

Subject	ALL/ RURAL		URBAN, PERI-URBAN	
	'Good Practice'	'Gap'	'Good Practice'	'Gap'
	LAND RECORD MODERNISATION			
LRM : Ownershi	ip			
Ownership	Joint ownership results in simplification of mapping, survey and overall record maintenance procedures. Easier method of private (voluntary) partition introduced in HP.	Mirror concept not followed in joint ownership—Different owners might have 'possession' of different land parcels, but they are not recorded. Most transactions also in terms of shares, without delineating extent of property sold.	In HP, urban <i>abadi</i> areas also measured and recorded during settlements. In Bihar, all areas (<i>abadi</i> , urban) recorded. HIMUDA/ private colony records proposed to be integrated with the <i>jamabandi</i> record format (HP).	Abadi areas (with no details of individual ownership or possession) continue to exist in Haryana, Karnataka, and rural revenue estates in HP. Issues being faced during integration of HIMUDA records – difficult to superimpose flat numbers to original <i>khasra</i> numbers (HP).
LRM : Possessio	n		• •	
Tenancy Rights	Historically, RoRs have reflected different forms of tenancies with respect to cultivation rights.	Cultivator shares are not indicated in Haryana or HP RoR. Actual small cultivators not reflected in records anymore, fearing tenancy legislations.		No provision in urban RoRs to record tenancies. Vast spectrum of tenurial rights with respect to 'slums', squatters, 'encroachments', irregular settlements are not recorded in land records.
LRM: Classificat	LRM: Classification			
Land use classification	Haryana has provision to update land use through bi-annual <i>khasra</i> girdawari.	In practice, <i>khasra girdawari</i> not done in field. In HP, land use is updated only during settlement.	Planning authorities generally maintain a record of existing land use (in terms of <i>khasra</i> numbers in HP), and change of land use (CLU) permissions. Possible scope of data bridge.	Revenue records do not reflect urban land uses, or permissions such as CLU/layout permission: no mandate by legislations.

LAND RECORD MODERNISATION: 'GOOD PRACTICES' & 'GAPS'

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LRM: Extent				
Spatial records, post consolidation	In Haryana, reduced scope for detailed spatial records: consolidation into uniform land parcels makes mapping, dividing and amalgamating the parcels easier.	Joint owners might be cultivating specific portions, but these are not reflected in spatial (or textual) records. Scope for disputes.	Easier to assemble land for real estate purposes.	<i>Abadi</i> areas continue to exist even in consolidated villages, with no details of individual ownership or possession.
Spatial Records: Accuracy & Updating	In Karnataka, IMP & Pre- mutation sketch 11E introduced to update spatial records during transaction. Haryana and HP have provision for a <i>tatima</i> sketch, but no link with technology yet.	Textual data and spatial data of the land records may not match. Cadastral data and on- ground measurements may not match. Litigation due to variation/inconsistency in records. Boundary disputes highest in number. Increased spatial accuracy may increase disputes in the short and medium term, in absence of clear protocols.	In revenue estates with an urban character, maps are usually drawn at a more suitable scale, than the scale used for rural areas. In Bihar, individual property maps are drawn even for <i>Abadi</i> areas.	In Haryana, single RoR in urban areas might include several joint owners, without spatial delineation of extent. In HP, maps are updated only during settlement (40 year gap) which is significant for urban areas. Different combinations of institutions in urban/peri-urban areas have led to different cadastre situations and records formats. Probability of mismatches due to inaccuracies and scale differences. These mismatches become significant when land is acquired for development purposes.
Land Record Ma	anagement: Encumbrances			
Encumbrances	RoRs may include land acquisition details, lease, mortgages, court orders, tenancy rights, etc. In HP, built-up details, and Special exceptions under Sec. 118 noted.	Poor consistency of level of detail (between states, and within the same state), due to poor communication, lack of incentives to update records. Karnataka has initiated technological data bridges for the same.	In HP, entry of built up details in the <i>jamabandi</i> .	Urban encumbrances (license, CLU, regularisation status, location in controlled area, existing land use, etc.,) not reflected in RoR.

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		PROCESSE	S	
Mutation	Introduction to Right to Service provisions has led to increase in rate of disposal of mutations applications, and within a limited time period (HP, Haryana, Bihar).	Mutation backlogs still remain e.g. in Bihar. Bihar also has no provision for updating of lease, mortgage, court case, etc., via mutation. Often only textual records updated during mutation.	Poor status of mutations in urban/ peri-urban areas of Karnataka and Haryana— often updated only till last agricultural use.	In Haryana, mutations in urban areas are often manual, and not through HALRIS. Change of land use not considered as mutation, so corresponding records are not updated.
Settlement	Updating of village map, and land classification, via settlement. In HP, customary rights also recorded.	Settlement often takes a very long time, and results in multiple disputes. Need for protocols to resolve differences between legacy record and fresh surveys. In Haryana no settlement operations post- consolidation.	In HP, settlement operations have resulted in more up-to- date urban records than other states, especially in terms of spatial records, and land use classification.	Due to time-lag in settlement, records of various areas not consistent in their level of details.
Land acquisition	In Karnataka, use of technology (Bhu-Swadheen) to update records to acquired land parcels.	BhuSwadheen yet to be used by major land acquiring bodies. Often, land acquired is not updated in terms of ownership, leading to probable disputes during allotment/ sale of assets. Provision for adequate compensation for sharecroppers, commercial use of land etc., needs to be validated through records, which often do not include updated records of these.		The link between land records and processes of acquisition, notification, denotification is incomplete and not updated in real time. Inter- institutional land transfers may not be updated in land records especially in intermediate stages. In the absence of up-to-date urban land records, suitable compensation may not be paid.

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TECHNOLOGY			
Digitisation of Textual Records	Digitisation of RoRs is complete in Karnataka (rural only), Gujarat (partially for urban) and Haryana. Record keeping is faster, simpler and cleaner. Citizens have easier access to RoRs, at the <i>tehsil</i> level in Haryana and village level in HP (through LMKs).	In HP, records of remaining <i>tehsils</i> will be computerised after the ongoing settlement is over. In Bihar, records of several districts pending for computerisation: missing or un-updated records in some areas. In Bihar, access of citizens to computerised RoR copy is yet to be implemented.	
	In Haryana, Plot & Property Management system in HUDA areas creates digital records. Digitised property tax records available in specific urban centres, across five states.	HUDA system has limited scalability. No data bridges between revenue records (RoRs) and property tax records/ other urban records.	
Registration	Registration computerised in most states: KAVERI (Karnataka), HARIS (Haryana), HimRIS (HP), SCORE (Bihar) & GARVI (Karnataka). Improved service delivery to citizens, and higher stamp duty collection.	HimRIS yet to be implemented in some <i>tehsils</i> of HP (which typically witness low number of transactions).	
Mutation	Completely computerised mutation process in E-Jamin, BHOOMI and HALRIS. Mutation modules for several encumbrances (mortgage, lease, court case, acquisition). Reduced mutation gap. Improved service delivery for citizens.	Limited process engineering in HALRIS & HimBhoomi. Modules of HALRIS are not fully utilised because backend datasets or processes (e.g. <i>Khasra girdawari</i>) are not in place. HALRIS does not provide updated urban details. HimBhoomi and BhuAbhilekh (Bihar) currently involve only data entry for updating of record, post manual mutation sanction by revenue officials.	
Registration -Mutation link	In Karnataka, registration followed by J-slip, which triggers mutation process. Similar process in GARVI-E-Jamin & HARIS- HALRIS: Once a transaction deed is registered, corresponding RoR reflects that mutation is pending. It also enables verification of whether seller owns the property under transaction.	One-way bridge between HimRIS & HimBhoomi, Registration does not automatically trigger mutation. In Haryana <i>tehsils</i> , Bridge is either not used or partially used (especially in urban periurban areas); reverted back to manual process. No registration-mutation link in Bihar, as land records yet to be computerised completely.	
Digitisation of Spatial Record	Preservation of Maps through ongoing digitisation. Bihar has computerised system for easier access to digitised maps - operational at state level, and select district headquarters. BhuNaksha (HP, Haryana, Bihar) and E-Jamin (Gujarat) to provide spatial extract of land parcel, with RoR copy.	Unless resolved, the inaccuracies of <i>mussavis</i> will be carried forward in the digitised maps too. In Haryana and HP, BhuNaksha will follow the system of reflecting jointly-owned large plots, without marking which owner possesses which area.	
	Initiatives to create more accurate and digitised maps using ETS and GPS technology, during settlement.	Lack of protocols for resolving issues regarding (i) RoR updating and spatial updating not being on par (ii) differences between old maps and fresh surveys.	
Spatial Record Updating	BhuNaksha is designed for remote, real-time updating of digitised maps, during mutation process. Bihar & Karnataka have introduced provision for private surveyors.	Updating through BhuNaksha yet to be implemented in any of the study states.	

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	LEGAL & INSTITUTIONAL			
Archaic Laws, and their updating	Bihar has introduced new legislations to streamline the processes of mutation, settlement, dispute resolution. Karnataka and Gujarat have made certain suitable changes in legislations to enable use of technology.	Most legislations require to keep up to speed with technology changes e.g. Digitisation of maps and spatial updating does not have any legal sanction yet. Lack of clear, legally relevant protocols and processes to address data discrepancies. In Haryana, circulars/ government orders are used for procedural changes, without statutory backing.		
Institutional jurisdictions	In Haryana, single authority for all purposes—revenue, land records, registration, survey and demarcation. In HP, municipal boundaries and planning areas boundaries are defined in terms of <i>khasra</i> numbers and revenue estates respectively. In Haryana, controlled areas notified in terms of <i>khasra</i> numbers.	In Bihar, registration jurisdictions are independent of revenue jurisdictions. In HP & Bihar, settlement officials move from one district to another, as and when surveys are completed. Layers of jurisdiction among urban authorities, which change with time or overlap, leading to ambiguity. It is difficult to navigate the urban system.		
Inter- Institutional Linkages	In HP, integration of revenue and registration-upto district level: Sub-Registrar is also the <i>tahsildar</i> . In Haryana, survey & settlement functions also integrated with the revenue-cum- registration officials. In Karnataka & Gujarat, top positions of revenue and survey departments are merged at state level. Presence of revenue officials across urban institutions to facilitate land acquisition, allotment, and updating of records.	In HP, Settlement wing is distinct from Revenue-cum Registration wing. In Bihar, Registration wing is distinct. Inter-Institutional differences might arise, leading to delays. Disconnect between revenue jurisdictions/land records systems and other urban institutional jurisdictions such as planning areas and municipal areas.		
Transition to Technology	Designing of a suitable, robust land records system requires coordination between NIC & the Revenue Department. HimBHOOMI has successfully incorporated <i>tehsil</i> level differences, but it took time.	DILRMP design and funding is defined by the Center, and does not allow for flexibility within the state. Some states facing infrastructure issues. Initiatives are implemented incrementally, without a clear phasing strategy detailing out the modalities. Reluctance to shift to new technology among ground-level revenue officials. Insufficient training and capacity building coupled with a sudden and complete transfer to use of modern technology		
Capacity Building & Staff Strength	Gujarat Revenue Department has published a series of manuals for various officials (Collector Manual, Prant Officer Manual, Mamlatdar Manual, Talati Manual) and processes (Resurvey Manual & E-Dhara Manual). Systems have been set up for officials to be regularly trained and periodically reviewed. In addition, suitable incentives such as awards etc. have been provided.	Shortage of staff, additional responsibilities as reasons for delays in processes. Need for regular refresher courses for revenue officials. Discretionary powers of <i>patwaris</i> and <i>tahsildars</i> remain despite attempts at institutional reform. Resistance from field-level officials when required to give up certain powers in favour of technology.		