MARCH 12-14, 2019 I India International Center, New Delhi

Technology Options to Improve Land Administration

Organiser(s)/: Institution(s) Vijay Rai Welthungerhilfe & NRMC-CLG





Despite wide recognition of the link between poverty and landlessness in India, the country has the largest number of landless persons (over 500 million) in the world. Fifty-six per cent (101.4 million) of rural households do not have a permanent homestead while 30 per cent (53.7 million) households consist of landless labourer, who face the worst deprivation. In fact, research has shown that landlessness is the best predictor of poverty in India – a better predictor than illiteracy or the membership in a schedule caste or scheduled tribe.

Although the situation varies by state, the general state of land records in India is inadequate. The vast majority of rural households – and virtually all-poor households — have problems with their land records or documentation causing a variety of negative impacts. Textual records are often of low quality and limited coverage and spatial records are often outdated. Un-updated land records are a significant cause of land tenure insecurity – certainly for the poor, but also much more broadly. Inadequate land records also facilitate corruption, contribute to the high and costly incidence of land disputes, reduce the government's ability to conduct effective planning and raise revenue, and generally limit the capacity for good land governance. Land conflicts constitute 66% of civil court cases in India and along with billions lost in stalled investments, probably cause the biggest GDP drains in the economy with very high social and ecological cost. Small and marginal farmers, who account for more than half of the total land holdings, and may not hold formal land titles, are unable to access institutionalized credit. Incorrect land records also affect the availability of other inputs for farming.

Security of land tenure is incumbent upon clear, transparent and updated land records, documenting the personal and parcel information clearly along with tenurial information as per prevailing legal (formal or customary) regime.

DILRMP has been pushing progress towards this through its goal of conclusive titling, by helping states progressing substantially in the areas of computerization of land records (CLR) closely followed by computerization of registration process and digitization of cadastral maps. However, the component of 'survey and resurvey' has not progressed as desired, faced with challenges of cost norms, clearances from appropriate authorities for aerial survey, technology choices, setting of ground control points as well as very limited community participation, in spite of some states (viz. Bihar and Odisha) bringing in special legislations. DILRMP has been able to complete only 2% villages in terms of resurvey, while 86% records computerized and 46% old cadastral maps digitized as on November, 2017.

Fast changes in technology landscape in the contemporary world, at the same time, is making mapping more inclusive, less costly, more efficient and easy to handle. IT use is growing in emerging economies and cheaper smartphones/tablets have become now more ubiquitous. Mapping options are more evolved, universal, less costly and more accurate with expanding GIS infrastructure and technologies as well as with spaces opening up around availability and high resolution of satellite imageries and Increased access to (and lower cost) of drones. In India, already there have been experiments and pilots around use of such technologies to secure land rights of forest and slum dwellers and also update and consolidate land records.

The process of digitalizing textual records in various Indian states has pointed to several best practice principles, making the process transparent and results broadly accessible. The state of Andhra Pradesh for example is now using the blockchain technology to make land records tamper-proof. Another important best practice is the use of community led, multi-sourced inventory processes to correct the mistakes in the manual records before they are computerized.

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There is an urgent need to learn from such experiences within India in modernizing land information systems to develop viable and replicable models for improving and maintaining both textual and spatial records. This session, drawing from such experiences of state and non-state actors at different locations and legal-social contexts will showcase diverse technology innovations towards improving and updating land records. It also seeks to stimulate discussions around the potential, limitations and challenges of such options through different stakeholder-lenses with an objective of exploring fit-for-purpose solutions.

Target audience

Key decision/policy makers in the administration, civil society, technology providers, entrepreneurs

Workshop Objectives

- 1. To discuss objectives, processes, achievements and challenges of DILRMP (Digital India Land Records Modernization programme).
- 2. Dissemination of lessons learned/good practices from different pilot projects on use of technology in mapping land records across India.
- 3. Identify key challenges and barriers in using technology in carrying out land reforms at state level.
- 4. To promote a community of learning exchange among administration, civil society and service providers on use of technology.

Workshop Outcomes

- To establish a network of practitioners to exchange key learnings and provide support on land records digitization.
- To contribute towards a model action plan on use of technology to bring transparency and clarity in the title of the landholders in order to minimize land disputes.

<u>Session Plan</u>		
13-Mar-19	Panel 13: Technology Options to Improve Land Administration	13.45 - 15.15 Hrs
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Chair	Vinod Agrawal, Retd. Additional Chief Secretary, Government of Telangana	
Moderator: Ramesh Sharma, National Convener, Ekta Parishad		
H.S Meena, IAS, Jt. Secretary, Department of Land Resources, Govt of India		
Ms. Karuna Akella, Special Commissioner, Land Administration, Government of Telangana		
Aswani Kumar Munnangi, PhD. Scholar, IIT Kanpur Low-cost foot-mounted inertial navigation system for updating of Cadastral Maps <i>G V Rao, Director, Geolysis & Pravanjan Mohapatra, NRMC</i> Use of mobile app augmented with DGPS receiver in mapping forest rights		
Amarsh Chaturvedi, Transerve Drone-enabled workflow for mapping urban slums: Solution and Challenges		
Gopal Naik: Hybrid geospatial technology f	or improving crop area data management in India	

