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**NAMIBIA UNIVERSITY**  
OF SCIENCE AND TECHNOLOGY

**Faculty of Natural Resources and Spatial Sciences**  
Integrated Land Management Institute (ILMI)

# Land, livelihoods and housing Programme 2015-18

## Working Paper

The Integrated Land Management Institute (ILMI) is a centre of the Faculty of Natural Resources and Spatial Sciences (FNRSS) at the Namibia University of Science and Technology (NUST), committed to developing reputable and multidisciplinary research and public outreach activities in the fields of land, administration, property, architecture, and spatial planning.

The Land, Livelihoods and Housing Programme aims at deepening and expanding the focus on these key issues in Namibia. The Programme aims at deepening and expanding the focus on these key issues in Namibia. This thematic approach seeks to reflect the wide-ranging skills existing at the FNRSS., and was developed to guide ILMI's activities during the 2014-18 period. The programme is organised in four aspects: institutional, environmental, fiscal and spatial processes.

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Working Paper No. 3  
**Sustainable Land Governance  
in Support of the Global Agenda**

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## SUMMARY

Land governance is about the policies, processes and institutions by which land, property and natural resources are managed. Land administration systems (LAS) are the operational component of land governance and provide a country with an infrastructure for implementing land policies and land management strategies in support of sustainable development. This paper provides an overall understanding of the land management paradigm in this regard.

Land governance and administration support the global agenda through addressing the key challenges of our time such as climate change, poverty reduction, human rights, rapid urban growth, and the post 2015 Sustainable Development Goals (SDG). Land governance and administration therefore need high-level political support and recognition. This relates especially to developing countries where there is an urgent need to build simple and “fit-for-purpose” land administration systems that will meet the needs of society today and that can be incrementally improved over time.

This paper is work in progress and draws from previous research. The paper supports the public lecture on Sustainable Land Governance in Support of the Global Agenda given at Namibia University of Science and Technology (NUST) on 4 March 2016.

## BIOGRAPHICAL NOTES

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For a full list of about 400 publications see: <http://personprofil.aau.dk/100037?lang=en>

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## EVOLUTION OF CADASTRAL SYSTEMS

In the Western cultures it would be hard to imagine a society without having property rights as a basic driver for development and economic growth. Property is not only an economic asset. Secure property rights provide a sense of identity and belonging that goes far beyond and underpins the values of democracy and human freedom. Therefore, property rights are normally managed well in modern economies. The main rights are ownership and long term leasehold. These rights are typically managed through the cadastral / land registration systems developed over centuries. Other rights such as easements and mortgage are often included in the registration systems.

Looking at the so-called Western world the evolution towards a modern market based and democratic society has taken place over centuries. The people-to-land relationship is dynamic and has been changing over time as a response to these general trends in societal development. During the feudalist era before 1800 land was mainly seen as wealth; during industrial revolution up to around 1950 the aspect of land as a commodity was added, and further into the current information revolution era land is also seen as a community scarce resource. In the same way, the role of the land administration / cadastral systems is changing over time, in response to these societal trends. From being merely a fiscal instrument for valuation and taxation of land, cadastral systems turned into also supporting a legal function in relation to the land market. The most recent examples are current world concerns of environmental management, sustainable development and social justice that are supported by multi-purpose cadastral systems underpinning the core land administration functions of land tenure, land value, and land use, see Figure 1.

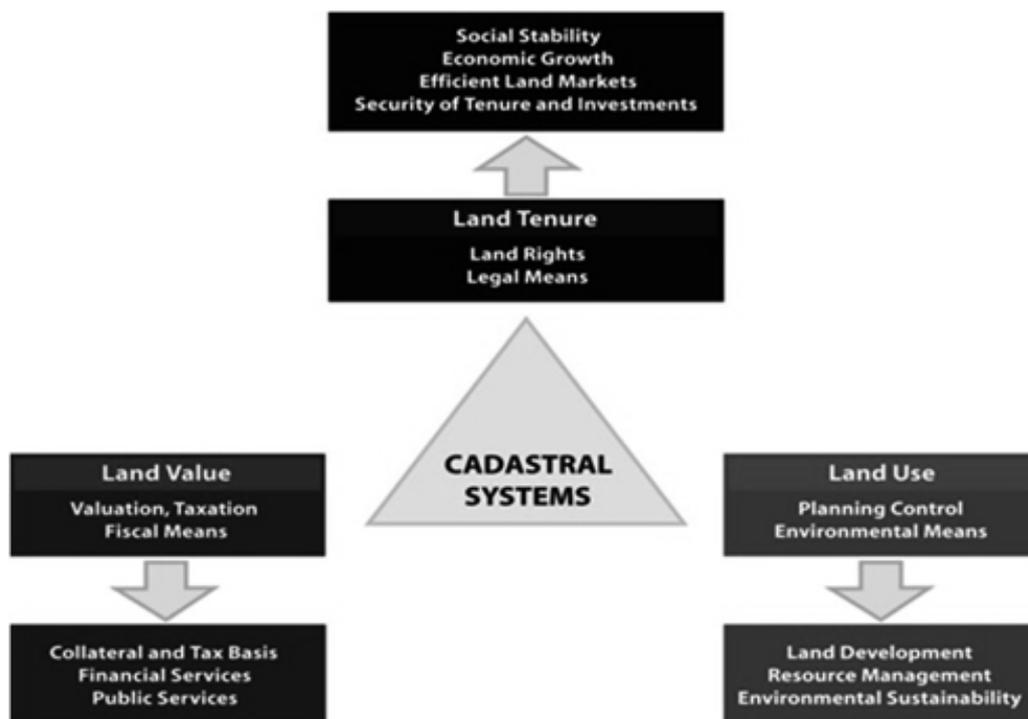


Figure 1: Multipurpose cadastral systems provide a basic land information infrastructure for running the interrelated functions of Land Tenure, Land Value, and Land Use (Enemark, 2004).

## 1. LAND ADMINISTRATION SYSTEMS

Land governance is about the policies, processes and institutions by which land, property and natural resources are managed. Sound land governance requires operational processes to implement policies in sustainable ways. Land Administration Systems (LAS) are the operational component of Land Governance and provide a country with an infrastructure for implementation of land policies and land management strategies in support of sustainable development (Williamson, Enemark, Wallace & Rajabifard, 2010).

Land administration is not a new discipline but has evolved out of the cadastre and land registration areas providing information systems with specific focus on security of land rights (Dale & McLaughlin, 1999). A couple of decades ago land administration was referred to as “the processes of determining, recording, and disseminating information about ownership, value, and use of land when implementing land management policies” (UN-ECE, 1996). The emphasis was on information management reflecting the computerisation of the land information agencies in the 1970s. The focus on information remains, but within recent years the type and quality of information needed has changed, pushing the design of LASs towards an enabling infrastructure for implementing land policies in support of sustainable development. Such a global land administration perspective is presented in Figure 2.

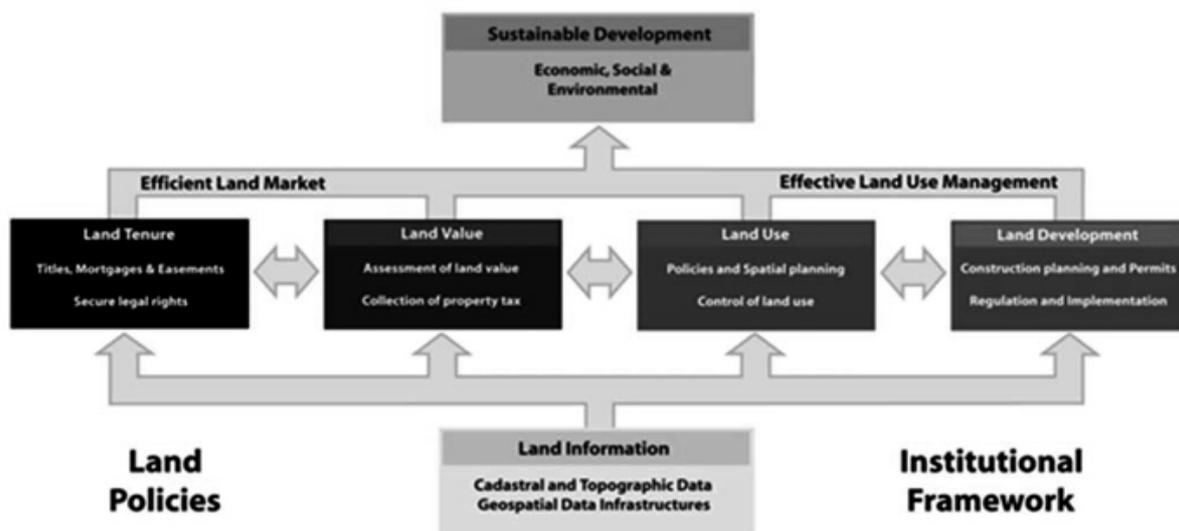


Figure 2: A global land administration perspective (Enemark 2004; Williamson et al., 2010).

Land management covers all activities associated with the management of land and natural resources that are required to fulfil political and social objectives and achieve sustainable development. The operational component of the land management concept is the range of land administration functions that include the functions of land tenure (securing and transferring rights in land and natural resources); land value (valuation and taxation of land and properties); land use (planning and control of the use of land and natural resources); and land development (implementing utilities, infrastructure, and construction planning, and schemes for renewal and change of existing land use).

These four functions interact to deliver overall policy objectives, and they are facilitated by appropriate land information infrastructures that include cadastral and topographic datasets linking the built and natural environment. Ultimately, the design of adequate systems of land tenure and land value should support efficient land markets, and adequate systems of land use control and land development should lead to effective land use management. The combination of efficient land markets and effective land use management is seen as a key component in delivering economic, social and environmental sustainability. Sound LASs deliver a range of benefits to society in terms of: support of governance and the rule of law; alleviation of poverty; security of tenure; support for formal land markets; security for credit; support for land and property taxation; protection of state lands; management of land disputes; and improvement of land use planning and implementation.

From this global perspective, LASs act within adopted land policies that define the legal regulatory pattern for dealing with land issues. They also act within an institutional framework that imposes mandates and responsibilities on the various agencies and organisations. They should service the needs of individuals, businesses, and the community at large. LASs that are designed this way form a backbone in society and are essential for good governance, because they deliver detailed information and reliable administration of land from the basic level of individual land parcels to the national level of policy implementation.

## 2. THE GLOBAL AGENDA

If a hypothetical map of the world is generated by using the Gross Domestic Product as the scale for territorial size – the so-called western regions North America, Western Europe, South Korea and Japan would “balloon” while other regions such as Africa and Central Asia would almost disappear (see map of UNEP, 2007). The global agenda is very much about bringing this map back to scale through poverty eradication, improving education and health services, facilitate economic development, encourage good governance, and ensure sustainability.

The global agenda is threefold and has changed over recent decades. In the 1990s, the focus was on sustainable development; in the 2000s the Millennium Development Goals (MDGs) were adopted as the overarching agenda; and in the 2010s there is increasingly focus on climate change and related challenges such as natural disasters, food shortage and environmental degradation. Finally, rapid urbanisation has appeared as a general trend that in itself has a significant impact on climate change.

The global agenda as set by the MDGs expired at the end of 2015. This agenda served the world well as a focal point for governments to reduce poverty and improve the lives of poor people. The progress in meeting the goals was monitored and published yearly as a global incentive. For example, the 2014 progress report showed that the extreme poverty rate had been halved and Goal 1 was thereby met at a global scale – but with huge regional deviations, e.g. the Sub-Sahara Africa region lagged far behind (UN, 2014a).

The MDGs are now replaced by the Sustainable Development Goals (SDGs) with a new, universal set of 17 Goals and 169 targets that UN member states are committed to use to frame their agenda and policies over the next 15 years. The goals are action oriented, global in nature and universally applicable. Targets are defined as aspirational global targets, with each government setting its own national targets guided by the global level of ambition but taking into account national circumstances. The goals and targets integrate economic, social and environmental aspects and recognize their interlinkages in achieving sustainable development in all its dimensions (UN, 2014b).

While the MDGs did not mention land directly, the new SDGs include six goals with a significant land component mentioned in the targets. E.g. in Goal 1, that calls for ending poverty in all its forms everywhere, target 4 states that by 2030 all men and women will have equal rights to ownership and control over land and other forms of property. Similarly the land component is clearly referred to in Goal 2 on ending hunger, Goal 5 on gender equity, Goal 11 on sustainable cities, Goal 15 on life on land, and Goal 16 on peace, justice and strong institutions ([sustainabledevelopment.un.org](http://sustainabledevelopment.un.org)).



Figure 3: The 17 Sustainable Development Goals ([sustainabledevelopment.un.org](http://sustainabledevelopment.un.org)).

The goals and targets expressed in the SGDs will never be achieved without having good land governance and well-functioning country-wide LAS in place. There is a need for reliable and robust data for devising appropriate policies and interventions for the achievement of the SDGs and for holding governments and the international community accountable through monitoring and assessment. This calls for a “data revolution” for sustainable development to empower people with information on the progress towards meeting the targets (UN, 2014a).

Responsible governance of tenure is now incorporated as part of the global agenda through the Committee on World Food Security’s Voluntary Guidelines on Responsible Governance of Tenure (FAO, 2012). These Guidelines represent a global consensus on internationally accepted principles and standards for responsible practices. While the Guidelines acknowledge that responsible investments by the public and private sectors are essential for improving food security, they also recommend that safeguards be put in place. These protect tenure rights of local people from risks that could arise from large-scale land acquisitions (land grabbing), and also to protect human rights, livelihoods, food security and the environment. The Guidelines promote secure tenure rights and equitable access to land as a means of eradicating hunger and poverty and supporting sustainable development. The guidelines thereby place tenure rights in the context of human rights, such as the right to adequate food and housing.

Good land governance is also essential for meeting the challenges of climate change and rapid urbanization that should be seen as part of the global agenda as well. Climate change mitigation refers to efforts and means for reducing the anthropogenic drivers such as greenhouse gas emissions from human activities – especially by reducing emission of carbon dioxide (CO<sub>2</sub>) related to use of fossil fuel. On the other hand, adaptation to climate change can be achieved to a large extent through building sustainable and spatially enabled LAS. Such integrated LAS should include the perspective of possible future climate change and any consequent natural disasters. The systems should identify all areas prone to sea-level rise, drought, flooding, fires, etc. as well as measures and regulations to prevent the impact of predicted climate change (Enemark, 2014).

Rapid urbanization with the continuing concentration of economic activities in cities is another component of the global agenda. Urbanization is inevitable and generally desirable. However, this increase in economic density needs to be balanced with environmental safeguarding through sustainable development policies

and land policies needed to manage and connect megacities and their hinterlands holistically to maximize the significant economic and social benefits across the region. It is recognized that over 70% of the growth currently happens outside of the formal planning process and that 30% of urban populations in developing countries are living in slums or informal settlements (UN-Habitat, 2012). Sound land management, governance and administration are key measures to address these urban challenges.

There is a general consensus that governing the people-to-land relationship is at the heart of the global agenda. However, it is also recognised that about 75 percent of the world's population do not have access to formal systems to register and safeguard their land rights. Only about 40 countries in the world have well-functioning LAS. There is an urgent need to build simple and basic systems using a flexible and low cost approach to identifying the way land is occupied and used. When considering the resources and capacities required for building such systems and the connected basic spatial framework in developing countries, the western concepts may well be seen as the end target but not as the point of entry. Building such fit-for-purpose systems will establish the link between people and land, and thereby enable management and monitoring of improvements in relation to meeting aims and objectives of adopted land policies as well as meeting the global agenda.

#### 4. FIT-FOR-PURPOSE LAND ADMINISTRATION

The Fit-For-Purpose (FFP) approach essentially means that the process of building the systems should start by analysing and defining the purpose(s) that the system should serve and then deciding on the adequate approach for meeting that purpose. This means that systems should be designed to meet / fit the purpose(s) rather than following some rigid regulations and demands for accuracy often imposed by colonial time and leading to systems that are unsustainable for developing countries and serving only the elite.

The main purposes of the systems are normally identified as security of tenure, access to credit and investments, valuation and taxation, planning and control of land use and natural resources, and facilitating the process of land development. LAS therefore need a spatial framework to operate which should identify the individual land parcels / plots / spatial units. This framework should be established according to the purposes e.g. the need for accuracy will normally be higher in densely populated and high value urban areas than in open landscape, rural or mountainous areas. This discussion should identify the actual needs of the systems with regard to the different purposes. E.g. security of land tenure only needs identification of the spatial unit and does not need boundary surveys *per se*. This also goes for the purpose of valuation and taxation. Planning and land use control merely need the combination of topographic mapping and land parcel mapping in order to identify existing land use and to plan for future development opportunities.

The FFP approach has three fundamental characteristics: focus on the purpose; flexibility; and incremental improvement (Enemark, McLaren & Lemmen, 2015).

**Focus on the purpose.** This new approach is focused mainly on the purpose of providing secure tenure for all. The means to achieve this should then be designed to be the most "fit" for achieving this purpose rather than blindly being guided by rigid standards for accuracy and top-end technological solutions.

**Flexibility.** The FFP approach is about flexibility in terms of demands for accuracy, and for shaping the legal and institutional frameworks to best accommodate societal needs. The FFP approach also includes the flexibility to meet the need for securing different kinds of tenure types, ranging from more social or customary tenure types to formal types such as private ownership and leasehold.

**Incremental improvement.** The systems should be designed for initially meeting the basic needs of society today. This will identify the optimal way of achieving this by balancing the costs, accuracy and time involved. This creates what is termed a "Minimum Viable Product". Incremental upgrading and improvement can then be undertaken over time in response to emerging needs and opportunities.

## The Fit-For-Purpose Concept

The concept includes three core components: the spatial, the legal, and the institutional frameworks, see Figure 4. Each of these components includes the relevant flexibility to meet the actual needs of today and can be incrementally improved over time in response to societal needs and available financial resources. The three framework components are interrelated and form a conceptual nexus underpinned by the necessary means of capacity development. Each of the frameworks must be sufficiently flexible to accommodate and serve the current and specific needs of the country within different geographical, judicial, and administrative contexts.

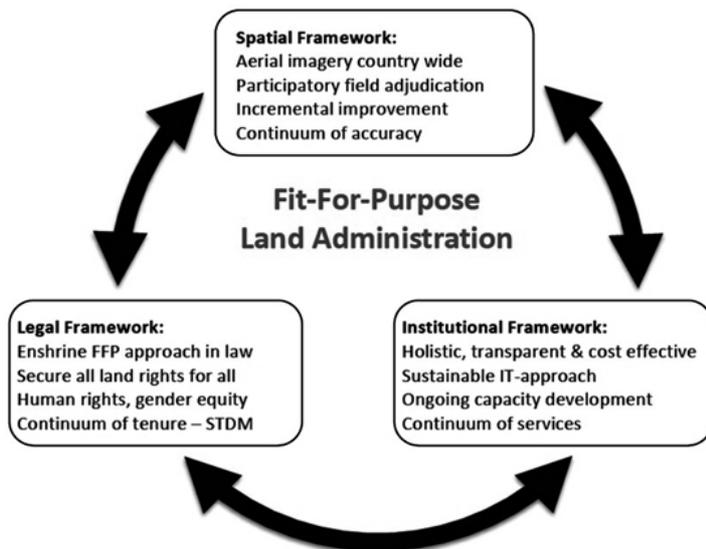


Figure 4: The Fit-For-Purpose Concept (Enemark et al., 2015).

The spatial framework aims to represent the way land is occupied and used. The scale and accuracy of this representation should be sufficient for supporting security of the various kinds of legal rights and tenure forms through the legal framework as well as for managing these rights and the use of land and natural resources through the institutional framework. The FFP approach therefore needs to be enshrined in the land laws, and for administering this regulatory set-up the institutional framework must be designed in a holistic, transparent and user-friendly way. This administration again requires reliable and up to date land information that is provided through the spatial framework. The FFP approach includes four core principles for each of the three frameworks as illustrated in figure 5 below:

### KEY PRINCIPLES

#### Spatial framework

- Visible (physical) boundaries rather than fixed boundaries
- Aerial / satellite imagery rather than field surveys
- Accuracy relates to the purpose rather than technical standards
- Demands for updating and opportunities for upgrading and ongoing improvement

#### Legal framework

- A flexible framework designed along administrative rather than judicial lines
- A continuum of tenure rather than just individual ownership
- Flexible recordation rather than only one register
- Ensuring gender equity for land and property rights

#### Institutional Framework

- Good land governance rather than bureaucratic barriers
- Holistic institutional framework rather than sectorial siloes
- Flexible IT approach rather than high-end technology solutions
- Transparent land information with easy and affordable access for all

Figure 5: The Key principles for building Fit-For-Purpose land administration systems (Enemark et al., 2015).

The key point is that the systems should enable secure land rights for all and cover all land as a basis for land valuation and land use control. At the outset, the systems may vary from being very simplistic in some (rural) areas of the country while other (densely populated) areas are covered by more accurate and legally complete applications, especially where land is of high value and in short supply. Through updating and upgrading procedures the systems can then, in turn, develop into modern and fully integrated systems for land information and administration, where appropriate. The systems should also allow for recording and securing all types of land rights including informal and social kind of tenures. The legal and institutional frameworks have to be adapted to allow for this kind of flexibility and also accessibility for all. This change process, necessary for implementing a FFP approach to existing LAS, can start today.

A key demand for implementation, of course, relates to developing the necessary capacity for building and maintaining the systems. It is critical to ensure that the systems, once they are built, can be properly and immediately maintained in terms of ongoing updating so that the systems are complete and reliable at any time. Therefore, a capacity development strategy should be adopted up front before starting the project. Another demand is about assessing the costs and establishing the budgetary base for building the systems, e.g. by seeking development aid support such as through the World Bank. And, most importantly, there is a fundamental requirement for strong political will and leadership for adopting the project and keeping it on the track for achieving the goals and outputs in terms of benefits for society, businesses and citizens. However, recent experiences have shown that it is possible – Rwanda, for example, has covered the whole country of about 10 million land parcels using a Fit-For-Purpose approach within 5 years and for a cost of around 6 USD per parcel / spatial unit.

The Fit-For-Purpose approach is participatory and inclusive – it is fundamentally a human rights approach. Further benefits relate to the opportunity of building appropriate systems within a relatively short time and for relatively low and affordable costs. This will enable political aims such economic growth, social equity and environmental sustainability to be better supported, pursued and achieved.

## **5. CLOSING REMARKS**

There is a general consensus that governing the people-to-land relationship is in the heart of the global agenda. A wide range of initiatives under the umbrella of the Global Land Agenda are delivering: Voluntary Guidelines on Responsible Governance of Tenure (FAO, 2012); monitoring and evaluation tools to strengthen land policies and associated operations (World Bank, 2011); and tools for implementing land administration solutions (UN-Habitat / GLTN, 2012).

However, despite these interventions progress is limited, and will remain restricted, due to the lack of comprehensive information on the evidence of land rights and associated security of tenure. Although policy frameworks and guidelines are essential for good land governance, the real bottleneck is that current solutions are not scalable. Even with new emerging generations of technology solutions, policy frameworks and guidelines will never realistically deliver security of tenure to the remaining 75 percent of the world's population in appropriate timeframes.

It is hoped that this Fit-For-Purpose approach will pave the way forward towards implementing sustainable and affordable LAS and enabling security of tenure for all and effective management of land use and natural resources. This is fundamental for meeting the Post 2015 Global Agenda.

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