and maintenance of the system. Sections 8 and 9 briefly discuss the cost and timing of introduction of a new system. Although the team has not been able to estimate the cost of introduction of the system, international experience is that costs are likely to be substantial. Likewise, the team recommends that the new system should be introduced incrementally, and suggests how this may best be done, with the title registration system co-existing with the deed registration system for a period of perhaps a

decade or more before title registration is made compulsory. Section 10 summarizes the main stages needed to attain this objective of a new a land registration, mapping and information system for Delhi.

Section 11 discusses issues relating to tenure in Delhi's informal settlements, which have defined to include squatter settlements (JJ Clusters), Resettlement and Relocation Colonies, Unauthorized Colonies, and Urban and Rural Villages, together comprising about three-fifths of the population of the city. The section reprises the findings of the first two stages of the study, and makes some recommendations for short-term actions to ameliorate the tenure situation (as well as explaining why the team is not recommending more radical action for widespread changes of tenure).

Section 12 discusses the provision of electricity and water services to informal settlements: a summary of the findings of the previous two reports, with added specific recommendations for practical actions that could simultaneously improve people's welfare and health, and the finances of the water and electricity distribution companies.

The report concludes with a comprehensive bibliography of all works used during the course of the study, and a list of the people with whom we have consulted and who have helped us with information and analysis. We should, however, like to re-state that the opinions and recommendations contained in this report are those of the authors, and are not necessarily shared by any – and certainly not by all – of the authorities listed.

2 THE NEED FOR A NEW TITLE REGISTRATION SYSTEM

2.1 The Present System of Property Registration

There is no system of title registration in Delhi, and, as a consequence, title (ownership), possessory rights (e.g. leases), easements, etc are not readily verifiable.¹ There is no central registry of land in Delhi. Agricultural holdings are recorded, but urbanized land is not subject to any central registration system. In general, records of land held by governmental agencies are maintained by each individual agency, although even these records are not cross-referenced to any systematic cadastral survey. There are no central records of land in private ownership, including land recently transferred from leasehold to freehold.

Delhi does have a long-standing system of *deed* registration. In accordance with the Registration Act, 1908, the Delhi Government's Registrar of Assurances is required to register most types of property transactions, although there are some exceptions. One important exemption is that changes of ownership through simple inheritance, and equitable mortgages (see footnote 8, below), need not be registered. The team believes that the majority of property transactions in Delhi's planned colonies are properly recorded. However, the widespread use of Powers of Attorney and of unregistered Agreements to Sell – encouraged by the perceived high level of Stamp Duty on property transactions – has led many people to avoid use of the formal system of registration especially, but not exclusively, in unplanned Delhi.

Registration of a deed or transaction gives no assurance to a purchaser of valid title to the property; it only acts as a general statement that a particular document has been executed. It gives no certainty of title.

In addition, because the deed records are filed in written form and by date of registration, it has become virtually impossible to trace the chain of ownership through a (manual) search of the records. The process of registration of *new* deeds is now computerized, but there are no known plans to extend computerization to the *old* records.

2.2 The Consequences

The consequences of this situation are that:

- Because of the difficulty of proving title by chain of ownership, buyers and mortgagors face a small risk that the title to a property may be imperfect or fraudulent; there is a financial risk for banks and housing finance companies that they may be unable to foreclose a mortgage, or that the property has been used to secure a prior mortgage.
- As many households – most notably, residents of unauthorized colonies – are unable to prove legitimate ownership, they do not have access to mortgage finance; conversely, banks and finance companies are deprived of a significant part of their potential market.
- The property market is inefficient and the volume of secondary transactions is constrained, adversely affecting prices.
- The absence of a verifiable property titling and record system has led to excessive litigation about property ownership and boundaries.

¹ Some people reportedly believe that payment of property tax and associated receipts confer some proof of ownership: this is, however, decidedly not the case.

- Stamp and Transfer Duties are probably collected on only a minority of transactions; experts believe that total revenues from these duties would increase if their level were lowered.²
- There are missed opportunities for 'joined-up' urban management – for example, whereby city planners and managers have access to a land information system.
- Although property tax is collected by the municipal bodies, if they were to have access to a central register of properties, their ability to identify properties that are not presently included in the property tax registers would be enhanced: their taxation ability would be made much more efficient and equitable if they had access to an up-to-date property register.

As a result, the economic growth of Delhi is measurably lower than it might otherwise be: estimates are of an annual GDP reduction of at least 1 percent.³

2.3 The Need for Change

It was argued in the team's December report⁴, and in the August workshop, that a number of reforms are needed, including:

- An efficient, new, system for property registration (new technology and new laws / regulations) to clarify and authenticate citizens' property rights
- Improved security of title to allow banks and housing finance companies to function properly and with confidence
- Stamp duty reform
- Clear definition of title in subdivided properties; systematic documentation of titles in regularized colonies
- The *Delhi Apartments Ownership Act* to be amended and implemented
- Improved coordination between governments and government departments.

The arguments for change are strong. It may be less clear why change is needed now. The time to plan for the future is when the current operations are reasonably satisfactory, not when the limits of those operations have been reached and the pressures for change become more urgent.⁵ For example, if the present system of property registration were to be continued without reform, it is reasonable to predict increasing land disputes and frauds, increasing marginalization of the 60 percent or more of households with no good title to their property, below-trend levels of investment in commerce and industry, little redevelopment of uneconomic areas of housing, and a lower quality of urban management than would otherwise be the case.

In addition:

- The recent upsurge in the number of conversions of properties from leasehold to freehold needs the introduction of transparent procedures for registration of ownership before further transfers are effected.

² See, for example, Alm, James, Patricia Annez, and Arbind Modi. "Stamp Duties in Indian States: A Case for Reform". World Bank Policy Research Working Paper 3413, September 2004

³ See, for example, the McKinsey Company Report *India: The Growth Initiative* (2001). The Planning Commission has estimated that removal of constraints on land management – including those investigated in this report – would add 1.25 to 1.4 percentage points to the national growth rate.

⁴ Urban Institute. "New Approaches to Land Titling and Tenure in Delhi". Report prepared for USAID/India, December 2006.

⁵ This argument is based on a statement in Hong Kong's *Strategic Change Plan*.

- Technology has changed, so that it is now much easier (and cheaper) to introduce appropriate technology than it was even a few years ago. Developments in other States in India have demonstrated the sort of technologies that could be adopted by Delhi.
- It is part of the Delhi Government's Citizen Charter (Administrative Reforms Department) to provide improved customer services to residents. A modern title registration system will provide a service to all property owners in Delhi that was previously lacking, in a cost-effective and user-friendly manner.
- The initiation of a title registry will signal to investors that Delhi is a World City, with a confident economy based on stable land rights, relieved from much of the burden of uncertainty of title that previously encumbered it.

3 THE LONG-RANGE OBJECTIVE

3.1 A Delhi Land Title Registry

3.1.1 *The objectives*

The following statement of intent is recommended as appropriate for adoption by the Delhi Government.

The principal objective is to provide certainty of title to land in Delhi, in order to facilitate property transactions, to encourage investment and improvement, to reduce disputes and uncertainty over the ownership of land, and to increase access by the under-served part of the population both to credit and to participation in the wider economy of the city.

The present system of deed registration will be replaced with a system of title registration such as has been adopted by many common law jurisdictions around the world. This will be achieved by the establishment of a central registry of property, rights and charges. The aim is to have one of the world's most efficient and effective systems of land registration, as well as to demonstrate the way forward to other States and jurisdictions in India.⁶

The intent would be to create a land registration, mapping and information system that will primarily:

- *provide a complete and transparent record of title and other interests in land and immovable property*
- *establish the legality of title or other interests*
- *provide constructive notice to third parties of title and other interests*
- *help avoid conflicts and property disputes*
- *be self-proving, providing a presumption of accuracy and indemnification for errors*
- *protect subsequent owners through a complete and transparent chain of title;*

and, secondarily, will also:

- *collate data about real estate markets*
- *provide data to help government determine rational land use policies*
- *facilitate the rational management of property assets held by public agencies in Delhi*
- *support the property tax system.*

3.1.2 *The alternative*

An alternative approach – not recommended for adoption here – would be to improve the functioning of the present system of deed registration under the Registration Act, 1908 in order to allow users better access to the data base and to bring more properties into the system. This could be achieved, for example, by computerizing all the existing records (dating back to 1908) and linking them through a chain of title; by enforcement of regulations relating to Powers of Attorney; and by extension of the requirement to register other types of transaction (e.g. mortgages, transactions in the Urban Villages, etc). This exercise, however, would only marginally increase the certainty of title (there would be considerable opportunity for error),

⁶ Land is taken to include all permanent buildings and construction erected upon it.

could not form the basis for any form of guarantee, would be relatively difficult and expensive (especially interpreting and linking the chains of older documents), and would likely increase the incidence of litigation.

3.1.3 *What is to be recorded on the Land Register?*

- A description of the attributes of the land parcel: a precise reference to the Land Cadastre – title number, location, etc (Section 3.2, below)
- Land ownership and possessory rights – e.g. the name of the owner(s) of the land, the capacity in which the owner holds the land, particulars of leases, etc. (Leases may or may not be registered; in the circumstances of Delhi and to conform to present practice, we recommend that leases with a term of 1 year or more should be subject to registration.⁷)
- Non-possessory rights (easements and covenants)
- Mortgages and other charges. It is usual that title registration includes the details of *all* legal transactions affecting the parcel, including sales and mortgages. Equitable Mortgages (mortgage by deposit of title deeds) are presently exempt from registration by the Registrar of Assurances under the Registration Act 1908.⁸ We recommend, however, that – in order to protect lenders – *all* such transactions should be included in the title register. We believe that this can be achieved by administrative order (see Section 4.1 below); this is neither prohibited by the Registration Act, nor is it contrary to the spirit of that Act.
- Interests in apartments (see Section 4.2 below). We do not recommend that the register should include a register of buildings *per se* (as there is, for example, in Norway). However, since there may be different ownership interests in a built property (e.g. a condominium built on leased land), it would be appropriate for the title registry to reflect these *legal* interests.

It is common – although not universal – for a Land Register also to record the price paid at the time of transfer. Although we would recommend that this ultimately be included in Delhi's Land Register, this item of data is not specified in the governing Act (Section 4.1 below). We therefore recommend, instead, that details of the land price be included in the parallel Cadastral Register – Section 3.2, below.

An example of data held by a modern land registry – information included in the Land Registry of England and Wales – can be seen at

http://www.landregisteronline.gov.uk/lro/resources/example_register.pdf.

Registry of titles can be mandatory (e.g. Singapore) or optional (e.g. Ireland, where a deed registration system operates side-by-side with a title registry); or the system can allow a

⁷ The international norm is about three years, although there are variations. The Registration Act requires compulsory registration of all leases of immovable property from year to year, or for a term exceeding one year.

⁸ Equitable mortgages are defined and authorized under the Transfer of Property Act, 1882, as follows (Section 58[f]): "Where a person in any of the following towns, namely, the towns of Calcutta, Madras, and Bombay, and in any other town which the [State Government concerned] may, by notification in the Official Gazette, specify in this behalf, delivers to a creditor or his agent documents of title to immoveable property, with intent to create a security thereon, the transaction is called a mortgage by deposit of title-deeds."

transition from a dual system to a mandatory system over a specified period (e.g. Hong Kong).⁹ Alternatively – as in England and Wales – registration can be compulsory on new sales of land, but optional on land that has not been sold.

The team recommends that registration of titles under the new system be compulsory, but that the introduction of the new registry should be undertaken systematically, area by area, over a period of a number of years. Please see Section 8.2 for more detail.

Ultimately – when the whole of Delhi is covered by the new Title Registry – the existing Deed Registry (as operated by the Registrar of Assurances) would be redundant. It would be unnecessary (and confusing) to have both operating simultaneously for identical parcels of land. In the interim period, however – which we expect would last for many years – deeds pertaining to areas not yet notified for inclusion in the Title Registry would continue to be registered in the Deed Registry. The Deed Registry would therefore be systematically phased out as a registry of property transactions, continuing to exist only as a repository of deeds of property without registered title – see Section 3.1.4 below.

3.1.4 *The legal basis for a Title Registry*

As explained in Section 4 below, we believe that the authority of the Punjab Land Revenue Act, 1887 (“the PLR Act”), is sufficient to allow the establishment of a land titling system for Delhi, without the need for the passage of any major new legislation, but with some relatively minor amendment – see below. It may be necessary for the Delhi Legislative Assembly to adopt the relevant provisions of the Act, but this would be a relatively simple procedure. This interpretation is supported by independent observers, but will need to be confirmed by a formal opinion of the Attorney General.

In order to ensure that transfer occurs *only* with registration (an essential feature of a land registration system), it would be necessary for the PLR Act to be amended to the effect that if the requirement of registration is not complied with, the transfer, etc, of the relevant property would become void.

It will also be essential to finalize the revision of, and enact, a new Delhi Apartments Ownership Bill (see Section 4.2 below).

Other legislative changes will be required, including, at a later stage, measures to permit the establishment of an indemnity fund (which would guarantee that registration under the PLR Act would constitute a valid title), revocation of the Registration Act, 1908, for those areas subsumed under the PLR Act, as well as the passage of detailed regulations for implementation of the PLR Act.

We would recommend, in due course, the drafting and passage of a completely new Land Titles (Delhi) Act or, perhaps, a national Act that can be adopted by individual States as required. This would incorporate all necessary provisions of a contemporary land title registration act that would otherwise require passage of a multitude of amendments to and regulations for the PLR Act.

⁹ Ireland is moving incrementally toward a mandatory registration system. At present, three out of the 32 counties have mandatory registration. During 2007, three more counties will be added.

3.1.5 *The institutional structure*

Section 7 of this report recommends that the appropriate institutional home for the new land registry would be the Delhi Government. Consistent with our belief that a land registry could be established virtually immediately, under the Punjab Land Revenue Act, 1887, the administrative structure would necessarily also follow the requirements of that Act, and the responsible office would be the Financial Commissioner (or his designee). We recommend, however, that the Delhi Government establish a new Department of Lands and Survey, with responsibility for administration of both the land registry and the land cadastre and, possibly, also of the land information system. (In order to avoid duplication, it would be desirable if the cadastral agency and the land information system be accommodated within the same agency, rather than being split between different government authorities.)

Although the new Department would properly remain in the public sector, we believe that – consistent with recently-developed models elsewhere – it should be run on business lines, with a long-term financial model. This report makes recommendations for involvement of the private sector in appropriate areas of design and management and utilization of the new systems.

3.1.6 *Computerization*

Most land registers throughout the world are computerized, although there are several national or regional administrations that have chosen to retain a manual system, including Thailand. Given the present state of technology, India's pre-eminent expertise in information technology, and recent relevant experience in other States, we believe it is obvious that Delhi's land registry and land cadastre should be fully computerized from the start. Section 6 discusses appropriate technologies.

3.1.7 *Guarantee of authenticity*

It is common, although not universal practice, that registration of title by a government body comprises a guarantee of authenticity of the title: entries in the register are taken as prima facie evidence of the actual legal status of the land. Alternative systems in less common use are private title insurance schemes, usually used in conjunction with registers of *deeds*; we do not see the potential for such in Delhi.

We recommend that, in order to encourage public confidence in the new system, legislation be introduced to allow for guarantee of title. Please see Section 9.3 for more detail.

3.1.8 *Access to information*

One of the principles of modern land registration is that once title or other interests are registered, all persons are deemed to have constructive notice of the facts in the record. This is essential to prevent fraud, to protect the interests of holders of rights in the property against other parties, and to allow property owners to freely exercise their rights. While it is property owners who are concerned about lack of confidentiality, it is they who benefit most from a public system. Another beneficiary is the mortgage lender, who must have assurance that the property has not been used to secure other debts.

An increasing proportion of land registries around the world permit access to all information they contain, with the exception of personal identifiers. Access to registered information is available, often online, for a fee.

We believe it is consistent with the principles of India's Right to Information Act, 2005, with the Delhi Right to Information Act, 2001, and with the present practice of e-governance in Delhi,

that all information contained on Delhi's land register, with the exception of personal identification, should be made available to any enquirer, in person and on-line.

3.1.9 The cost

We have not estimated the capital cost of establishing the system, since there are no sufficiently close parallels elsewhere in India or outside that would allow us to make a reliable estimate. Including the costs of the cadastre – see below – the total cost is, however, unlikely to be much less than Rs. 20 crores.¹⁰ Although a portion of this will be recovered from charges for initial registration, much would have to be met from public funds.

It should, however, be possible for the recurrent costs of the scheme to be financed exclusively from user charges.

3.2 Delhi Land Cadastre

In order to establish the precise boundaries of each parcel of land in Delhi, it will be of central importance to undertake a cadastral survey. This will form the basis of a cadastre, comprising a series of maps showing the size and location of all land parcels, together with text describing the attributes of the land. The land cadastre shows the geometric characteristics of a property, thus serving to precisely locate each individual parcel of land.

Since the main purpose of a cadastre is to support title registration (as well as property valuation and land resource management), we recommend that it be commissioned by the same agency that is responsible for the Land Registry, consistent with the requirements of the Punjab Land Revenue Act, 1887.

The geodetic network will need to be established by a national agency (Survey of India; NRSA), although lower-level mapping can be undertaken by licensed private surveyors.

An example of a title plan from the Land Registry of England and Wales can be seen at http://www.landregisteronline.gov.uk/lro/resources/example_title_plan.pdf.

The land cadastre is discussed further in Section 5.

3.3 A Land Information and Regulatory System

Data that may appear in a cadastre include: geometric coordinates, property addresses, land use, property information, tenure, details of construction of buildings and apartments; population.

In addition to guaranteeing ownership and security of tenure, and thereby assuring better access to credit, information contained in the land registry and cadastre can be used for purposes of estimating and collecting property taxes. We recommend that the cadastre be designed and used as the main data base for property taxation by Delhi's Municipalities.

The same data may be used to support land use planning and management (including development control, and planning for redevelopment), planning for and management of public utilities and services; transport planning; emergency planning and management; and for

¹⁰ Based on a back-of-envelope estimate of a minimum cost of Rs.400 per parcel, and a likely minimum of 5 million parcels.

demographic and other statistical analysis. It can be used to monitor land markets (an important potential source of revenue), for property assessment and valuation.

Importantly, the data can also assist public agencies to manage their property assets and ensure their efficient use. We suspect that these are not always managed optimally at present, and therefore recommend that the data base be specifically designed to accommodate this objective.

Customers of a well-developed land information system could include most government departments (Departments of the Delhi Government, MCD, NDMC and DDA) as well as banks and housing finance companies, real estate developers, economists, insurance specialists, lawyers and notaries, valuers and others.

The team recommends that the department responsible for the registry and cadastre give careful and extensive consideration to the potential uses of additional data, the costs of collecting these additional data (and the revenue that might be gained) before determining what information should be added to the data bases. This process of determination must involve liaison between many different user agencies (including police and fire services; utility companies; and representatives of associations representing, for example, valuers, planners, bankers, etc); it will be time-consuming. It should be noted, however, that experience elsewhere suggests it is common to collect more information than is actually used, with the result that the land information system may not be cost-effective if data are added simply because they might prove useful at a later stage.

We also strongly recommend that the title register and cadastre should be made compatible with the property tax register (or vice versa), using the same data base and relying on an identical or compatible referencing system. (Section 5.4 below discusses the property identifier.)

4 THE LEGAL FRAMEWORK

4.1 The Governing Law

The following interpretation has been suggested to the team. We concur with these findings and recommendations.

In an ideal situation, the Government would draft and enact new legislation to define and permit the establishment of a land title registry and cadastre for Delhi. It is, however, likely that this process would take so long that the need would be overtaken by events, and the opportunity for the introduction of a registry perhaps be lost unless some interim measure can be adopted. There is an existing law – the Punjab Land Revenue Act, 1887 (“the PLR Act”) – which, although old and written for the state of Punjab as then-administrator of the present NCT Delhi, we believe can be utilized for the same purpose to enable an immediate start to be made on the administrative construction of a registry. However, at least one significant amendment to the Act would be needed before it can be used to create authoritative titles.

Prior to 1954, the PLR Act prevailed in the municipal area and villages west of the Yamuna. The U.P. Land Revenue Act, 1901 was applicable to the urbanized area and municipal areas in the trans-Yamuna area. In 1954, the Delhi Land Revenue Act was introduced to authorize the maintenance of records of lands in rural Delhi – excluding that is, the municipal area, Government land, and public purpose and public utility land (lands excluded from the Delhi Land Reform Act, 1954) – and simultaneously repealed the provisions of the PLR Act applying to the same areas.

Under the continuing provisions of these Acts, land records are still being maintained and updated for *rural* areas of Delhi.

With some exceptions, there is no such clarity about the keeping and maintenance of land records in most of *urban* Delhi. The DDA, however, does maintain the land records of the original Nazul estates, according to the provisions of the PLR Act. We assume that authority for this derives from a formal resolution of the Delhi Legislative Assembly to continue implementation of the applicable laws under the old (i.e. Punjab State) Administration, and to transfer authority for record-keeping to DDA as the Competent Authority.¹¹ It appears that the Delhi Legislative Assembly has the authority to adopt the PLR Act to urban Delhi, although this would need to be confirmed by qualified authorities.

The key provisions of the PLR Act are as follows.

Section 31(1) requires that Records of Rights be kept for “estates” (including land in the present NCT Delhi area). “Estate” is defined by Section 3(1) as any area:

- “(a) for which a separate record-of-rights has been made; or*
- (b) which has been separately assessed to land revenue, or would have been so assessed if the land-revenue had not been released, compounded for or redeemed; or*
- (c) which the [State Government] may, by general rule or special order, declare to be an estate.”*

¹¹ This statement would need to be verified.

Thus it appears that the term “estate” is used in the PLR Act in an equivalent way that the term “parcel” is used in a modern registration system and could support the introduction of parcel-based registration, which is lacking in the system currently used in urban Delhi.

Section 31(2) of the Act defines Records of Rights as comprising:

- “(a) Statements showing, so far as may be practicable: -*
- (i) the persons who are land-owners, tenants or assignees of land-revenue in the estate or who are entitled to receive any of the rents, profits or produce of the estate or to occupy land therein;*
 - (ii) the nature and extent of the interests of those persons, and the conditions and liabilities attaching thereto;*
 - (iii) the rent, land-revenue, rates, cesses or other payments due from and to each of those persons and to the Government;*
- (b) a statement of customs respecting rights and liabilities in the estate;*
(c) a map of the estate; and
(d) such other documents as the Financial Commissioner may, with the previous sanction of the [State Government] prescribe.”

The documents, etc, described in the Act may – by invoking sub-section (d) (“such other documents” as may be prescribed) – be completely consistent with those typically contained in a Land Title Register, as summarized in Section 3 of this report, above. The Financial Commissioner would prescribe the form and content of the Records of Rights, according to powers given him by Section 46 of the PLR Act.

Section 32 of the Act allows the State Government to require that a Record of Rights be created or revised as necessary for any estate. The start of the process would thus be for the Financial Commissioner to declare, from time to time, geographic areas or neighborhoods which are to be included in the title registry (see Sections 5.2 and 8.2 below); and then to issue a notification requiring that records-of-rights be made for these areas.¹²

There is, however, one major, and critical difference between the provisions of the PLR Act and key elements of a land registry, as follows. Relevant sections of the Act (Sections 34 and 39) state only that

“Any person acquiring, by inheritance, purchase, mortgage, or otherwise, any right in an estate as a land-owner, assignee of land-revenue or tenant having a right of occupancy, shall report his acquisition of the right to the patwari of the estate”, and that this should be done “within three months from the date of his acquisition of a right”...

The key legal element of a title registry, however, is that legal transfer occurs only on registration of the title, not the registration of the transfer documents. It would be necessary,

¹² We note, in passing, that Section 22 of the PLR Act requires that “when a proclamation relating to any land is issued by a Revenue-officer, it shall, in addition to any other mode of publication which may be prescribed in any provisions of this Act, be made by beat of drum or other customary method, and by posting of a copy thereof on a conspicuous place in or near the land to which it relates”.

therefore, for the PLR Act to be amended to the effect that if the requirement of registration is not complied with, the transfer, etc becomes void.¹³

The precedent of the application of the PLR Act to the Nazul estates amply demonstrates that the Act may also be applied to other urban areas of Delhi not covered by the Delhi Land Revenue Act, 1954. This can be done by simple adoption of the relevant provisions by the Delhi Legislative Assembly – a simpler procedure than the passage of a new law – giving powers to the Government of the NCT Delhi to apply the Act to those lands under its administration. (On creation of a new State, the new entity must agree to continue with the old laws, by passing a resolution in the State Assembly.)

Opportunities for further legal amendments to the Act can be taken as and when the need for them is identified and once the revisions to the current system under the PLR Act are under way. As noted above, however, we do recommend that use of the PLR Act should only be viewed as an interim measure – albeit a measure that is probably sufficiently robust to survive several years – until such time as a purpose-drafted Indian Land Title Registration Act can be drafted and passed. There are many precise provisions in a contemporary Act that have no equivalent in the PLR Act, the implementation of which would be that much weaker as a consequence.¹⁴

4.2 The Apartments Act

Individual ownership of apartments in multi-unit buildings requires the establishment of a complex set of relationships and interests in the property. The form of property ownership called “condominium” involves individual ownership of part of the property (the apartment), with the rest of the building (the common property) co-owned by the owners of the apartments. The common property comprises the roof, the façade, the entryway, stairways, hallways, common walls, mechanical systems, structural components of the building and the like.

The respective parts of the property and their interests must be clearly denoted in the land registry, including the percentage or share of ownership of the common property appurtenant to each apartment. This also allows ownership and other rights, including contract rights, to be established and made enforceable, since some of the most important rights and obligations of the individual owners are measured by the percentage or share of the ownership interest in the common property. The amount of the owners’ respective fees to maintain the common property, for example, are usually determined by the relative size of the apartment: e.g. the owner of the largest apartment pays the most to maintain the common property, owners of apartments that are equal in size pay equal amounts, and so on.

Although many of Delhi’s apartment buildings are owned cooperatively, the Delhi Cooperative Societies Act, 2003 does not adequately define the ownership and inheritance rights of allottees and transferees in these apartments. In order to address these shortcomings, the Delhi Apartment Ownership Act, 1986 was passed; it was applicable to all multi-storeyed buildings constructed by Group Housing Co-operative Societies or any other body or agency.

¹³ The Land Registration Act 2002 (England and Wales) says, simply, in Section 7 that “If the requirement of registration is not complied with, the transfer, grant or creation becomes void as regards the transfer, grant or creation of a legal estate”.

¹⁴ The Land Registration Act 2002 for England and Wales, for example, has 136 Sections and 13 separate Schedules. See <http://www.opsi.gov.uk/acts/acts2002/20020009.htm>

Several deficiencies were found in the Act, notably that it lacked appropriate penalty provisions. Presumably as a consequence of this, the Act was never enforced.

According to the Ministry of Urban Development, this Act was to have been repealed as it was found to be ineffective.¹⁵ The Delhi Apartment Ownership Bill, 2001 – a substantially new law, now including penalty clauses, among other changes – was consequently introduced into the Lok Sabha. Extensive discussions were held on details of the Bill by the Standing Committee on Urban and Rural Development, which proposed specific amendments to parts of the Bill (focusing on registration of units, the allocation of interests in the common property, and formation of associations).

The Bill lapsed before the revisions could be presented to Parliament. Nevertheless, various bodies, including the Confederation of Indian Industry and certain residents' groups continue to lobby for passage of the Bill. A representative of the Ministry of Urban Development is quoted in the press as having explained the delay as because the Delhi Administration believes some of the provisions to be "inadequate and ineffective".¹⁶ If this is the case, we urge the Delhi Government to seek an early resolution to the impasse.

The team recommends that, unless and until a new Delhi Apartments Ownership Bill is enacted, it will not be feasible to define the rights of individual apartment owners in a title registry. Passage of this legislation is thus a prerequisite for the establishment of a title registry.

4.3 Other Laws and Regulations

Other than the laws and regulations discussed above, if the recommendations of this report are adopted it would be desirable to establish a registration indemnity fund (see Section 9.5), and, as necessary, for Delhi's Financial Commissioner to make regulations and specifications for the cadastral survey (Section 5.1).

It is a requirement of the Registration Act, 1908 that, for a good title, registration of deeds should take place under the Act. This is a Central Act, applicable throughout India. However, as areas of Delhi are declared as Estates for the purposes of the PLR Act, these same areas would simultaneously need to be excluded from requirements of the Registration Act under Section 2 of that Act.

It will be necessary to amend the Ordinances for the Indian Stamp Act relating to Delhi to be amended in order to allow Stamp Duty to be charged on registration of titles in the Land Title Registry.

¹⁵ Since the 2001 Bill was never passed, we believe that the 1986 Act was, therefore, never repealed.

¹⁶ *The Hindu*, December 15, 2006, reportedly quoting a letter from a Deputy Secretary in the Ministry of Urban Development.

5 CADASTRAL SURVEY AND FIRST REGISTRATION

5.1 Cadastral Mapping of Delhi

A land registry can only be established if the boundaries of each parcel can be unambiguously defined. And this can only be achieved through a land cadastre. Since there is no extant reliable survey information for at least the greater part of Delhi, a cadastral survey must be undertaken here before a land registry can be started.

We understand that the Survey of India has recently undertaken a project of developing digital base maps of Delhi by aerial survey, through NRSA / Hyderabad. The maps are at a scale of 1:1250. However, the maps reportedly omit any cadastral data (land boundaries) and, as such, therefore cannot immediately be used for land title registration. The digital topographic maps would need to be completed with cadastral information, most efficiently by using techniques such as GPS and Total Station.¹⁷ Particularly in urban areas, with their density of settlement and high land values, precision of measurement is important.

Section 100 of the PLR Act gives authority to the Financial Commissioner to “make rules as to the manner in which the boundaries of all or any estates in any local area are to be demarcated and as to the survey-marks to be erected within those estates”. A cadastre would normally be undertaken in accordance with rules, standards and principles laid down by the national survey organization, covering aspects such as accuracy, survey monuments, integration of surveys, methods of lodging the survey records and access to that information. India has, however, no such national standards; State standards are normally established by a State Government’s own land records department, which does not exist for Delhi.¹⁸

The Urban Development Department of the Delhi Government is in the process of establishing a central City Survey and Mapping Centre (CSMC), using data provided by the National Informatics Centre, MCD, DDA, and with ground surveys using Total Station technology. It is believed that one of outputs of this Centre is intended to be a mapping system with unique numbers allocated for each parcel of land, with a system to link it with the political divisions (ward, colony, etc), and the topographical coordinates, and integrated into a GIS system .

It will, therefore, be necessary for the CSMC to determine proper procedures for cadastral surveys from first principles. In keeping with the intent that Delhi should “have one of the world’s most efficient and effective systems of land registration, as well as to demonstrate the way forward to other States and jurisdictions in India”, it will be appropriate for the CSMC to establish world-class procedures for cadastral surveying. Although private companies in India have the technical capability to undertake first-class base mapping and control surveys, expertise for specifying the required standards is uncommon.¹⁹ It may, therefore, be necessary

¹⁷ Appropriate standards and techniques for India are discussed by Rao, Brig.M.Gopal. “LIS in India - Perspective and Retrospective”. 2001,

<http://www.gisdevelopment.net/application/lis/overview/lisrp0003.htm>

¹⁸ The most recent known set of standards for cadastral surveys in India were contained in the City Survey Manual’ by F.G.H. Anderson (1917), which provides guidelines for conducting Cadastral Surveys in towns with a population > 2000. This is still in use, although not appropriate for contemporary survey techniques and technologies.

¹⁹ In Thailand, for example, land surveys were conducted by public employees until the early 1990s; now there are over 750 licensed private surveyors who support the system. In Karnataka, private surveyors were introduced during the Bhoomi project (Phase 2 report, Section 5.1. Surveys have been

for the Department of Lands and Survey to acquire advice, perhaps from overseas, for the specifications for a good cadastral survey (e.g. through donor technical assistance), and to procure administration of the survey through private agencies.

We note, however, that determination of boundaries is as much an art as a science, and involves substantially more than 'simply' measuring:

"The practice of finding boundaries is neither a purely legal process, nor a purely scientific process. It is something in between with a twist. The boundary surveyor in finding an old survey must be cognizant of the legal description of the land and any conflicts which may affect it. This involves not only knowledge but skills in research and investigation. Then the surveyor must be part archeologist to find physical evidence of previous surveys and occupation on the ground. Throughout the process the surveyor must understand the concepts of good measurements to find and describe what is found, and be able to interpret its relationship to the record. In the end those that do it well find it can be rewarding and fun, sort of as mathematical detective work, with archeology, dendrology, geology and paralegal aspects thrown in."²⁰

It is, therefore, also appropriate to ensure that the firm contracted to undertake the survey should work hand in hand with government staff familiar with (or well trained in) the principles of boundary determination in complex urban areas. This expertise is understood to be available in India – similar work is being undertaken for agricultural land, and there is experience available from Maharashtra's work in urban areas – although additional training might well be needed in the use of new technologies

5.2 First Registration

It is at the time of First Registration that existing rights in land are finally and authoritatively determined. The owners of the land must be identified, the rights that are associated with the land must be determined and the boundaries of each parcel agreed

First registration is usually conducted by government officials – or by government officials in conjunction with private surveyors – going area-by-area, gathering evidence from existing written records, supplemented as necessary by evidence from local officials and landowners. The procedures used in Thailand are often cited as a model for Asia: titling work is undertaken by teams from the Department of Land, with records transferred to a provincial or branch office after a 30-day public notice period. Field records are then registered and titles distributed to land owners.²¹

It will be essential for the Delhi Department of Lands and Survey to prepare clear-cut guidelines on what is needed to legitimize ownership in cases where there is no documentation of transfer of title in the records of the Registrar / Sub-Registrars of Assurances. There are a number of grey – unclear – areas, many of which were described in the team's first report, "Land as Security: Tenure and Title Issues in Delhi".

undertaken using private surveyors in Maharashtra, Karnataka and, doubtless elsewhere, although the standards of accuracy might not be sufficient for use in most parts of Delhi.

²⁰ www.cadastral.com

²¹ This is consistent with Recommendation 11.18.5 of the Tejendra Khanna Committee on Unauthorised Construction and Misuse of Premises in Delhi.

The most common case will be properties that have been transferred simply using Power of Attorney. We suggest that, if accompanied by an Agreement to Sell on which the appropriate stamp duty has been paid, this should be treated as proof of ownership – subject to no dispute being recorded within the public notice period.

There will be other cases in which the title is not clearly defined, and the opportunity should be taken to clarify ownership or tenancy rights, such as apartments constructed by builders on single plots and sold to individuals, but where the earlier chain of title remains with the builder and the owners' rights are not clearly defined in the title deed.

The process of creation of land titles will uncover properties where the title and/or boundaries were believed to be certain but which can no longer be proven (such as properties acquired by inheritance, or some very old properties) and which could, therefore, be disputed. These disputes may or may not be legitimate or ethical, but nonetheless will need to be adjudicated. In Delhi, they are presumably more likely to occur at the time of first registration in unauthorized colonies and other informal settlements than in the planned colonies, although legal precedent suggests that significant disputes may also occur within formally planned areas, too. It is, therefore, important that efficient, equitable and socially-acceptable procedures be put in place for the adjudication of disputes at the outset of the process.

5.3 Adjudication

Adjudication is the process by which existing rights in a parcel of land are authoritatively determined. Adjudication ordinarily does not alter existing rights or create new ones but instead establishes what rights exist, by whom they are exercised, and with what limitations.

Adjudication of land rights must be handled with the utmost promptness and transparency, particularly at the time of systematic or first registration, not least in order to ensure widespread public confidence in the system – the public must see the value in acquiring legitimate ownership. Conflict resolution must be fast, authoritative, and predictable, based on widely publicized and scrupulously fair procedures. Abuse of bureaucratic power results not only in increased transaction costs but also impedes the emergence of a competitive real estate market in areas where it was previously suppressed.

We believe that leaving conflict resolution in Delhi to the Courts could create such extreme delays as to discredit the whole titling process. The following principles for the design of alternative adjudication processes are derived from international experience of land mediation:

- Mediation is an appropriate process when it can potentially contribute to settlement of a dispute. It is important to recognize that mediation may not solve the entire conflict, but it might play a vital role in solving a portion of the conflict.
- There must be a recognizable dispute for mediation to be involved.
- There must be at least the possibility of a settlement between the disputing parties.
- All of the key parties identified in the dispute must participate in the mediation process. It will be useless if only some of the parties are involved, since the excluded or non-participating groups will never agree to the conditions of the mediated peace.
- Mediation should be handled, if possible, by a professional land mediator, and preferably by a panel. However, in some instances mediation can be conducted by NGOs who offer legal services. It is vital that the mediator be knowledgeable about land law and policy,

since it would be extremely detrimental to discover that a mediated solution was actually illegal by national law.

- It is important that mediators be realistic about the result that can be achieved – agreements should try to have realistic expectations, so that they can actually be achieved given the truth / reality of the actual support on the ground.

Section 36 of the Punjab Land Revenue Act describes an adjudication mechanism:

(1) If ... a dispute arises as to any matter of which an entry is to be made in a record or in a register of mutations, a Revenue-officer may, of his own motion, or on the application of any party interested but subject to the provisions of the next following section, and after such inquiry as he thinks fit, determine the entry to be made as to that matter.

(2) If any such dispute the Revenue-officer is unable to satisfy himself as to which of the parties thereto is in possession of any property to which the dispute relates, he shall ascertain by summary inquiry who is the person best entitled to the property, and shall by order direct that person be put in possession thereof, and that an entry in accordance with that order be made in the record or register.

(3) A direction of a Revenue-officer under sub-section (2) shall be subject to any decree or order which may be subsequently passed by any Court of competent jurisdiction."

These provisions fulfill many of the criteria set out above. The public interest, however, would be better served if the Revenue Officer were to be assisted by an independent advisory body (which is not excluded by the Act). In addition, we would recommend that rules be determined to ensure that decisions would be based on substantial documentary and/or oral evidence; and an absolute requirement that, if mediation were to be followed, all of the key parties must participate in the process.

We are aware that accelerated conflict resolution mechanisms have been used in urban contexts elsewhere in India – one such is in Belgaum (see the December Report, Section 5.1.5), and would recommend that these mechanisms should be reviewed to determine their appropriateness for Delhi.²² In addition, it would be prudent to seek advice on forms of adjudication from the Department of Legal Affairs (Ministry of Law & Justice), which has considerable expertise in arranging arbitration.

5.4 The Plot Identifier

Each plot or parcel requires a unique identifier (such as a geographic reference or address) so that data concerning the parcel can be given an exclusive reference in the registry and in transactions relating to the property.

²² At the time of field survey in Belgaum, the Surveyor collects information on the boundaries of the property and information about ownership, how the present owner obtained the title and other related details. This information is furnished by the surveyor together with the final map. An officer is appointed to decide the titles. He serves the individual notice, and calls for information from the person identified as owner by the Surveyor. If necessary, quasi-judicial proceedings are conducted at which titles are decided and recorded. Sufficient opportunity is given to interested parties to raise objections. There are further appeal provisions against such orders.

There is no absolute need for the computer identification number to be the same as the plot identifier (which may, for instance, be created so as to make it easier for a user to identify the plot). MCD's Property Tax Registration Project is attempting to provide 'addresses' for each property in the city. If it is successful in this, it would be appropriate to use an identical address for the land register, to enable the two systems to communicate with one another. These addresses should also be linked with current street addresses, as these are well understood by residents.

However, in the circumstances of Delhi where a new land cadastre will be required, the main plot identifier would probably most easily be based on geographical coordinates allocated, presumably by NSRA, (with sub-numbers for properties sub-divided by ownership, such as apartments in a multi-unit building).

It will also be necessary to allocate identification numbers to all Government property (i.e. including public spaces, transportation routes, etc, etc) if the system is to be comprehensive. This will permit good public asset management, as well as allowing proper monitoring of illegal encroachments on public property.

6 TECHNOLOGIES FOR TITLE REGISTRATION

It will be necessary to install new information technologies to manage and integrate the land titling system, the land cadastre and the land information system. Although the IT Department of the Delhi Government is well aware of the IT issues, they are not familiar with the specific needs and issues that will arise in designing this new system. We therefore recommend the establishment of an IT working group that will define the parameters of the system, ensure its full integration across departmental boundaries, and recommend procurements processes. The working group would include representatives of the legal, cadastral and information system working groups (see Section 10 below), and with representatives of the system developer for the municipalities' property tax systems, presumably under the chair of the IT Department.

Our December report ("New Approaches to Land Titling and Tenure in Delhi") included summaries of projects in which the authorities for Maharashtra, Karnataka and Chandigarh are in the process of computerizing their land records. The projects are not directly comparable to Delhi's situation, not least, because they are essentially computerizing existing manual systems of record-keeping; and Delhi would intend to introduce a completely new system, with untried and untested methodologies. Nevertheless, they confirm that appropriate technologies and systems can be designed for the public sector in India: for large-scale application, with the levels of security that are needed, in a relatively short period of time, and – apparently – without the glitches that are so often encountered in equivalent projects in other countries.

The same report, and the more detailed reports underlying it, include details of the various operating systems and software developed.²³ It is obviously not possible for this study to make recommendations on the types to be used in Delhi, especially in a fast-changing IT environment; but we can note that, with appropriate procurement procedures, it will not be difficult to obtain hardware and software technologies required for the system. Networking technologies and backbones are also already in place in the city, and could be quickly accessed to connect the offices of the land registry and other agencies.

System development and procurement, however, should be matters for detailed consideration, not least to determine appropriate roles for the public and private sectors, and to allocate resources, risks and rewards. Partnerships obviously involve some element of financial risk and a commitment to provision of resources. The shares in the profit should be appropriate to both the risks and level of resource input by each party. Examples from Karnataka and Maharashtra show different ways in which the private sector have been involved in recent IT system design and implementation relating to land records in India.

In Karnataka's Bhoomi Project (the computerization of land records), for instance, the software was developed by the National Informatics Centre (NIC), Ministry of Information Technology under the guidance of a committee involving NIC and officers of the Government of Karnataka. Data entry (for the 20 million existing records) was outsourced to private agencies, and verified by local officials; project roll-out was undertaken by staff of the Land Record Department, but with the assistance of consultants from NIC.

²³ ICMA South Asia. "Computerization of Document Registration, and Rural and Urban Land Records, State of Karnataka". Ahmedabad, November 2006. ICMA South Asia. "Computerization of the Document Registration and Land Records in Maharashtra". Ahmedabad, November 2006. Vohra, Sudhir. "Land and Property Title Registration in Chandigarh". Delhi, November 2006.

In Karnataka's Kaveri Project (the automation of document registration), the software was developed by a private agency to the specification of the Department of Registration, and other agencies were contracted to operate the system. The private sector here provided, installed and commissioned all the hardware and peripherals required to meet the desired service standards, furniture and layout, consumables; they installed all requisite software, and provide support manpower for data entry.

In the Mahabhulekh Project, Maharashtra (computerization of existing land records), system design reportedly took up to a decade. Software development was undertaken by the NIC.

Computerization of Maharashtra's Revenue and Stamp Department was undertaken by a private agency, a good example of public-private cooperation. Essentially, the private body provided the bulk of the resources and agreed to bear most of the financial risk, in return for which they are able to gain appropriate rewards.

It may be necessary for the Delhi Government to utilize the services of the NIC or an IT consultancy firm to determine the ideal system specifications, keeping in mind the volume of data which might be generated. This same organization would be asked to suggest appropriate procurement techniques, including degrees in which it would be appropriate to involve the private sector in subsequent management of the service.

7 INSTITUTIONAL ARRANGEMENTS

7.1 The Institutional Home

The Constitution defines “land” as comprising “rights in or over land, land tenures including the relation of landlord and tenant, and the collection of rents; transfer and alienation of agricultural land; land improvement and agricultural loans; colonization.” “Land revenue, including the assessment and collection of revenue, the maintenance of land records, survey for revenue purposes and records of rights, and alienation of revenues” is similarly defined as a State subject. This latter classification clearly includes matters such as land titling and registration and, presumably, cadastral mapping.

According to the Seventh Schedule of the Constitution, Article 246, Land is a (normally) State subject. The 60th Amendment, however, reserved Land in Delhi as being a matter within the purview of Central Government. Central Government (i.e. the Ministry of Urban Development) has not actively accepted its responsibility for land administration in Delhi except insofar as it has a strong oversight role. It has accepted, at least by default, that certain functions of land administration should continue to be the responsibility of the State Government, such as the powers derived from the Registration Act of 1908. Revenue laws, including the Delhi Land Reforms Act, Punjab Land Revenue Act and the UP Land Revenue Act as extended to Delhi have decentralized certain responsibilities for management of land records, etc, to the State Government.

In order to achieve the stated objectives for title registration in Delhi (Section 3 above), new agencies need to be established for land titling and for cadastral survey. It is recommended that – for purposes of efficiency and to ensure compatibility of the two systems – these functions should be incorporated within the same department. Whether this is identified as a Department within the Delhi Government or of the Central Government (although we note that most of the relevant Central Government expertise lies within the Ministry of Rural Development, which otherwise has little brief for Delhi), we believe that the functional aspects of administering the new department should fall to the Delhi Government.

It is also worth recalling that the Delhi Urban Environment and Infrastructure Improvement Project (January 2001) recommended the establishment of a single title registration and mapping unit within the Delhi Government:

a “special and dedicated unit set up in the Land / Urban Development offices of GNCTD reinforced by suitably qualified and experienced personnel from MCD and DDA”, which would work towards “... (i) The preparation of land and property registers and fiscal cadastres; (ii) Digitised maps and records which can be easily and regularly updated as land and property transactions are finalized (iii) Establishment of a GIS unit for catering to the mapping needs of all utility services and municipal bodies...”²⁴

In other countries, the institutional home of the Title and Survey agency varies enormously. In some, it is a separate Department of State, in others, it reports to the Ministries of Finance, Justice, Physical Planning, Environment, Resource Management, etc. In Delhi, we believe that

²⁴ Government of India, Ministry of Forests and Environment, and Government of the NCT Delhi Planning Department. “Delhi 21”, Delhi Urban Environment and Infrastructure Improvement Project (DUEIIP). Delhi: January 2001, Section 20.2.6.

the new agency would logically either report directly to the Chief Minister, or to any one of three existing Departments:

- Urban Development; or
- Development, Revenue, (etc); or
- Land & Building.

In the immediate future, however, in order to comply with the requirements of the PLR Act, the agency would need to report to the Financial Commissioner or his assignees.

7.2 The Institutional Name

In other States of India, a *Survey, Settlements and Land Records Department* prepares and maintains mapping records and property cards (where these exist); a *Revenue Department* prepares and maintains the Records of Rights (generally applicable primarily to agricultural lands); and a *Department of Registration and Stamps* maintains records of land transactions.

In other countries, a variety of names are in use, often deriving from historical precedent. Where the agencies for land registration and cadastral mapping are combined, the names clearly reflect the function: "Directorate of Land Titles and Surveys", "Department of Land Management", "Cadastre, Land Registration and Mapping Agency", etc.

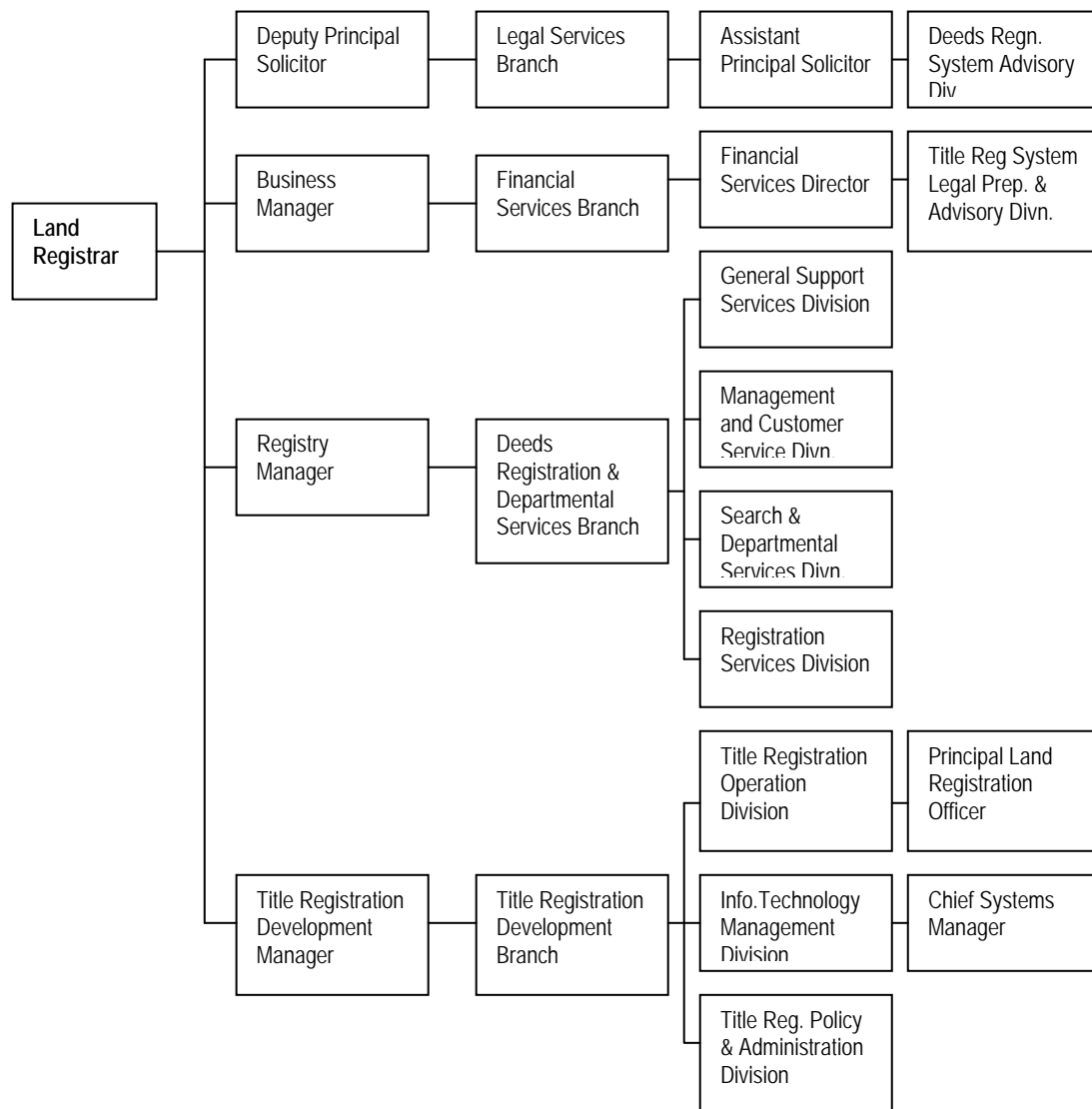
For the purposes of this report, we use the name "Department of Lands and Survey" as the generic name of the agency to be created within the Delhi Government.

7.3 Institutional Structure

The chart on the next page reproduces the current structure of the Land Registry in Hong Kong, which could serve as the basis of a model for Delhi. In addition, Annexes 1-3 include details of the structure of the office of Land Records in Maharashtra, the administrative responsibilities of officers of the Hong Kong Land Registry prior to 2005, and the Survey and Mapping Office in Hong Kong (which operates from a separate office to the Registry).

It is not appropriate for a consultant study to recommend an institutional structure. However, a Department of Lands and Survey in Delhi might comprise the following divisions: Legal Services; Business and Financial Services; Registry; IT; Survey and Mapping; Land Information Services; Administration.

Organization Chart of the Hong Kong Land Registry (February 2005)²⁵



7.4 Public Information

Because land registration projects can have substantial economic and social impact at the community level, it is important to have maximum community participation at all stages. Programs must be more than public relations aimed at informing landholders about the project, not least so that land owners do not see the exercise as preliminary to the introduction of more taxation, and that beneficiaries of the present system of deed registration understand that the process of change is to be gradual, and phased in over a period of many years.

There must be continuous appraisal of social impacts, particularly in the systematic registration components, and targeted efforts to ensure that beneficiaries understand the value of security of tenure and complete registration records.

²⁵ http://www.landreg.gov.hk/ar04-05/en/organization_structure_and_management_changes_nos.htm

The purposes and methods of first registration, in particular, should be explained at meetings with RWAs and Colony Development Societies, and through radio, television and print media.

Professionals who contribute to the working of the land, property and housing markets also need to know precisely how their work will be affected by the new procedures. It would be useful for the Delhi Government's Department of Lands and Survey to hold a series of workshops to familiarize professionals with the proposals, including a brief on the objectives and scheduling of the scheme.

7.5 Private Sector Participation

Until recently, land registration and other land administration functions have been regarded as public functions, and private sector participation was quite limited. Theoretically, the private sector can undertake all roles in land registration except those of regulation and policy setting; the limits are normally determined by country traditions and sector capacity. Modernization projects elsewhere have resulted in increasing use of private sector professionals, particularly in the field of surveying.

As discussed elsewhere in this report, we recommend the use of the private sector in the following capacities in setting up and managing Delhi's land title registration:

- Mapping for cadastral surveys (but not final boundary determination)
- Involvement/consultation in designing the land information system
- Detailed design of the computer system for the cadastre and title register
- Data entry.

8 TIMING

8.1 The Overall Timeframe

In countries that have introduced modern land registries with donor assistance, the defined 'projects' were typically implemented over five to ten years; nevertheless the overall process of change is much more extended than this. In Hong Kong, the title registration system is being phased in over a period of 12 years. However, Hong Kong did not have many of the problems that will be faced in Delhi, notably the mapping and registration of properties in dense, often-illegal settlements; nor did it have an equivalent multiplicity of agencies. The project time to complete the introduction of new registration processes in other Asian countries has been up to 25 years.

We anticipate that introduction of the new system in Delhi and its extension to all parts of the city except illegal squatter settlements could take substantially more than a decade.

8.2 Phasing of First Registration

Land in the city may be titled sporadically (i.e. wherever a need is seen, or wherever an owner requests that the land be titled), or systematically (i.e. area by area). Because the former technique is necessarily haphazard and inefficient, it is relatively expensive. Given that Delhi's land registration system is to be started *ab initio*, we see an advantage in recommending a combined system: registering properties area-by-area, as well as mandatory registration of all new transfers and mortgages, wherever they may occur in the city.

If the registration process is to be systematic, logic requires that registration be compulsory, in order that disputes may be recognized, and ownership of all parcels of adjacent land may be recorded. Incentives to register could be given, for example, by requiring payment of a Duty on registration of titles assessed at a lower level than Stamp Duty on deed registration. In addition, as we have recommended, there would be an absolute penalty for failure to register new transactions, since the transaction would be annulled if it were not registered.

Given the overall time frame of implementation of up to two decades, and in order to optimize the use of resources, it will be appropriate to tackle areas of the city incrementally and systematically, first mapping and registering specific geographic locations or types of settlement. We recommend starting first with those locations that may be expected to give the fewest problems, in order both to be able to start the process relatively soon (and not to wait until all potential problems have been resolved, some perhaps requiring new legislation), in order to demonstrate progress, and to 'learn by doing'.

In addition, as there are new transactions elsewhere in the city (e.g. new plots registered, land sales; mortgages), the affected properties should be added to the title registry.

It is our understanding that for land still held by DDA and L&DO – perhaps three-fifths of Delhi's urban land – good records exist of the site and leaseholders (although records of newly-acquired freehold properties will become out of date as they are transferred to other owners). This is not true of most other properties in Delhi. We believe, for example, that most land in New Delhi is reasonably well documented and, therefore, that it would be relatively easy to start here.

Based on proposals that have been made to the team by practitioners in Delhi, we recommend that registers be prepared according to the following order of priority:

1. All land in New Delhi
2. All other lands allocated, subdivided or regularized after the Notified Date (e.g. the date on which title registration starts)
3. Other land and properties (still) held by public authorities: L&DO, DDA, MCD, and other public agencies
4. Freehold properties sold by L&DO, DDA and other authorities
5. Colonies that were developed pre-1961, with layout plans prepared by MCD
6. Colonies that were regularized before the Notified Date
7. Urban Villages
8. All other urban land considered to be occupied legally (including the Walled City; unauthorized colonies).

Within each category, priority for registration would be given to land without competing claims of ownership or other interest, followed by land with such claims.

9 COSTS

9.1 Capital Costs

Costs for the introduction of a new land title registration system vary widely from country to country, depending on needs and the scope of the project. World Bank loans for registration projects over the past two decades have ranged in size from \$8 million dollars in Armenia, a small country of fewer than 3 million persons, to \$195 million in Ukraine, with a population of 49 million. Capital costs are equivalent to upwards of \$10 (say, Rs.450) per property registered.

Delhi has, however, significant differences from other places which have implemented title registration projects – in having, for example, no existing title system; no existing cadastral survey; relatively dense urban areas; many informal settlements – to the extent that we have not been able to estimate the likely costs of introducing a new system here.²⁶ The bulk of costs would be attributable to the cost of mapping and surveying (for which the Survey of India should be able to provide estimates) and the cost of first registration.

The costs of first registration in Belgaum (the Nagarasti Project) were about Rs.300 per property. The processes in Delhi and Karnataka are, however, not readily comparable, with the process of introduction of a new system in Delhi being considerably more complex and, therefore, expensive than the relatively simple processes in Karnataka.

Capital costs of new registration projects in other countries have typically been allocated between components as follows:

Land registration and titling, including systematic (first) registration and data conversion	20-45%
Cadastre services contracts (aerial photography, mapping, surveying)	10-40%
Equipment, vehicles, furniture	5-25%
Technical advisors	3-10%
Policy development and project management	7%
Training and education	5%
Civil works	1-15%
TOTAL	100%

9.2 Financing

We recommend that, although some of the capital cost of the design and installation of the computer system for registration and cadastre may be borne by private companies, most other capital costs of Delhi's new system will to be met from public sources.²⁷

User charges should be set – see below – with the intent of recovering part of the capital cost over a period of some years.

²⁶ As a relatively complex exercise, this would have been outside our Terms of Reference.

²⁷ We note that in Maharashtra that the cost of the software for digitization of existing land records (Rs.130 million), and the recurrent cost of maintenance of the records, was borne by a private agency, which recovers its investment from user fees.

We have been assured that the JNNURM is able and willing to make grants available towards the (non-recurrent) costs of introducing a land title registration scheme (optional reform [e] – “Introduction of computerised process of registration of land and property”). Although a submission has recently been made of a City Development Plan for Delhi without, we understand, including introduction of a title registry as a component, new projects – such as the costs of first registration of specific areas of the city – may be submitted at any time. See also footnote 28.

We would draw attention to the willingness of the World Bank and other international agencies, to participate in land registration projects in countries where they operate; we also note as relevant the professional interest of the World Bank in the urban land sector elsewhere in India. Despite the bureaucratic hurdles that are involved in negotiating a loan from an organization such as the World Bank, we would recommend that this option be given serious consideration for Delhi, not least to take advantage of the considerable concomitant technical assistance that would be available.

9.3 Cost Recovery

Most countries implementing systematic registration of land have elected not to charge the full cost of the first registration, with the expectation that they will recover a greater part of the cost from the registration of subsequent transactions. Government investment is justified by overall economic benefits from improved registration. In Thailand, for example, the first registration charge was \$4 per parcel while the actual cost was \$40 per parcel, with the idea that an affordable fee would result in the wide-scale registration necessary for the success of the program. Systematic registration therefore demands the injection of large amounts of capital, since subsequent transactions are expected to occur only once every 10 years.

It is, then, not likely that the full costs of set-up of the new system will be recovered. However, relatively low operational costs can allow land registries to become self-financing after the start-up period, even with modest fees. Revenues from the land titling system in Thailand increased from \$300 million in 1984 to \$1.2 billion in 1995. Fees that are too high, on the other hand, discourage registration, increase the likelihood of expanded informal settlements, and disproportionately impact the poor.

The formal cost of registration of a sale deed in Delhi is now Rs.101, plus Stamp and Transfer Duties, plus the costs of documentation and facilitation. It is intuitively likely that people would be willing to pay more for (permanent and secure) registration of a title than for registration of a deed.

9.4 Stamp Duty

The level and method of charging Stamp Duty is not directly relevant to the issues of the creation of a title registry. The change from the present system of deed registration to title registration need not, in itself, result in any change to the collection of Stamp Duty, except insofar as more properties will be registered, it is likely that Stamp Duty would be payable on a larger number of transactions. We do, however, recommend that the general level of duty should be reduced, and that a circle rate should be fixed for each area (see the team's September report, “Land as Security: Tenure and Title Issues in Delhi”, Section 3.7).

9.5 Indemnity Fund

If it is accepted that properties registered under the new system should be given a government guarantee of good title, it will be necessary to establish an indemnity or assurance fund to stand behind any claims against errors or omissions. (We understand that such a proposal has been put forward by the Director of the JNNURM.²⁸) Such a fund will eventually be self-financing, based on a small levy on registration fees (e.g. 5 percent of each fee). It is recommended that a cap be set on the liability of the fund. (Hong Kong arranged a stand-by Government loan facility of HK\$150 million to meet claims before a reserve is built up.)

In Sweden, for example, compensation is paid to any holder of legal rights in the property who, having relied upon the information, has suffered financial losses. In some other countries, (e.g. The Netherlands) registers are treated as primary evidence rather than definitive proof: enquirers are protected against inaccurate or incomplete information.

The Hong Kong Land Titles Ordinance states in part, for example,

“(1) ... a person suffering loss by reason of an entry in, or an entry omitted from, the Title Register, where such entry has been obtained, made or omitted, as the case may be, by or as the result of

(a) fraud on the part of any person ... which affects the ownership of the registered land ... or

(b) any mistake or omission on the part of any [public officials]...

shall be entitled to be indemnified by the Government in respect of that loss.

(2) No indemnity shall be payable ... to a person who –

(a) has himself caused or substantially contributed to the loss by his fraud or negligence; or

(b) derives title (otherwise than under a registered disposition made in good faith and for valuable consideration) from a person who so caused or substantially contributed to the loss...”

²⁸ The *Times of India* reported on 14 February 2007 that Mr. M. Rajamani, Joint Secretary of the Ministry of Urban Development and Project Director of JNNURM said “Land reform and specifically guaranteed titles are a very important milestone under the JNNURM... We are hoping to install guaranteed titling for Indian conditions, based on the Australian Torrens titling system.”

10 AN ACTION PLAN TO ESTABLISH A LAND REGISTRY SYSTEM

We recommend that the stages in the establishment of a new title registry should be as follows:

The Office of the Chief Minister of the Delhi Government should establish a Steering Committee with the responsibility of drafting a Strategic Plan for a land registration, mapping and information system as described in Section 3.1 of this report.

This Steering Committee would comprise representatives of interested Departments of the Delhi Government, including the Financial Commissioner, and the Commissioners for Revenue and Urban Planning. Depending on protocol and precedent, it could also include representatives of the Union Government's Ministry of Urban Development, and of DDA, MCD and NDMC as permanent or ad hoc members.

The Steering Committee will need to be assisted by a full-time secretariat, including at least one senior staff member with an active interest and expertise in land law. Its principal tasks will be:

- To **reach a consensus on the principles** and broad functional specifications of the new titling and registration system (e.g. the specifications included in this report);
- To **create agreement** among interested parties (including the Union Ministry of Urban Development, DDA, MCD, NDMC and the emergency services) **that the Delhi Government is the appropriate authority** to take the lead in creating and managing the land title registry and land cadastre;
- To **determine** in consultation with legal authorities (notably, the Attorney General and/or the Ministry of Law & Justice) **that the PLR Act is applicable** to the circumstances described in this report, agreeing the process the Delhi Government should follow to adopt the Act, and what amendments, if any, are immediately needed for the Delhi Government to proceed to create a land title registry for Delhi;
- To determine **which body within (or outside) the Delhi Government should take responsibility** for the new administrative arrangements, both in the long-term (i.e. when the system is operational; and perhaps after more major legislative amendments have been enacted), and in the immediate future (i.e. to conform to the requirements of the PLR Act, as well as of administrative efficiency);
- To help develop a consensus and mechanisms to **revise and enact a new Delhi Apartments Ownership Bill, either based on the 2001 version, or more substantially revised**;
- To **liaise with external bodies** that might provide technical assistance to take these proposals forward (such as study tours to examine structures and procedures in other countries, possibly including Thailand, Singapore and Hong Kong), cooperation with other States with well-developed IT systems for land information management, and, possibly, external financing.
- To **approve recommendations made by working groups** (see below).

We suggest the Steering Committee should set up a series of working groups, if necessary complemented with staff from other Departments and agencies, which would include the following:

- **Legal working group.** Clarify legal issues (e.g. including taking forward the above issues, determining conformity with existing pieces of legislation such as the Information Technology Act, 2000 and other data protection regulations; procedures for adjudication; whether legislative changes are needed to require that all mortgages be registered; the appropriate form of Notifications and any Enabling Regulations to be issued under the adopted PLR Act); define the input required for the land register.
- **“First Registration” working group.** Define the minimum requirements for establishing property rights at the time of first registration, and the procedures for conflict resolution.
- **Cadastral and mapping working group.** Establish design of the cadastre (including the formulation of relevant standards for control and cadastral surveys and mapping; encourage the sharing of spatial data); agree a Delhi-wide system for plot identification (“the address”).
- **Land information system working group.** Prepare specifications for a land information system, collating requirements from interested agencies in the public and private sectors, including details of how the data would be used, and the financial value of each data set.
- **IT working group.** Define the parameters of the IT system, to ensure its full integration across departmental boundaries, and to recommend procurements processes.
- **Finance and administration working group.** Establish the financial parameters, including the pricing structure, the need and form of an indemnity fund, determine the costs of development of different parts of the system, identify possible sources of finance. Design the outline administrative requirements for the new system, including staffing and training requirements; determine physical requirements for offices and equipment.

With guidance from these sources, it will be possible for the Steering Committee then to prepare a Strategic Plan which would specify responsibility for, and specific outputs of the following operational stages, and their timing:

- The coordination of all control survey and related activities; procurement of accurate survey and digitized mapping information including aerial geo-photography and information communication technology; develop a program of mapping for the following five years;
- Assign unique parcel identification numbers and document designators for electronic data management;
- Design specifications for the land registration database with the assistance of the IT Department of the Delhi Government; procure or develop information systems to manage new information, allow for secure electronic filing and research and a user-friendly registration website;
- Create a new registration system by developing standardized, transparent, and efficient registration procedures, and preparation of an operational manual with registration forms and procedures, customer service standards and complaint procedures, etc;
- Design specialized procedures for the first registration of properties (including the determination of what land and property rights already exist, and are already documented);

- Design and implement an information program to increase public awareness and create a broad base of support for reform among key policy makers and the public;
- Procure and install system architecture and equipment – computers, software, licenses, communications equipment, local area networks. This includes a Joint Information System for the cadastre and the land registry, with components such as an administration and security system, workflow engine, alphanumeric and geometric data maintenance system, window inclusive of all features for internal and external users, and a flexible reporting application for cadastre and land registry;
- Implementation of financial management procedures, including arranging capital financing, domestically or externally;
- Educating and training personnel involved in all areas related to land titling, registration, surveying, mapping, system and data management, and dispute resolution;
- Planning for system maintenance and upgrading over time.

11 TENURE IN INFORMAL SETTLEMENTS

11.1 The Existing Situation

We have defined informal settlements as having been built outside administrative procedures, characterized by the following features:

- no title for the land parcel requested or obtained from the titling authority (at titling level) or
- no building permit requested or obtained from the urban planning authority (at construction level),
- and thus facing a risk of demolition.²⁹

There may be little or no physical difference between the actual buildings in informal and formal settlements: indeed, many are illegal only in a technical sense.

There is no consensus on the magnitude of these settlements in Delhi today; nor, so far as we can ascertain, is there any recent map of them. We have found a variety of statements of their size, mostly inconsistent, some implausible. Our best estimate is that, in 2006, informal settlements in Delhi accommodated some 10 million people, i.e. about three in five residents of the city.³⁰

We have classified Delhi's informal settlements into four broad groups:

Squatters / JJ Clusters. Jhuggi Jhompri (JJ) Clusters may comprise about 3 million people. Other estimates are higher, although no-one has made any authoritative estimate of their size in the last decade or more. 99 percent of the JJ Clusters are on land owned by public agencies (the greater part, by the DDA), and which the agencies claim ultimately to be required for other purposes. We believe that no map or other record of these colonies has been made in the last decade or more, and that there is no documented statement made by most land-owning agencies of their need for specific pieces of their land occupied by squatters, nor of the timing of this need (e.g. to specify a period of time before the land is required for the intended purpose).

Those squatters who arrived in Delhi before December 31, 1998 and can document their legitimacy have a right to an alternative plot of land if they are evicted (i.e. if the land on which they have squatted is required by the landowner). In practice, however, in recent years not all evicted and eligible squatters have been allocated alternative plots. Squatters who arrived in Delhi after 1998 have no land rights.

A significant, but unknown, proportion of squatters have squatted on the same site for several decades, in some cases having been given promises of security by political leaders; our research, however, indicates that most squatters are well aware that they are liable to eviction with little notice. With this level of insecurity, there is no reason for residents of JJ Clusters to make any long-term investment in-situ, in their homes or businesses, or to make environmental

²⁹ Following Kapoor, Mudit, and David le Blanc. "Measuring the Risk of Housing Investment in the Informal Sector: Theory and Evidence from Pune, India". World Bank Paper WPS 3433. Washington, D.C.: 7 October, 2004.

³⁰ The Urban Institute report "New Approaches to Land Titling and Tenure in Delhi", December 2006, documents some of the alternative estimates.

improvements to the settlement. As noted in Section 12 below, the utility companies, too, see no incentive to invest in these settlements.

Our September 2006 report, "Land as Security: Tenure and Title Issues in Delhi", documented the evolution of policies towards squatters, and the rationale for the present policy.

Resettlement and Relocation Colonies³¹ These colonies may house some 1.8 million people – although, as with all these population figures, even the approximate number is not known for sure and is subject to dispute. They were designed to accommodate re-settled residents of former squatter settlements. They have a variety of forms of tenure, some on leasehold, but predominantly with 10-year licenses. These latter give no tenure right other than to permit the allottees and their immediate family members to reside on the plot for the period of the license. Licensees are, for instance, prohibited from selling or renting their properties, and from using them for commercial purposes. In most cases, the original licenses have not been renewed (residents have not been asked to renew). Conditions of the license are, however, rarely enforced, and informal (illegal and unregistered) sales are reportedly common in some areas.

The issuance of a license in relocation colonies is required by a Delhi High Court ruling of 1993 that resettled squatters should not be given leasehold land, but only a license 'with no right in the licensee to transfer or part with possession of the land in question' (*Lawyers' Cooperative Group Housing Society vs Union of India*).

There have been a few projects of in-situ upgrading of squatter settlements, in which the land has been re-plotted and allocated to the original settlers. Tenure here, too, is on license.

To our knowledge, there have been few, if any, evictions from resettlement and relocation colonies, or from upgraded colonies. Although this gives some perception of security of tenure, there is a perceived risk in making any substantial investment in homes in these settlements (commercial use of residential plots is illegal), and no opportunity to raise mortgage finance from formal sources. As noted in Section 12 below, the utility companies also see a risk in investing in these colonies. As a further consequence, sanitary conditions are substandard, and the resultant health risks affect the whole city.

Unauthorized Colonies These colonies, located on land zoned for agricultural use, may accommodate some 3.5 million people. The most recent estimate is that in mid-2006 Delhi has 1,432 unauthorized colonies.³² Despite the periodic issue of guidelines for regularization of these colonies, none has been regularized since 1993. A recent attempt to describe appropriate procedures was included in a set of recommendations to the Nanavati Commission in 2006. The process of regularization would, *inter alia*, require submission and approval of a layout plan; the formation of a representative organization; and payment of land charges.

Although the initial sale of land to the first settlers and developers was legal and, presumably, properly documented, most subsequent sales have been through Powers of Attorney, a system that has developed in the past two decades mainly in order to circumvent payment of stamp duty. A law was passed making it mandatory to record Powers of Attorney with the Registrar of

³¹ 'Relocation colonies' are those settled after 1990.

³² Recent newspaper reports suggest the number of colonies to be closer to 1,600 in late 2006.

Assurances³³, but this has rarely been practiced for sales in unauthorized colonies. For some but not all plots it may be possible to trace a chain of title.

Although some buildings would be subject to demolition in the process of regularization, most residents appear to believe that 'possession is nine-tenths of the law' and that the risk of eviction is low.

Because the land is used illegally, and buildings have been constructed without planning permission, it has not been easy for residents to get mortgages on their property. A recent ruling by the RBI (November 2006) makes it mandatory for banks and finance institutions to ensure that mortgaged property conforms to the relevant planning and building bye-laws.³⁴ If this is enforced, it will become impossible for residents of unregularized, unauthorized colonies to obtain formal mortgage finance.

Rural and Urban Villages. These villages have an estimated population of 1.6 million people. With rapid urbanization, the villages have lost their original character, becoming the hub of residential, commercial and corporate activities because land is cheaper than elsewhere in the city, in part because they are exempt, or believed to be exempt, from building bylaws. There are presently 142 designated Urban Villages (eligible for infrastructure improvements) and 226 Rural Villages. The village patwari maintains records of original right in respect of all rural villages with Khasra (Village) numbers, and individual plot numbers on extended Lal Dora lands.

Because of their history, residents face no threat of eviction, and thus enjoy security of tenure. However, land title can often be difficult or impossible to trace which, in practice, precludes them from obtaining mortgage finance. Improvements are, therefore, financed using informal sources, which can be more expensive and/or more limited than formal finance.

11.2 Long-term and intermediate objectives

11.2.1 *De Soto's theories and their application in Delhi*

It must be a proper long-term objective of the Delhi authorities to provide security of tenure to every legal resident of Delhi. Security of tenure, however, is not the same as freehold title to land.

There is a widely-held theory that property without title is 'dead capital', because it cannot be leveraged to produce growth and increase wealth, which would occur primarily through access to formal credit.³⁵ However, in those places where reform in titling property for poorer populations has occurred, mere acquisition of title has not resulted in significant improvement in access to capital for the poor: banks generally will not lend just on title if the property is located in an urban slum and has little or no market value. However, many residents of Delhi's informal settlements are not poor (of the city's population, about 60 percent live in informal settlements; only 9 percent of the city's urban residents lived below the poverty line in 2000³⁶). Nor is it the case that the structures in most of Delhi's informal settlements have no value – many are bought and sold, and others would be if it were legal to do so, or if mortgages were available.

³³ The Registration and other Related Laws (Amendment) Act, 2001

³⁴ RBI Circular 2006-07/182, November 17, 2006

³⁵ Hernando de Soto, "The Mystery of Capital", Basic Books, 2000

³⁶ Economic Survey of Delhi 2003-04.

In addition, international findings are much more positive in terms of investment in small, informal businesses following improvement in tenure, many of which are micro-enterprises or repair or fabrication workshops run out of homes, and in the homes themselves. Data suggests that the growth and sustainability of these businesses depends critically on security of tenure and formalization of residential property rights. Other studies have shown that provision of title has led to increased housing investment, smaller household size and improvements in the education of children.³⁷

The team recognizes the reality of the situation in Delhi: that there are good historical reasons for not wanting to provide land title (freehold ownership) to most categories of informal settlement. We also recognize the multiplicity of academic studies making recommendations for the improvement of these settlements, most of which have gone un-implemented. We do not want to make recommendations that go against the grain of political sentiment, and so make observations consistent with the culture of Delhi and with the need to improve functioning of the city's economy.

We find that issuance of titles is expensive, and is far from a panacea for poor populations. Mass titling may also inflame property disputes and competing claims and further intensify existing distortions in land markets. Titles, however, are undeniably beneficial for middle-income households who are otherwise able and willing to access the credit market for mortgage loans.

11.2.2 Intermediate tenure systems

Improving security of tenure for the poor does not necessarily mean issuance of formal land titles: simpler and less expensive measures to increase or regularize security can be as effective as formal titles and security can be adequate with significantly lower transaction costs than formal individual titles. Moreover, security of tenure is to a large extent a matter of perception as well as legal right.

Alternative systems that were proposed in our December report, "New Approaches to Land Titling and Tenure in Delhi", included the following:

- ***Documentation of tenure***

Simple documentation of occupancy rights often confers a sense of security of tenure, and leads holders to invest in property and improve their economic condition even if the rights conferred are not transferable. The rights may be in the form of long-term lease or license, especially if the term is long and rights against eviction are secure. Examples were cited from Guatemala, Albania and Botswana.

- ***Community land tenure and trusts***

Secure tenure, efficient resource allocation, and improved incentives to invest and conserve need not be equated with individual private tenure. It is possible to vest tenure in a community of users, with common property representing the private property of the group. A community association is usually formed and has the authority to adopt and enforce use and occupancy rules. Leaders can be elected, and small fees collected from the members for neighborhood improvement, infrastructure upgrading, and the like. Boundaries of the community and

³⁷ Galiani, Sebastian, and Ernesto Schargrotsky. "Property Rights for the Poor: Effects of Land Titling." Universidad Torcuato Di Tello, March 13, 2006.

individual plots can be determined by the association in conjunction with the owner or local authorities.

Community cohesion, strong leadership and clear delineation of rights are necessary for this system to work well. The major limitation is the requirement of complex documentation. This system might be considered for squatter settlements comprising cohesive communities where individual title or long-term lease tenure may not be permitted.

- ***Land pooling / Land sharing***

Land pooling (often known as land sharing) is a community redevelopment strategy in which an agreement is made whereby the land already occupied by an illegal settlement is "shared" between the community and the landowner. Land sharing is often a public-private arrangement, with different actors holding the formal land rights. Residents agree to rebuild their houses on one portion of the land, with secure tenure rights, and return the rest of the land – usually the most commercially attractive part – to the landowner to develop for its own purposes, commercial or public. In some cases, the people negotiate to be given the land they will use for their housing, to buy it at a low price, or to lease it for a long term. This gives community residents secure land tenure in the long term, and the landlord gets most of his land back to develop. Once the land sharing deal has been struck, community residents can then re-block or reconstruct their communities on their part of the land. Whether the landowner is a public or private entity, the public housing authority may participate by subsidizing the construction of units or installation of services.

In any case, the public entity should be involved to assure that tenure rights remain protected from eviction. Land sharing can be generally detrimental to tenants, especially the poor, unless it is carefully regulated by law and conducted under the auspices of a third party mediator – usually a local authority, since otherwise the landowner's rights are likely to prevail in any dispute. Residents should not be expected to negotiate their rights directly with the landowner.

Land sharing has been implemented successfully in Thailand and the Philippines. Land sharing might be appropriate for certain long-standing squatter settlements in Delhi where the occupants are middle income and even informal tenure has become commercialized. To be successful, such a program would require strong community organization and consensus, third party intermediation, and physical and technical feasibility as well as demonstrated financial feasibility.

- ***Legalizing unauthorized construction***

Some countries with substantial amounts of unauthorized construction have modified their registration laws to allow for registration of such properties as a means of encouraging the development of the housing and mortgage finance markets. In Armenia, for example, the law and registration procedures have recently been amended to allow registration on the basis of a drawing of the plot that indicates unauthorized structures through use of a different color or lines around the unauthorized object. That way, there is no tacit legalization of the structure, but the transaction is not impeded. These steps were taken not to protect the poor, but to recognize the practical difficulties created by the vast amount of unauthorized construction among all income groups and to allow lenders who seize property after mortgage loan default to sell it without difficulty on the open market.

11.3 Recommendations for Delhi

The following sections of the report focus only on amelioration of the economic consequences of uncertainty of tenure in Delhi's informal settlements. The recommendations are, therefore, relatively narrowly focused. We have not been asked to resolve all the problems of the informal settlements; we are well aware that many efforts are currently being made to address these problems, and more proposals are being tabled, for instance in the Delhi Master Plan 2021. Although we are cognizant of the wider picture, we have therefore not attempted to "solve the problems" of Delhi's informal settlements.

11.3.1 *Establishment of an Informal Settlement Authority*

The planning and management of informal settlements in Delhi is spread between a number of authorities. In particular, the Slum & JJ Department (which was not established under any statute) was originally entrusted with implementing the provisions of the Slum Areas Act, 1956. Its present mission is "to improve the quality of life of Slum & JJ Dwellers by implementing number of approved plan Scheme on behalf of Delhi Govt." 'Slum dwellers' are defined by reference to the Slum Act of 1956, and presently mainly comprise residents of notified slums in the Walled City. The mandate of the Slum & JJ Department is, therefore, much narrower than the universe of Delhi's informal settlements analyzed in this study. Nor does the Department have authority (or funds) to plan or monitor the conditions of the people with whose welfare it has been entrusted – no survey has been undertaken since the early 1990s, for example – nor does it have any authority over other types of informal settlement.³⁸

The Department has periodically shifted between DDA and MCD, but has remained within the MCD since 1992.

Responsibilities for planning and managing other informal settlements are shared between MCD, DDA, the Delhi Government and Central Government. One must also note the role of the Courts in influencing the status of Delhi's informal settlements. Important consequences of this dispersion of responsibility are: the absence of any unified policy for integrating these settlements into the city's economic fabric; lack of knowledge about their condition; and the poverty of official interest in improving their condition.

There are issues, problems and solutions in common between the different types of informal settlement (see Section 12 below, for example), and there is consequently need for a single authority with overall responsibility for their planning and management. We believe this is a sufficiently important recommendation that, without such an authority, many of the subsequent reforms suggested could not be undertaken. We would also urge that its mandate be drawn up, and the staffing pattern organized so as to give a degree of autonomy and an expectation that the organization would be expected to "think outside the box". It is beyond the scope of this study to suggest which level of government should be given this responsibility, although the decision presumably lies with Central Government and day-to-day management with a lower-level government authority.

For the purpose of this report, we refer to this new body as the *Informal Settlement Development Authority*.

³⁸ There was a comprehensive survey of slum dwellers in 1990 for the purpose of issuing ration cards.

11.3.2 JJ Clusters

- *The need for a survey*

We believe it is not possible to plan for the future of JJ Clusters and their residents – amounting, as we have noted, to perhaps 3 million people – unless and until there is better information on the scale, location and characteristics of these settlements. This information is not currently known, nor is any authority in a position to conduct such a survey.³⁹ (MCD's Slum & JJ Department, for example, does not have the resources for this.) We therefore recommend that the Informal Settlements Development Authority be required and provided sufficient resources to carry out such a comprehensive survey as a matter of high priority.

- *Alternative approaches to improve tenure*

We concur with the present general policy which states that – subject to several provisos that we omit for the sake of clarity – where squatters reside on land zoned, and legitimately and absolutely required for other purposes, they should be provided with alternative and reasonably equivalent sites and assisted to move at such time as the land under their settlement is required. We also cannot object to the planned relocation of squatters from sites that are too small for development or dangerous to their health. We also note the policy of benign neglect (leaving the clusters untouched until such time as the land-owning agency is in a position to redevelop the site; with the interim provision of basic urban services). However, the resultant uncertainty for squatters – especially those who have been living in Delhi for a number of years – has led to their economic stagnation, not to speak of poor health and welfare for the squatters and their neighbors.

We welcome the proposal to extend the *Bhagidari* (partnership) scheme to informal settlements, which will help their residents to voice their concerns regarding tenure (among other matters).

We believe there are several instances where alternative approaches may be adopted to improve the condition of certain settlements, consistent with existing policies for squatters. These include:

- Land pooling / land sharing;
- Recognition of the temporary tenure of qualifying settlements;
- Improvement of supply and water and electricity.

Each of these approaches would require that each and every agency owning squatted land should determine and certify why and when the land is required for development, and should submit a formal statement justifying the extent of the proposed use. This statement would then enable the developing authority to determine in principle whether alternative approaches to improving tenure for the present squatters would be feasible.

The Informal Settlement Development Authority would then conduct a “screening and selection exercise” to rank areas that qualify for tenure improvement programs. Prioritization criteria

³⁹ We are aware that there has been a previous proposal to conduct such a survey. As reported in Chapter XXIII of the Delhi Government's Annual Plan, 2003-04, the Delhi Government decided to undertake a “special comprehensive socio-economic survey” in all JJ clusters; the proposal was approved and preparatory work initiated in 1999 until the proposal was dis-approved by the Urban Development Department on the grounds that the same data would be generated by the 2001 Census. The Department subsequently suggested a smaller sample survey, although this was not favored by the Slum & JJ Department. It seems that resolution has still not been reached.

might include: age of settlement, future prospects, extent of current service coverage by location, tenure status, population density, proximity to public or private lands and likelihood of permanent tenure being awarded.

- ***Land Pooling***

The principles are discussed in Section 11.2.2 above. Land pooling should be used in circumstances in which not all of the squatted site will be required by the land-owning agency, and they would be able to release some of the land for residential development in exchange for the release of the needed land and a modest financial return on the land to be developed for or by the squatters.

We believe this approach to be consistent with the recommendations of Master Plan 2021 that lands occupied by JJ Clusters on Nazul land be allotted to Cooperative Group Housing Societies under Nazul rules. This would require approval of the government for the allotment of land and rates to be charged from the dwellers. Assuming the developer / Cooperative Society would sell part of the floor space in the open market, the legal framework for transfer of properties on Nazul lands has to be reviewed.

Adoption of this policy would require the formation of a dedicated team within the Informal Settlements Development Authority to administer the program.⁴⁰

- ***Granting temporary tenure to JJ Clusters***

Although it seems likely that many JJ Clusters are either located on land which will be needed in the near future by the land-owning agency, or are located on land which is unsuitable for residential use by virtue of its size, location or other factors, there are probably settlements to whom temporary tenure could be granted without prejudice to the public good. Indeed, there are believed to be several colonies that have been in existence for some decades and which, if they had been given earlier recognition, could have considerably improved their physical and economic circumstances to the benefit of the whole city.

The team's December report listed several such ways in which squatters may be given temporary tenure, short of permanent tenure or even of being given a settlement licence. These range from the issue of "No Objection Certificates" or "Possession Certificates" (as in other cities in India – see Sections 12.2.2 and 12.2.3 below), to "Certificates of Comfort".

- ***In-situ upgrading***

The team recognizes the success of in-situ upgradation (as it is called in Delhi) in other cities of India and elsewhere in the world.⁴¹ We believe that the principles should be applied to all of those squatter settlements that meet the screening and selection process summarized above.

Although the experience of in-situ upgradation in the 1990 project was not an unequivocal success, it is being revived in a current project (see the team's December report, Section 2.2.13). We do not know the full details of implementation of this particular project, but trust that it is being carefully monitored with a view to replicating its successes.

⁴⁰ Above most other proposals in this report, it would be essential for this team to include the services of an urban economist.

⁴¹ The Koramangalam (Bangalore) project is a good example, where association between squatter dwellers and IT companies has resulted in a viable project.

- ***Upgrading tenure in upgraded colonies***

Plots in the existing upgraded colonies have been allocated on license, but we are informed that the licenses have not been renewed. In order to remove the uncertainty of residents in these settlements, we strongly advise that their tenure be improved. A precise reading of the relevant 1993 Court ruling suggests that it would be permissible to allot / sell freehold or leasehold rights to the residents.⁴² An alternative approach would be to renew the licenses for a nominal charge, preferably for periods longer than the present ten years.

- ***Improvement of utility supplies***

This report argues that the supply of water and electricity may be improved to JJ clusters (and other informal settlements in Delhi) to the mutual benefit of both the utility companies (DJB and the DISCOMs), and the squatters (and their neighbors in formal colonies). The arguments are more fully developed in Section 12 of this report, below.

11.3.3 Resettlement and Relocation Colonies

We recognize the Court ruling that requires that resettled squatters be given land on license “with no right in the licensee to transfer or part with possession of the land in question”. This ruling has been respected insofar as (most) resettled squatters were given a license at the time of resettlement. The licenses have not, however, been renewed; nor have their conditions been enforced; nor has any policy been declared about the future of these people or their settlements. The tenure of these settlements is thus governed by a state of administrative neglect: they are neither legal (these are few current licenses; many license conditions are being contravened), nor illegal (having been established by the city authorities).

This situation is barely acceptable for the residents of these colonies, among other problems resulting from this uncertainty of tenure being that they suffer from poor utility and municipal services, and are unable to access formal finance for development of homes or businesses and – reportedly – are subject to harassment for payment of informal “fees”. It might be possible to argue that the original condition of resettlement imposed by the Court has been met; but that now they have become equivalent to unauthorized colonies, and that residents are – under some conditions – now, therefore, entitled to tenure *with* the right to transfer or part with possession.

The Court ruling raises the question of whether this license is to be in perpetuity and what happens – for example – when the licensee dies. However, the Court ruling does require that the resettled squatter be given a license, with the implication that the license can only be withdrawn if its conditions are breached, and therefore that it should otherwise be renewed.

We are not aware that any debate has been entered into with regard to the future of these settlements, but would urge that this be included in the mandate of the proposed Informal Settlements Development Agency, with a view to enhancing the security of tenure of the nearly two million people who live there.

11.3.4 Priority for regularization of unauthorized colonies

We have noted repeated statements of intent by Government to regularize unauthorized colonies throughout Delhi, and recognize the problems inherent in doing so. We do not feel

⁴² *Lawyers' Cooperative Group Housing Society vs Union of India*, 1993: the Court ruled that where squatters are resettled, they should not be given leasehold land, but a license ‘with no right in the licensee to transfer or part with possession of the land in question’.

competent to debate the issues in detail, and broadly concur with the principles set out in the report to the Nanavati Commission for a methodology for regularization.

Especially in the light of the recent rulings by the Delhi High Court regarding mortgages on structures in unauthorized colonies, we believe that most residents of these colonies would welcome the opportunity to be among the first to receive (and pay for) formal title to their land. We have recommended – Section 8.2 above – that regularized colonies should be among the first areas to be offered title registration; for ease of administration and to provide a good demonstration effect, it would probably be appropriate to start with the richer and less densely-settled colonies such as Sainik Farms, Anantram Dairy and Mahendru Enclave.

11.3.5 Urban Villages

We have recommended (Section 8.2 above) that the urban villages be included in the process of First Registration for the purpose of granting secure, registered title to property holders.

12 WATER AND ELECTRICITY SUPPLY TO INFORMAL SETTLEMENTS

12.1 The Existing Situation

The study was asked to consider the extent to which the supply of water and electricity to informal settlements in Delhi has been constrained by the nature of their tenure. The Electricity Act, 2003, puts electricity distribution companies – DISCOMs – under an obligation to provide electricity connections if it is legally tenable and technically feasible. In other words, electricity can be supplied provided there is no legal issue such as disputed ownership or occupation, and that it is possible to connect electricity following accepted safety norms. Likewise, there is no legal hindrance for the Delhi Jal Board, DJB – Delhi's water board – to serve informal settlements.

The position nevertheless remains that most informal settlements are poorly served with electricity and water. Many settlements receive electricity that is either illegal or poorly regulated: connections may be unsafe; there is often only limited power, insufficient for the requirements of many households; and, because of various forms of revenue losses, the situation is costly to the DISCOMs.

Most households in informal settlements also receive grossly inadequate public supplies of water, although residents – here, as elsewhere in the city – have adopted a variety of coping strategies to compensate for the shortcomings of public supplies. These strategies often result in ill-health (e.g. from use of polluted sources); they are expensive to households, since additional costs of time and money are required to obtain a supply of water; and it is expensive to DJB, which is required to provide free tanker and standpipe services.

The study found, in broad terms, that DISCOMs are reluctant to invest in informal settlements for a number of reasons, including the following:

- They are unable to calculate future financial returns when the remaining tenure of the settlement is unknown;
- Their officials are unaccustomed to dealing with 'marginal' communities, and with the informal organizations that operate there;
- The flat rate charges that are currently authorized may be insufficient to give them an adequate financial return; and
- It is perceived to be difficult to make electricity connections in unplanned communities.

Similarly, DJB is believed to be reluctant to invest in informal settlements for a number of similar reasons, including the following:

- They are often unable to calculate future financial returns, simply because the future of the settlement is unknown;
- Their officials are unaccustomed to dealing with 'marginal' communities, and with the informal organizations that operate there;
- There is a mistaken perception that poor people are unable and/or unwilling to pay for water – a perception that is clearly belied by expenditure patterns on water by residents of informal settlements; and
- There is a perception that there is 'not enough water to go round', and that it is easier to attempt to provide full service to the formal colonies as a priority. The team's report noted, however, that per capita water consumption in Delhi's is much higher than in many richer cities, implying that there is sufficient water to serve everyone.

12.2 Best Practice

12.2.1 *International Best Practice*

The second phase of the study included analysis of several Indian and international “best practice” case studies. The analysis confirmed that lack of secure tenure does create a problem with electricity and water utility companies, notably through a perception that there is a high cost of connection to such communities, high levels of theft and prevalence of unsafe conditions (for electricity connections) and hence that supply to such communities would not be cost-effective.

Listed below are some international best practice findings that provide insights to the Delhi situation:

- Many international utilities have recognized the permanence of such communities and have devised programs to improve supply, safety and foster good community relations.
- A win-win situation can be crafted, provided there is adequate stakeholder support provided to overcome the initial adversarial perceptions.
- Social barriers can be overcome among other means, by adopting a consensus approach using local NGOs/CBOs to help devise a program that engages all stakeholders.
- In many countries, simplified commercial interfaces have been introduced. Improved billing and collection methodology which helps increase utility confidence, may include the following:
 - Connection Charges:*
 - Government or donor subsidy through lower rate
 - Installment payment through bill
 - Swapping account debt for a new pre-payment meter
 - Commercial management:*
 - Outsourced billing services
 - Handheld billing
 - Door-to-door collections
 - Pre-paid metering
 - Reduction of power theft and tampering by:*
 - Secure meters
 - Conversion of distribution systems from low voltage to high voltage
 - Increased patrolling by community representatives, contractors, utility or contract personnel
 - Customer service improvements for existing consumers by improvement of:*
 - Connection/disconnection times
 - Service complaint response time
 - Billing accuracy and frequency
 - Convenience of payment, through drop off counters or via CBOs.

- Proof of Residency and tenure issues can often be overcome by the issue of No Objection Certificates, or similar, using the following principles:
 - The public utility should motivate the City authority to take action, NOT the other way around
 - Include CBOs and NGOs familiar with slum and informal settlements to assist in proposing acceptable proof of residency; community to feel ownership.
- Utility-to-Customer Relations – both electricity and water utilities are driven by lowering product losses. Program design for services to informal settlements need to incorporate this fundamental business driver into any program they design.

12.2.2 India Case Study 1: Ahmedabad Electricity – The Slum Networking Project

The Ahmedabad Municipal Corporation (AMC) initiated the Slum Networking Project (SNP) in 1998 in collaboration with local NGOs. The scope of the SNP involved an integrated approach to improving the physical infrastructure of slums in the city by undertaking a collaborative approach with city utility providers, urban local bodies, community organizations and key individuals. This case study provides specific insights on the provision of electricity service to slum consumers.

The main achievements have been:

- For providers, the key program design driver, within an integrated slum upgrade (physical rehabilitation of sanitation and toilets, energy and water), was commercial electricity and water loss reduction, regularizing/legalizing users, and developing over the long term, a commercially viable consumer base;
- Designing an institutional framework that works – getting a “No Objection Certificate” to residency for tenants from AMC was essential;
- A connection subsidy incentive was used to overcome initial reticence by low income consumers. The local electricity provider, Torrent Power negotiated a reduced electricity connection rate for slum consumers, approximately 50 percent lower than standard published rates of some Rs. 6,000 to Rs. 9,000. In some cases a 75 percent reduction in rates was achieved. After the initial pilot study phase, the connection charge was standardized across all slum areas at Rs. 5,200;
- Proven improved power service delivery – fewer interruptions, and increased hours of service reinforced success, leading to the ultimate expansion of the pilot project;
- Willingness to look at slum consumers as ‘real consumers’, thereby creating a legitimate consumer group – more consumers receiving a bill.

12.2.3 India Case Study 2: Bangalore Water Supply and Sewerage Board (BWSSB)

BWSSB provides water and waste water services to Bangalore, with an obligation to provide drinking water and sanitation services to every citizen in metropolitan Bangalore. With some 2,400 staff, BWSSB, like many Indian urban local bodies, is on an aggressive path towards asset construction and modernization. This program involves construction of new potable water plants (Cauvery Water Supply Phase 1 and 2), GIS based infrastructure mapping, water transmission and distribution improvements (reservoirs, pumps, lines and electrical equipment), and customer service improvements.

The main achievements of the project to improve water and sanitation initially to three slum areas in a pilot project, later extended to 46 poor communities – about 10 percent of the city's slums – have been:

- The key program design driver was commercial loss reduction, through the ability to create a legal, commercially viable consumer base;
- Drafting a clear institutional framework that works – working with various Bangalore agencies and establishing the tenure status of slums (through assessing their position in the process of a formal “declaration” of their tenure and granting residents a “possession certificate”, or “lease-cum-ownership” papers that provide full tenure after a 10-year lease period during which the recipient pays a regular nominal lease payment.) was critical; once slums begun to get connected, political interference reduced; among other things, by the creation of a Social Development Unit within the BWSSB;
- Ultimately 11,000 households in informal settlements including slums were provided with individual level water supply and basic sanitation (individual toilets);
- The project created a legitimate consumer group: more consumers receiving a bill;
- Other tangible social benefits included improved community relations and long-term progress towards social integration and improved upward mobility.

12.2.4 Best practice recommendations for service delivery to informal settlements

Based on the Best Practice reviews summarized above (and elaborated in our December report), a generic four-step process is recommended to develop successful and sustainable delivery of electricity, water, and/or sanitation services to residents of informal settlements.

- **Step One – Screening**

The first step in delivering services to informal settlements is to determine which settlements are suitable to receive which type of services. Some settlements may be found to be located on private land; others may be on public land that is slated to be used for an alternate purpose in the near future; while still others may be on land that has no other plans for the relatively foreseeable future (e.g. ten years).

In the first two instances, a relocation plan would be the most appropriate course of action for residents, while the latter would present an opportunity to provide services for residents. It is therefore important to survey and screen all potential informal settlements to determine who has an ownership claim on the land and what plans for alternate use of the land exist. For those settlements deemed to be an acceptable location for regularization, individual structures would be inspected to determine if they were sound enough to not present a safety concern, or if they needed to be structurally improved before receiving services.

- **Step Two – Services Definition**

Once settlements are selected, the level of services should be determined through discussions between the utilities and community-based organizations, with oversight from regulatory agencies. An assessment should be made as to what services are needed and what services can be economically and safely delivered to the settlement, either electricity, water, or sanitation only, or a bundle of some or all of these services. For electricity service, the voltage level per connection should be determined so as to balance the need to provide electricity with the ability to ensure a reliable supply.

Once a decision is made on what type of services to be delivered, the next step is to choose whether to use a community connection for these services or individual metering. Individual metering, using either a pre-paid or standard meter, is the desired end result, however, when first hooking tenants up to an official meter, it may be preferable to meter and collect on a community basis to instill a culture of payment before upgrading to individual meters. When a metering option has been chosen, an appropriate tariff slab should be implemented.

- **Step Three – Risk Mitigation**

In order for a utility to connect customers in an informal settlement, it must properly mitigate for both the legal and economic risk of the process. The vast majority of the residents in informal settlements lack a formal recognition of either land-ownership or tenure rights. It is, therefore, necessary to develop, in conjunction with the local body, NGOs and CBOs, a substitute package that establishes temporary tenure rights to informal settlement residents to allow the utility to legally connect the customers.

- **Step Four – Implementation**

The final step in informal settlement services delivery is to physically perform the connections. Illegal hook-ups must be removed and replaced with properly wired and metered connections either directly by the utility, or by using a CBO as an intermediary. Service reliability is essential in ensuring that collection rates stay high, and as such, communities and utilities should be vigilant in identifying and eliminating new illegal hook-ups, and where possible, change those connecting illegally to legal and paying customers. As a culture of payment becomes the norm in a settlement, the utility can begin upgrading its most trustworthy customers to individual meters with higher voltage and more reliable service, with the goal to scale up the individual meters to the entire settlement.

12.3 Recommendations for Delhi

A number of recommendations follow that would allow improvements to be made to service delivery to some of Delhi's informal settlements, that at the same time would improve the welfare of their residents, the health of all residents of Delhi, the economy of the settlements and of the city as a whole, and – not least – the financial position of the utility companies (the DISCOMs and DJB).

The recommendations, however, need engagement and initiative by both the utility company and an agency of government. There is presently no clear agency with the responsibility and authority to assume this level of engagement and initiative. As discussed in Section 11.3.1 above, the team recommends that a new Informal Settlement Development Authority needs to be established before many of these initiatives can fully be implemented.

The Informal Settlement Development Authority should ...

- Work with utility service providers and engage them *from a commercial perspective to plan for the delivery of services to informal settlements.*

Case study successes indicate that utilities' managements should be convinced of the 1) size of the "new market"; 2) potential for overall commercial loss reduction in existing operations, and 3) improved consumer relations. Incumbent service providers have rigid organizational structures and these include "engineer culture" and lack of resources to deliver new infrastructure which can hamper scale up efforts from pilot to large scale projects.

- Develop and implement a program rationale to grant temporary tenure to select squatter settlements and confirm the temporary tenure of other settlements (see Sections 11.3.2 and 11.3.3).
Without a direct intervention to address tenure, utility companies will usually be unable to extend service to settlements with undefined tenure.
- Involve community groups to interface with selected settlements on key implementation issues.
Many pilot project start-ups reflect historic lack of communication between utility, slum settlement consumers and the municipal authorities, NGOs across public and private companies.

The Delhi Government should ...

- Interact with the Delhi Electricity Regulatory Commission (DERC)⁴³.
While DERC's Orders broadly support the pilot efforts of NDPL and BSES to legalize electricity connections in informal settlements with a view to reducing illegal electricity connections, the Orders do not comprehensively cover all informal settlements, nor do they contemplate an increase in tariff charges to this consumer class. The current DERC Tariff Order (2006-07) does not provide any additional guidelines to utilities on serving slum clusters) or other informal settlements, or those consumers that do not have clear tenure or residency rights.

The Delhi Government (Secretary [Power]) should set up a working group to liaise with DERC and provide input for the next generation of tariff orders. If additional clarity is required regarding the Electricity Act, then the Ministry of Power (MoP) should be consulted. The working group might proceed according to the following steps:

1. Develop a white paper that addresses overall and cross-cutting issues concerning supply to JJ clusters and informal settlements. These will include supply, reliability, availability, measurability (metering), controllability (especially losses) of supply to JJ clusters and informal settlement areas. This paper will provide consensus on tariff and supply issues and build consensus among interested parties;
2. Conduct research on select topics that have potential impact on supply cost. An illustrative list of issues which merit consideration includes:
 - i. Standardization of design for providing supply to informal settlement based on safety and engineering considerations, these include laying of cable or poles through challenging right-of-ways, single point metering, and metering strategy;
 - ii. Addendum to the Distribution Code that addresses; a) Number of meters per common service, b) Maximum permissible load per residential units. These will help in up-scaling pilot project activities and later on can support tariff formulation;

⁴³ DERC was constituted by the Government of the National Capital Territory of Delhi in 1999. DERC, as part of its nine approved functions under the Delhi Electricity Reform Act, 2000 (tariff fixation; regulate power purchase; promote competition, efficiency and competition; provide policy guidance; provide data and forecasts; regulate assets to safeguard public interest; issue licenses; regulate licenses; and adjudicate disputes between licenses) must aid and advise the Government on power policy.

- iii. Develop the economic rationale for elimination of flat-rate tariff regime for JJ clusters and certain other informal settlements: by principle, these are to be fixed based on the cost of supply and should reflect energy consumption - retail tariffs should generally not be flat rate, which often sends distorted price signals and triggers dubious behavior among certain consumers.
- Consider the establishment of a Delhi Water Regulatory Board (DWRB). Although the DERC is well established and respected, there is no equivalent authority for water and sewerage. We would encourage the formation of a water regulatory board for Delhi.⁴⁴ This might be established on the lines of the Water Services Regulation Authority, the economic regulator of the water and sewerage industry in England and Wales. Their stated role is to seek value for consumers, by:
 - setting limits on what companies can charge;
 - ensuring companies are able to carry out their responsibilities under the appropriate Acts;
 - protecting the standard of service;
 - encouraging companies to be more efficient;
 - meeting the principles of sustainable development; and
 - helping to encourage competition where appropriate.

This is consistent with recommendations made by the World Bank study on reforms of the DJB, subject to entry of the private sector.

- Establish an Advisory Committee on Water and Sanitation for the Poor A recent study proposed that an Advisory Committee on Water and Sanitation for the Poor be formed at the level of Delhi State Government. The members of this committee would include MLAs, councillors, NGOs, consumer associations, advocates for the poor, representatives of the poor and other stakeholders.⁴⁵
- Use appropriate channels to ensure that the DISCOMs and DJB are aware of the following recommendations, and whether they are endorsed by the Delhi Government.

Recommendations for DISCOMs and DJB

- Understand where losses occur in the system; data is important to convince senior management. Before embarking on a slum connection program, it is imperative that the utility companies perform energy balance analyses (an accounting exercise whereby the utility can accurately assess the number of electricity units purchased or delivered from a particular feeder line and those that were consumed and paid for by consumers) – measuring and monitoring purchased, delivered and billed power on the system. This will allow utility management to understand whether losses are technical or commercial in nature and permit them to identify which physical portions of their grid require the greatest attention.

⁴⁴ We understand that a model Act has, in fact, been drafted but is currently shelved.

⁴⁵ Brocklehurst, Clarissa and Catherine Tovey. "Report of the Advisors on Serving the Poor: Improved Water and Sanitation Services for the Poor. Recommendations for DJB Policy and Management Contract Design: Revised Report, Policy and Information Assessment Phase ". June, 2005.

- The utility must address service to slums and informal settlements as part of a holistic program to improve customer service process.
Performance improvement opportunities should include interventions in informal settlements where loss-reduction paybacks can be attractive. Hence, costs related to legal supply of electricity to slums and other informal settlements should be clearly presented in the Annual Revenue Requirement filing to DERC.
- Get utility buy-in at Board level.
Utility managers must get approval in writing from the Board or designee to: 1) modify consumer application requirements regarding tenure to be in line with the residency requirements described under the Electricity Act 2003; and 2) present the proposed project's benefits (e.g., terms of technical and non-technical losses, new connections, load added, revenue potential and costs of connection charges). By conducting the detailed feasibility and ideally a pilot project, utilities are in a better position to make commercially feasible decisions regarding up-scaling new connection activities.
- Think about a large-scale intervention, but start with a pilot project.
Many projects have stalled at the pilot project level due to lack of resources or commitment to scale up; care should be taken to define a sizeable project size, e.g., greater than 5,000 new consumers.
- Conduct a socio-economic baseline assessment.
This step is an often overlooked element of the planning process. Such a survey helps provide direct and indirect insights: the survey instrument provides a complete understanding of energy demand, use, user and income characteristics and engineering needs, it also provides consumers to interact with utility personnel and helps provide invaluable information to both groups on improving service levels.
- Set up a special unit within the utility to coordinate delivery to informal settlements.
In order to overcome the "firefighting culture" within the utility, it is recommended that a dedicated staff and project office be created. This will allow for focus and timely execution of pilot projects.

The cited report on improving water and sanitation for the poor in Delhi also recommended the establishment of a DJB Poverty Outreach Unit in each operating zone.⁴⁶ These units, with support from NGO and CBO partners where appropriate, would:

- "coordinate the arrangements for temporary improvements in service;
- enable low income households to access the distribution network;
- provide customer education tailored to low-income consumers;
- help ensure that complaints from low-income customers are adequately handled by the relevant authorities;
- help ensure that bills are correctly calculated for shared connections, and facilitate timely bill delivery in low-income settlements;
- provide education to poor consumers regarding the need to become valid customers of the utility (either individually or in groups), contribute to cost

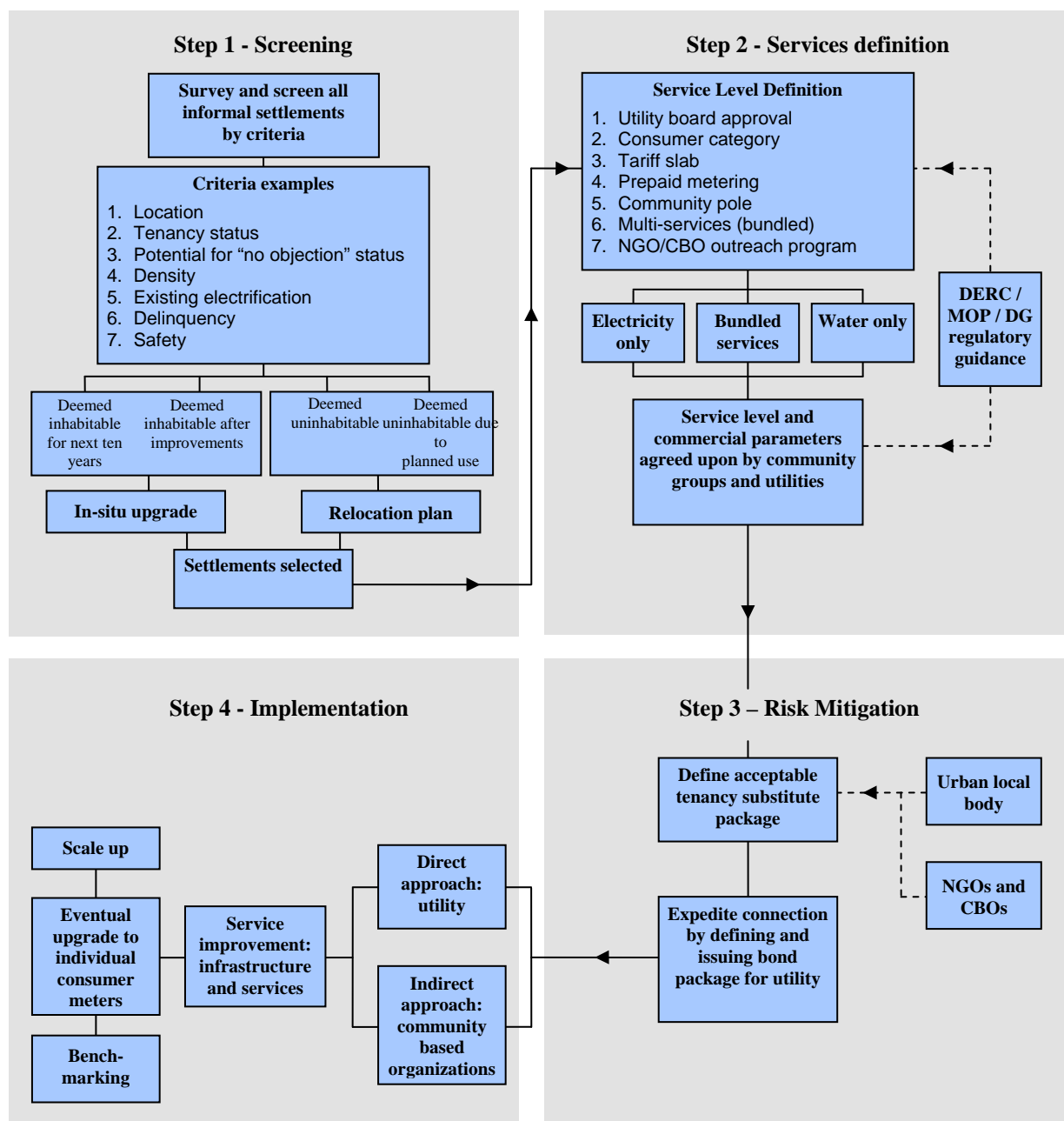
⁴⁶ Brocklehurst and Tovey, op.cit.

- recovery, and reject illegal tapping of the DJB mains; and the advantages that legitimate services can bring;
 - prepare poor households for improved water service, explaining to them their options, the cost, the billing arrangements, and any arrangements for payment over time;
 - provide liaison and coordination with MCD regarding slum sanitation and other issues (road restoration, for instance) under MCD jurisdiction;
 - ensure a continuing dialogue and good communication with the poor.”
- Community and NGO players are essential for service delivery.
All successful pilot and scale-up activities involve local organizations to build trust and help develop the “tenure instrument.” Such groups also play an important role in project survey, scoping and cost estimation as well as in improving collection rates.
- Conduct a pre-feasibility to assess network expansion options.
Water utilities, including DJB are expanding mains and distribution networks; these expansion plans should be mapped carefully with slums and informal settlement areas. Choosing the initial service territory and customer classes to be targeted can impact the success of the program by delivering quick, high profile, high value wins.
- Clearly define current conditions.
As part of understanding of the system, the utility must establish a baseline. This facilitates stakeholder understanding regarding the state of the utility as it embarks on its operational reform. It will also permit the utility to clearly illustrate its achievements from the reform.
- Pool available capital resources to support reforms.
The utilities’ Finance Directors should, as a priority, coordinate funding to support operational improvements. There are many sources of funds available from multilateral, bilateral, commercial and private entities. The finance director may pool these resources and manage them like a portfolio in order to optimize against investment needs. The finance director must also closely monitor and manage performance post-implementation in order to satisfy the reporting requirements of lenders and investors. This promotes good governance, keeps investors happy, and provides good publicity within the investment community for the next time the utility needs capital.
- Assure adequate funding is available.
Be realistic in estimating the cost, effort and time involved to achieve reforms. If funds run out in the middle of the improvement process, waiting for approval of support funds or raising new funds from external sources will create gaps in the project timeline, cause reforms to lose momentum, and may even reverse progress or kill the project altogether.
- Communicate with stakeholders – before, during and after improvements.
There is often misunderstanding of how the reforms will take place and what the implications are for stakeholders. Utilities must communicate clearly with the concerned public – who may feel they will bear nothing but increased costs, possibly higher than regular consumers – the utility workers – who may feel they will work in areas where the utility places a low priority, e.g. low income areas – and the

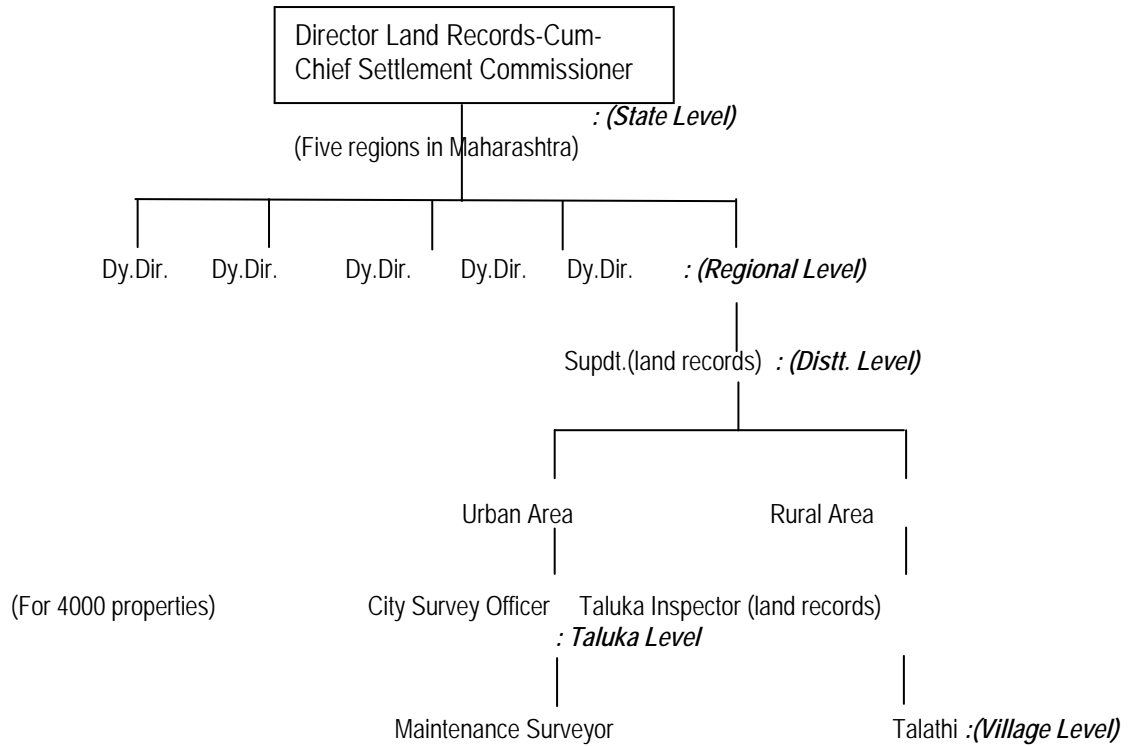
government – that may believe it will experience constituency revolt if adequate safeguards are not taken.

- Use functional outsourcing and contracting to help extend capital and resources.
At times the water utility cannot undertake improvements completely on its own; sometimes it requires outside help. Use of management outsourcing contracts, franchising operating areas to private entrepreneurs, and even ‘microprivatizing’ defined portions of the grid can help utilities to speed commercial improvements by improving collections, reducing non-technical losses and increasing customer service.

Recommended Process for Services Delivery in Informal Settlements



ANNEX 1 ORGANIZATION OF THE DIRECTORATE OF LAND RECORDS (SETTLEMENT COMMISSIONER), MAHARASHTRA



ANNEX 2 ORGANIZATIONAL RESPONSIBILITIES IN THE HONG KONG LAND REGISTRY, PRE-2005**Organizational Responsibilities: Hong Kong Land Registry, pre-2005**

Directorate**Land Registrar**

- Head of the Land Registry
 - General Manager of the Land Registry Trading Fund
 - Overall management of the Land Registry, formulating and reviewing policies on its operation, business and development
 - Statutory authority for the administration and enforcement of the Land Registration Ordinance, Land Titles Ordinance, other relevant Ordinance and regulations
-

Registry Manager

- As Head of the Deeds Registration and Departmental Services Branch, managing the day-to-day operations of the Land Registry, overseeing the maintenance of the Land Register and enforcement of the Deeds Registration System
 - Ensuring efficient delivery of departmental services and supervising the introduction of new or improved services to meet customer needs
 - Managing public relations and publicity
 - Overseeing human resource management and administration functions
 - Setting performance target and monitoring compliance
-

Deputy Principal Solicitor

- As Head of the Legal Services Branch, supervising the legal teams in providing legal services to the department
 - Planning and carrying out legal work in preparing for the commencement of the Land Titles Ordinance and introduction of the Land Title Registration System, formulating legal policy and dealing with related legal issues
 - Reviewing and recommending any necessary changes to the Land Titles Ordinance, Land Registration Ordinance and related ordinances
 - Overseeing the drafting of Regulations and Rules, preparation of statutory procedures and forms
-

Title Registration Development Manager

- As Head of the Title Registration Development Branch, developing strategies and plans for the implementation of the Land Title Registration System (LTRS)
 - Reviewing the existing administrative and operational procedures in preparation for LTRS operation
 - Overseeing the enhancement of the Integrated Registration Information System (IRIS) to support central registration under the revised Deeds Registration System, and supervising the further development of other computer systems to support LTRS
 - Planning and implementing publicity and education programmes to promote public awareness and understanding of LTRS
-

Business Manager

- As Head of the Financial Services Branch, responsible for the financial management and business development of the Land Registry
 - Assisting the Land Registrar in managing the Land Registry Trading Fund
 - Managing financial accounts, preparing budgets, reviewing costs and advising on costing and pricing
 - Co-ordinating improvement projects for business development and efficiency enhancement
 - Participating in the formulation of Fees Regulations and the operation of the Indemnity Fund under the Land Titles Ordinance
-

Branch and Division

Deeds Registration and Departmental Services Branch

Registration Services Division (1)

- To provide services for the registration of documents affecting land in Hong Kong.
- To assist in planning and implementation of a Knowledge Management System on registration-related matters and enhanced professional training for registration teams.

Registration Services Division (2)

- To provide lodgement, imaging and dispatch services for registration of documents.
-

Search & Departmental Services Division

- To provide all search services and to handle applications for registration of owner corporations.
-

General Support Services Division

- To plan, manage and review human resources, office accommodation and administrative systems and provide general support services to the department.
-

Management & Customer Services Division

- To manage and develop the Land Registration Officer Grade; to provide customer services, anticipate and respond to their needs; to plan for the development of human resources enough comprehensive training programmes to meet the business needs of the Land Registry.
-

Legal Services Branch

Legal Services Division

- To provide legal advisory and support services on departmental functions and undertake all legal work relating to the Deeds Registration System.
 - To provide legal advisory and support service in the preparation for implementation of the Land Titles Ordinance; to conduct LTO review, prepare regulations, statutory forms and provide professional guidance to practitioners.
-

Financial Services Branch

Financial Services Division

- To prepare and control budgets, manage financial accounts, evaluate costing, fees and charges, review accounting procedures and financial systems; manage departmental supplies and stores.
-

Title Registration Development Branch

Title Registration Policy & Administration Division

- To provide administrative support to the implementation of Land Title Registration System and the development of the publicity and education programmes, as well as to provide secretarial support to major consultative committees like the Land Titles Ordinance Steering Committee,

Land Titles Ordinance Implementation Committee and Title Registration Education Committee.

Title Registration Operation Division

- To develop operational practices and design new registration processes for the Land Title Registration System, to provide operational support to the implementation of the publicity and education programmes, the enhancement of the IRIS System and the development of other computer systems for the Land Title Registration System.
-

Information Technology Management Division

- To manage and oversee the daily operation and on-going enhancement of the IRIS system; develop other computer systems to support the Land Title Registration System; to provide other IT support services.

ANNEX 3 FUNCTIONS OF THE SURVEY AND MAPPING OFFICE, HONG KONG

Deputy Director (Survey & Mapping)
Assistant Director (Survey & Mapping)

Land Information Centre

- Land Information Systems
- SMO Computer Systems
- SMO Network Security
- Computerization/Information System Projects
- GIS Consultation & Advisory Services
- Survey and Mapping Intelligence
- Information Technology Research & Development
- Digital Map Production
- Topographic and Thematic Map Publication
- Mapping Services
- Photogrammetric Services
- Air Survey Services
- Remote Sensing
- SMO Website Maintenance & Security
- IMP/VAR Contracts
- Promotion of Survey Services and Mapping Products
- Major Computer Projects

Headquarters Division

- Policies and Standards
- Human Resource Management
- Staff Development and Training
- Occupational Safety and Health
- Procurement
- Quality Management
- Inter/Intra Government Department Liaison
- Technical Information & Publicity
- Land, Engineering and Hydrographic Surveying Services Suppliers List
- Enquiries & Complaints
- Geographical Place Naming
- Geodetic Survey Infrastructure
- Emergency Survey
- Cartographic & Reprographic Services
- Sale and Distribution of Digital Data and Map Products
- Copyright Licensing of Map Products
- Map and Photo Archives
- Support to Land Auction

Urban Survey Division

- Land Survey Ordinance
- Legislation
- District Topographic and Land Boundary Survey
- District Land Record and Basic Mapping Maintenance
- Survey and Cartographic Support to DLO and Govt. Dept. at District Level
- Survey and Cartographic Support to Railway Development Projects
- Naming of Streets in Urban Areas
- Sale of Map Products and Survey Data

New Territories Survey Division

- Small House Development
- District Topographic and Land Boundary Survey
- District Land Record and Basic Mapping Maintenance
- Survey and Cartographic Support to DLO and Govt. Dept. at District Level
- Naming of Streets in New Territories
- Sale of Map Products and Survey Data

Headquarters Administration Section

- Office Administration
- Office Maintenance
- Office Accommodation
- Personnel Matters

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