



Land Governance in an Interconnected World

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WHAT DO COMMUNITIES WANT FROM LAND REFORM? A SOCIO-TECHNICAL EXPLORATION OF COMMUNITY-LED LAND RIGHTS DOCUMENTATION PROJECTS

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Abstract

Mobile penetration and technology advances, together with guidelines such as ‘fit-for-purpose’ have arguably largely solved the problem of ‘insufficient technical capacity’. What remain are the social, institutional and political questions that will fundamentally impact success or failure as well as the sustainable implementation of land administration activities once the project is completed. In the land administration literature, these socio-technical elements have been under-researched, and are typically under-reported, or simply not considered, in project monitoring and evaluation.

This paper explores the application of an assemblage methodology to represent and interrogate the complex connections between the actors, structures and technologies that form the implementation of land administration at the local level. It focuses on community-led land rights documentation, as these projects present a significant opportunity to understand local values relating to land and land rights. The paper contributes to a better understanding of the socio-institutional aspects that drive land reform success.

Key Words:

community-led, grassroots, land rights, assemblages, land administration



1. Introduction

The challenges of effective land administration and land governance are well-known and documented. Traditional, ‘Western-led’ models of land administration reform in the developing world have received criticism for their high costs; emphasis on technology and experts; emphasis on private/individual property rights and enabling of the land market; not fulfilling intended socio-economic aims; and for their top-down nature that ignores local practices and experiences (Bernstein, Byres, & Cousins, 2007; Bromley, 2009; Payne, Durand-Lasserve, & Rakodi, 2009).

There has been a recent shift towards a pro-poor, participatory and ‘fit-for-purpose’ land administration, whereby proponents have increasingly begun to recognize local stakeholder’s roles in mapping and documenting land and property rights and features (Enemark, Bell, Lemmen, & McLaren, 2014; Zevenbergen, Augustinus, Antonio, & Bennett, 2013). However, this recognition has largely focused on the technical and procedural and is founded on the premise that many projects are government-led initiatives, which may be aided, rather than designed, by individuals and community groups. It largely ignores the central role that individuals and community groups play in sustaining land administration reform, and in doing so, fundamentally ignores *how* local actors could use such approaches to redefine what is important to them, in terms of recording and managing land information.¹

Our intent here is to build on the current discourse on fit-for-purpose land administration, associated tools and practices, as these represent significant progress in the domain of land administration. We seek to extend these by highlighting the narrow implementation of *participation* in existing land administration reform practices, and drawing attention to the roles that socio-institutional structures and behaviors play at the local level. Ultimately, whilst there is broad acceptance across disciplines that property rights are inherently social relationships with regard to a ‘thing’ (Bennett, Wallace, & Williamson, 2008; Gray, 1991; von Benda-Beckmann, von Benda-Beckmann, & Wiber, 2006), such thinking is yet to fully extend to the design (and evaluation) of land administration projects. Neglecting to acknowledge this may fundamentally impact project success, failure and/or sustainability, in ways that may not necessarily show up in existing monitoring and evaluation practices.

In this paper, we argue that this is an important gap to be addressed that may better enable donors and project implementers to identify and plan for socio-political impacts, which in turn may impact project successes and failures. We propose that the questions of power, participation, structure and decision-making, which are more commonly addressed by social science methodologies, could benefit the fit-for-purpose land administration literature, as well as future project evaluations. In

¹ To some extent, this is addressed in some of participatory GIS literature, which has almost exclusively targeted rural areas (e.g. indigenous or forested lands) rather than urban areas (see Brown, 2012).



particular, we draw from assemblage thinking to begin a discussion on a possible methodological framework for reviewing and assessing land administration projects that take into account local-level socio-institutional and socio-technical impacts.

The structure of our paper is as follows: we first explore concepts of fit-for-purpose land administration and present a basic typology of projects that seeks to highlight levels of community participation. We then highlight the predominant focus on project outcomes, versus processes, in land administration and how such a focus may skew perceptions of the benefits of community-engagements and community-led design. We finally provide an overview of an assemblage methodology a potential framework to better explore socio-institutional and socio-material perspectives in land administration programs, to generate a better understanding of participation and future opportunities for improved community engagement and tenure security outcomes.

Whilst this paper may appear highly theoretical, we seek to frame social science theories, such as assemblages, in an approachable and highly implementable way, in order to inform future empirical studies. That is, future research that may better capture the politics, relationships, day-to-day practices of stakeholders, etc., that is rarely documented in project reports, but routinely impacts the success or failure of land rights and land titling initiatives. Our aim is not to develop rigid explanatory frameworks, but rather to broaden understandings and interpretations, particularly in light of the growing linkages between community-led initiatives and top-down government processes of regularization, titling and managing land information systems.

2. Participation, governance and typology of land administration projects

The following section provides a background and key definitions in the space of fit-for-purpose land administration, and particularly seeks to highlight the narrow implementations of *participation* in existing land administration reform practices.

2.1 Definitions

Firstly, some definitions. The focus of our paper is land administration reform at the community level, by which we mean the process of confirming, adjudicating, documenting and managing the land rights of households, entities, groups within a community or the community itself. In the classic ‘Land Administration Systems’ diagram (see Figure 1) this is encompassed by the *land tenure* and *land information* boxes and includes processes of regularization (being the adjudication and boundary delimitation of land rights), registration (which includes documentation), the recording and management of this information in some form of land information system (LIS) and the issuing of titles. Land use, land value and land development processes remain relevant to the issues of socio-political and socio-technical impacts that we will discuss, but are largely beyond our scope.



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For existing land administration experts and practitioners, the above may seem redundant, however it is important in our development of a brief typology of projects. For example, there are a number of slum-mapping, indigenous mapping and enumeration projects that have relevance to our analysis, which may have similar practices to land administration reform, yet ultimately are not in a position to adjudicate rights for the formal system. Hence the ‘or’ in our definition above. These projects are more typically bottom-up initiatives and present different forms of participation and governance to typical land administration reform projects. As more projects emerge that see partnerships between formal and informal authorities – including between government agencies and civil society organisations, often facilitated by the donor or multilateral community – it may become even more necessary to clearly identify roles and types of participation and governance structures to ensure mutual benefit and sustainability.

2.2 Fit-for-Purpose Land Administration

The Fit-For-Purpose (FFP) Land Administration approach (Enemark, et al, 2016) is one that is flexible and pragmatic, meeting the core needs of land administration in the present with a minimum of effort, in order to improve over time as necessary and relevant. It focuses firstly on clarity of purpose and secondly on implementation, as elaborated by Enemark (2017: 6) as the three fundamental characteristics of the FFP approach:

- **Focus on purpose:** Identifying what is fit-for-purpose in the context of securing tenure for all, rather than blindly following rigid standards for accuracy or implementing the latest technology.
- **Flexibility:** Shaping legal, spatial and institutional frameworks to best accommodate the identified purpose, including abilities to enable different tenure types, such as social or customary tenure as well as private ownership and leasehold.
- **Incremental improvement:** Designing systems to meet the needs of today, optimally balancing costs, accuracy and time needed, to develop a ‘minimum viable product’ which can be incrementally upgraded and improved in response to emerging needs and opportunities.

Four key principles then support the implementation of these characteristics:

- **General boundaries rather than fixed boundaries:** general boundaries, being boundaries that relate to physical features in the field and which may not be precisely determined, are deemed sufficient to delineate land areas for most land administration purposes, especially in rural and semi-urban areas
- **Aerial imageries rather than field surveys:** high-resolution satellite or aerial imagery is deemed sufficient for identifying parcel boundaries for most land administration purposes, and is typically significantly cheaper than field surveys.



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- **Accuracy relates to the purpose rather than technical standards:** land information accuracy should meet but not necessarily exceed the needs of what the information will be used for, and legislating specific accuracies is unnecessary and unproductive.
- **Opportunities for updating, upgrading and improvement:** land administration processes should be designed with incremental improvement in mind, with ongoing updating and sporadic upgrading as relevant or necessary for fulfilling land policy aims and objectives.

These principles operate within the spatial, institutional and legal frameworks, as shown in Figure 2. The spatial framework seeks to represent the physical aspects of land rights on the ground, and should be sufficient for supporting the rights identified by the legal framework. The institutional framework facilitates the administration of legal and spatial frameworks, including the integration, transparency and accessibility of the system.

So, reviewing the characteristics, principles and operational frameworks of fit-for-purpose land administration, whilst these clearly support a more participatory land administration, they still are largely oriented around the design and implementation of top-down projects. They are also very technocratic and continue to privilege formal systems and formal approaches over methods that may more explicitly encompass community/householder inclusiveness and desires. The FFP approach does espouse a participatory methodology, that includes the use of para-surveyors/trusted intermediaries instead of land surveyors, however it is participatory in implementation rather than design – there is little guidance or direction on how processes can more effectively engage with community members and householders, pre-project, to determine the best methods of promoting their tenure security. What might this mean in practice? We still may not be tailoring the identification, documentation and management of land rights information to the specific purpose of tenure security. The literature already identifies some uncertainty as to whether *land titling* actually supports tenure security, in addition to access to credit, socio-economic and livelihood improvements, etc. But further than this, by not involving community members in the design of projects, we may be limiting the sustainability of projects, in terms of maintaining data, ensuring processes remain implementable beyond the end of the ‘funded’ project and so on.

Moving beyond this, we further lack information around how the technologies promoted in FFP land administration may promote (or otherwise) participation, and particularly the participation of recognized vulnerable groups, including women. This enabling or limiting of participation will possibly vary by context and location, according to prevailing social norms and established practices. Similarly, these less tangible norms and institutional and governance structures may influence the practice of FFP in ways as yet unknown. As the reviews and completion reports of past land administration projects and programs demonstrate, these rarely go according to plan, and it is likely that project successes, failures and sustainability are impacted by such factors.



2.3 Overview of types of land administration reform projects

To further promote an understanding of why FFP land administration should better encompass socio-institutional and socio-technical, the following section provides a brief overview – a typology – of the different types of land administration reform projects that we are seeking a more participatory perspective of. The specific aim of this typology is to highlight the governance and participation aspects of land administration, and the typically absent community input to project design at a formal level.

To achieve this, we identify projects across four levels of community agency/design:

- ***Community-led mapping and enumerations***

These projects are typically instigated from the bottom-up, by civil society organisations, with very limited (if any) government input. The aim of these projects is typically to put communities on the map, identify and advocate for service provision (either self-, donor- or government-provided). The projects may document individual plots and occupants, typically for the purposes of defining who lives within and is part of the community, but these will likely not be integrated with or form part of more formal land rights administration processes. Clear examples can be seen in the enumerations of informal settlements, for example by Slum-Dwellers International in India and elsewhere (Appadurai, 2012; Patel, Baptist, & D’Cruz, 2012), and in projects such as MapKibera and OpenStreetMap where individuals and communities support the collection of data around households, service provision etc (e.g. Hagen, 2011; Haklay, 2013).

In partial blurring of formal and informal boundaries, organisations such as Namati and Cadasta are supporting participatory community mapping, similar to the above, with knowledge and technologies that more closely emulate formal systems: Cadasta, by providing the basis for a land information system (or spatial and part-institutional framework), and Namati, by providing integration within the legal framework. These organisations have more overtly taken on a co-design methodology to community mapping, enabling the community members and organisations they are working with to design community mapping approaches with their support (Brinkhurst, Pichel, & Ogina, 2017). They further support local ownership of data. Whilst these processes are designed for empowerment, however, it remains unclear to what extent the formal and informal processes are linked – further work is needed to identify good practices that both support participatory/co-design approaches whilst linking to the formal sector, without abusing community investment.

- ***Indigenous areas mapping***

Indigenous areas mapping is similar to the projects identified in the bullet point above, however more closely align with the body of work known as ‘public participation geographic information



systems' (PPGIS), typically involve the mapping of forest boundary areas and particularly support indigenous and forest-dwelling communities to guard their land rights against land grabbing. They link to the Volunteered Geographic Information (VGI) of OpenStreetMap and similar initiatives, may particularly support spatial planning and decision-making. These processes are arguably more participatory than projects to follow in later bullet points, and likely originate from bottom-up or community-led approaches, however can still be dominated by researchers and NGOs. The PPGIS literature is engaging with the question of 'whose participation' and integrating formal and informal mechanisms, but, similarly to the previous bullet point, provide additional methodologies and mechanisms for FFP land administration to consider and adopt. Examples from the literature that may provide more insight into indigenous area mapping include Namati's community land protection facilitators guide², literature in the field of PPGIS (e.g. Brown, 2012), work on counter-mapping (Radjawali & Pye, 2015) and reports of participatory mapping undertaken by local, national and international organisations such as Indonesia's Community Mapping Network (JKPP) and the International Land Coalition (ILC) (e.g. Di Gessa, Poole, & Bending, 2008).

- ***STDM, MAST, SOLA/OPEN TENURE projects***

Tools such as the Social Tenure Domain Model (both a concept and a tool, the Mobile Application to Secure Tenure (MAST), Solutions for Open Land Administration (SOLA) and OpenTenure all adhere to the fit-for-purpose approach as tools that support more participatory and community-centric forms of land administration. However, to date, the majority of applications of these tools have been government-led. A more thorough analysis may be necessary to determine to what extent community-members and householders have participated in project design, particularly the design of data collection initiatives. These projects have largely been facilitated by the international donor community, including UN-Habitat, the Dutch Ministry of Foreign Affairs, USAID, FAO, etc.

- **Large scale land administration / land titling projects**

These are what we would refer to as the Western, more traditional forms of land administration, which are typically implemented in a top-down manner, instigated by government, often with the support of donors. More recently, these projects are seeking to adopt FFP approaches, particularly drawing on the success of Rwanda (e.g. Schreiber & Bayisenge, 2017). They typically involve international consulting companies providing assistance to government and donors to implement, and rarely involve community organisations in design. Operating at a national scale, it may be difficult to ensure truly participatory processes that meet the needs of those most vulnerable,

² <https://namati.org/resources/community-land-protection-facilitators-guide/>



however more can certainly be done, particularly in terms of monitoring and evaluation of processes.

3. What literature is there on land administration processes and practice, instead of outcomes?

Further to the section above identifying types of land administration projects, paying particular attention to their levels of participation, this section now briefly turns to the literature that is available on the *process* or *practice* of land administration, which pay particularly attention to the socio-institutional or socio-technical elements of implementing land administration, rather than purely technical processes or economic/legal outcomes.

There is significant literature that reviews, evaluates and addresses the outcomes of land administration projects, particularly from an economics (and largely World Bank oriented) standpoint (e.g. Feder & Nishio, 1998; Hilhorst & Meunier, 2015; World Bank, 2003). Specific debates in the literature revolve around to what extent land titling provides tenure security, access to credit, livelihood benefits and so on. However, there is only a limited amount of literature that reviews and studies how local implementations and practices may influence project success. These predominantly come from the domains of anthropology, critical theory, and other social science fields.

In a detailed study on the case the deployment of student surveyors in Cambodia around 2012, Work and Beban (2016) describe how one community in Cambodia ‘remade local social and environmental relationships in anticipation of land titling and in efforts to mimic the social logics in which the cadastral project was embedded’ (p.38-39). Community members cleared land in order to be eligible for land rights, and ultimately witnessed a process that enabled the wealthy elite, resulting in a local land rush facilitated by ‘naïve’ student volunteers. Work and Beban stress that land administration literature needs to focus on the ‘diverse groups of local people [that] actively engage in reshaping the landscape and property relations’. They suggest that ‘scholars must examine processes of land titling and cadastral mapping through attention to their implementation at the local level, because it is always local actors who interpret and contest the policies that govern the titling process’ (p. 67). They highlight also the role that technology, such as aerial imagery and GIS, plays legitimising and de-legitimising rights on the ground, regardless of existing social norms and practices and how prioritizing such technologies and expert knowledge can disenfranchise the poor. Their study of one case of land reform in Cambodia demonstrates the necessity of this broadening of research into the social science domain, given that a diverse group of local and regional actors play critical roles in shaping and reshaping property rights relations, in addition to top-down, state mechanics.



In addition to the paper by Work and Beban, research by Appadurai (2012) reports on enumeration efforts in India that particularly highlight the benefits that community-led land reform can have, above and beyond the anticipated economic returns. These include, in particular, the role that such activities can have in empowering the community, promoting community building, group formation and leadership and greater participation in the political realm. Enabling communities to participate in monitoring, evaluation and reporting initiatives further strengthens their ability to negotiate for and communicate their needs, and provides a richer body of knowledge more generally for the field. Rigon (2017) echoes the work of the preceding authors, in particular highlighting the impact of the interaction between communities and governments, and calling for additional research that analyses the complexity of internal community dynamics during enumeration and how these impact relationships with the state.

The above literature provides just a short overview of available work that targets the *process* of land administration with particular attention paid to community-scale perspectives. Whilst we have drawn attention to lack of available literature in this field, this by no means indicates that the literature we have identified is exhaustive – these are merely representative examples. What we identify here, is the absence of such literature that links to, or integrates with the larger body of literature on land administration.

4. Assemblages as a methodological tool for evaluating projects via process

Before wrapping up and presenting our conclusions, we briefly identify here one tool/methodology - assemblages – from the social sciences that may support land administration practitioners to think about and design land administration reform projects in a more holistic manner, to better embrace and be aware of socio-institutional, socio-political and socio-technical processes. In this section we provide a brief background to assemblages as a methodological framework for understanding, analyzing and potentially evaluating socio-political impacts to land administration projects.

4.1 What are assemblages?

Assemblages as a theory and methodology (and occasionally ontology) have emerged from within the critical social sciences to address the complexity inherent to social systems. Assemblages encompass not simply the relationships and interactions of actors, but how these actors may interact with and be influenced by heterogeneous *non-human* elements, such as technologies, organisations, policies, social norms, procedures, events and so on (Baker & Mcguirk, 2017; Li, 2007). In the context of land administration, this means acknowledging the roles of not just individual actors (land owners, experts, government staff, etc.) in impacting a project, but also the influence of policies (survey regulations, land titling policies and goals, land laws, etc.), technologies in use (including maps and geographic information systems, handheld GPS and mobile phones, land information systems and databases, etc), social norms (including customary



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governance systems, day-to-day practices, gender roles, etc.) and the interpretations of these on the ground. These elements and their relationships are considered non-hierarchical, can change over time or according to perspective and are generally to considered to exist at one or more scales or locations.

In addition, all elements, human and non-human, are considered to have agency. What does this mean? Essentially it enables an understanding of human agency through the lens of enablement/empowerment. Concepts such as power are things that individual entities become enmeshed within, but are not owned or possessed, and relations are not fixed or stable but are enacted in practice. The focus here is on reviewing and describing the *process* as it happens in practice/reality, attempting, via the methodology, to remove inherent bias or preconceptions.

Similarly an assemblage methodology understands that there are multiple perspectives to any one event, policy or project implementation. This promotes a rich evaluation approach that seeks to prevent ‘pre-determination’, understand that relationships between elements may change over time, or may simply be perceived in different ways by different stakeholders. An example of this, is the context of a data collection form for land rights information. Such a form may be prescribed in regulations, circulated to distant places and can organize and provide rules to the process of data collection. However, this document has been created by an individual according to a set of defined principles, may include socio-cultural norms that are not expressly articulated and may be interpreted by trusted intermediaries or database analysts in different manners. A trusted intermediary using this form in practice may be perceived as having certain qualities by a householder that he/she does not have in a different context. This may seem esoteric or unimportant, but this widening of thinking and interpretation may lead to greater insights into discrepancies between theories and practice of land administration in the field.

An attempt to present the framework of assemblage methodology is presented in Figure 3.

So, in summary, but introducing a discussion on assemblages here, we seek to broaden research and perspectives on land administration such that:

- they recognize a multitude of heterogeneous actors and constituent elements
- they realise that actors have agency, and that non-human actors can impact this agency in multiple ways and have their own characteristics and dynamics
- they recognize the need to understand the complete process of land administration, eschewing preconceptions and bias, in order to seek out the variations between intent and reality
- they understand that elements and relations will change over time, geography and perspective



- a degree of uncertainty applies to the assemblage, such that the behavior of the whole is not deterministic

4.2 Answering some key questions regarding the use of assemblage methodology for land administration

In an attempt to make the above description of assemblages less esoteric, we identify some key questions here regarding how an assemblage methodology could be applied in the context of land administration, in an attempt to also further stress the key need for wider application of social science methodologies in this domain.

What does the land administration assemblage comprise?

In the above we have tried to include some examples of what the land administration assemblage could comprise, but this is ultimately down to context, and what the aim of the project might be. We've suggested the adoption of an assemblage methodology in order to support the evaluation of the extent to which a land administration project is meeting the aims for householder or community tenure security. In this case, it would be useful to define the following elements:

- Human actors: *could include householders, community leaders, government staff, donor or non-government organization representatives, project team, trusted intermediaries, etc.*
- Non-human actors/elements: *could include project implementation documents, policy documents, events held, technologies used (GPS, GIS, physical imagery print outs, mobile phones and tablets etc.), government agencies, etc.*

In addition to the above, it will be necessary to contain the analysis, recognizing the limits of time and investment. This might mean limiting geographic coverage (focusing on a single area, although acknowledging some level of interplay at higher scales, including regional and national scales). It may also mean limiting the scope of analysis to, for example, just the process of measuring boundaries, or just the implementation of a single policy, or just the process of accessing land information post-data collection. In an ideal situation, the project could be reviewed holistically, and this is certainly the recommended approach. In some ways, adopting an assemblage methodology is similar to a business process review (BPR) or mapping, but extending this with an *anthropological* or *ethnographic* lens to encompass broader perspectives from the community, and more overtly acknowledging the inherent bias or impacts that technology and other elements may present.

What is the process of adopting an assemblage methodology in land administration?

An assemblage methodology is essentially a guiding framework for a mixed method approach. Building on the 'BPR' analogy of above – and acknowledging that this paper is exploring the



theoretical rather than tested adoption of an assemblage methodology - the process of adopting an assemblage methodology can be roughly distilled into the following processes:

1. Preliminary identification of key elements (actors, non-human actors, etc.)
E.g. Scoping, stakeholder mapping, element identification
2. Tracing the material practices and roles of these actors, both in theory/intent and in reality
Interviewing identified actors on their perspective, understandings, socio-cultural norms and practices. Undertaking workshops or observing events to view or hear further about practice.
3. Observing practice and unpacking spaces of constitution contestation and negotiation
Observing the processes of land administration in the field, or the office; interpreting and exploring variations between volunteered and observed information; interrogating and unpacking the agency of human and non-human actors through a lens of enablement or empowerment.

Key to these steps are some of the questions around participation, intent and agency that have been highlighted above.

How do I start? How do I know when to stop?

These are perhaps the most problematic elements of a methodology such as assemblages, which maintains that the aim of inquiry is not to explain or predict, but to explore; that the object of the inquiry is necessarily complex and multi-faceted, operating across scales and geographies and subject to a multitude of perspectives which, together with the elements themselves, may change over time. Assemblage methodologies allow for emergency and do not typically recognize a strict project centre or origin – which makes articulating a clear and defined scope somewhat problematic.

The intent here is not to further complicate land administration reform. We propose a pragmatic – or fit-for-purpose(!) – approach to adopting assemblages which adopts a defined timescale for analysis, a defined geographic scale and clarity of purpose. The intent of the research should be made clear upfront, and we are clearly proposing this methodology as a mechanism for better understanding community—scale impacts and for the promotion and implementation in the future of more participatory methods.

The steps above provide a starting point; knowing when to stop is another matter. Most likely, this will be time and cost dependent – a researcher or practitioner will have a limited amount of time available to spend in the field. Involving the community in the research itself may assist – perhaps



in the first instance, through a confirmatory workshop to go through findings, acknowledging the limitations that come controversies or contestations may place on this.

5. What does this mean for future land administration projects? Some conclusions.

The increasing number of community-led land rights documentation initiatives drive the importance of beginning to contemplate, question and review the practice of participation, the socio-institutional and socio-political impacts and outcomes of land administration projects. There is a need to reconceptualise land administration in practice, in order to better understand how human and non-human elements within land administration projects interact with one another, and ultimately impact the transition of theory to practice. In particular, there is a need to better bridge the gap between community-level perceptions of tenure security – and how to promote tenure security – and those prescribed by governments and the donor community.

Initiatives by Cadasta, Slum/Shack Dwellers International (SDI) and Namati have resulted, in some cases, in parallel informal registries and repositories of information that contrast with those of the formal sector. With the acknowledged limitations of time, cost and resources, there is substantial scope to identify mechanisms and processes by which community-led initiatives can be incorporated within, or linked to the informal system so as to minimise municipal burdens whilst promoting service-provision and sustainable city planning and development. Additionally, these initiatives provide a unique opportunity to understand at the local level what the drivers of land reform may be (and how these contrast with national-level drivers), and how local-level socio-institutional structures may influence the practices of property (thus informing how land reform, and a ‘culture’ of registration may best be promoted). We believe that adopting a methodology akin to assemblages may best assist to facilitate close cooperation between formal and informal sectors.

In this case, we suggest that the ‘assemblage’ framework allows for the representation and interrogation of the complex, multi-dimensional connections and disconnections between the actors, structures, technologies and ‘things’ with respect to local-level land administration activities. These primarily draw out a greater understanding of the socio-institutional aspects that may drive land reform success and sustainability at the local level, and what may facilitate or limit interactions between local and state actors and institutional structures.

We propose that further research, for example, by piloting an assemblage analysis of a project, be undertaken.



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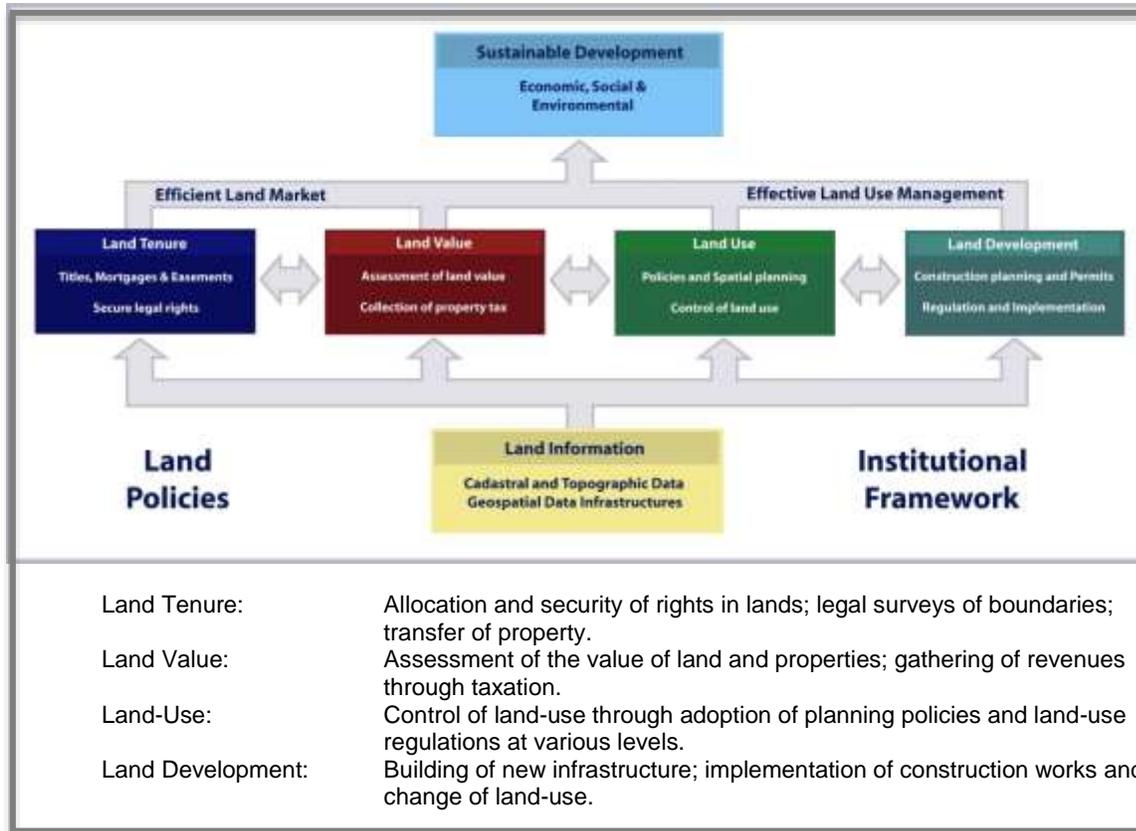


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Figure 1: Land Administration Systems (Williamson et al., 2013))



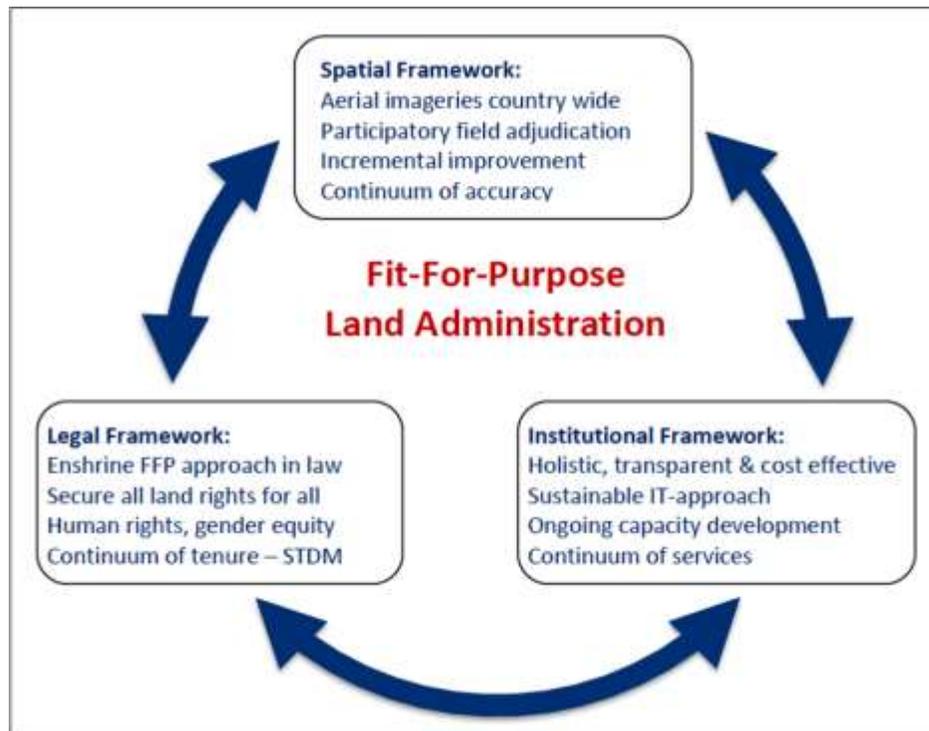


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Figure 2: The Fit-For-Purpose Concept and associated Frameworks (Enemark, et al., 2016)





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Figure 3: An overview of the framing of assemblages, whereby both human and non-human elements and their non-hierarchical interactions/interrelations are considered. These elements are all considered to have agency (that is, to impact power and enablement structures) and may change according to time, perception and scale. All elements have multiple geographies, and their agency and interdependencies may change according to this.

