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MODERNIZING LAND SERVICE DELIVERY THROUGH THE APPLICATION OF A CONTINUUM APPROACH: EXAMINING THE APPROPRIATENESS OF THE INTERNATIONAL LAND MANAGEMENT STANDARDS (ILMS)

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Abstract

This paper proposes a continuum of market appropriate standards through which countries can progress over time rather than strict adherence to a single, prescribed overarching standard. This concept is predicated on the underlying assumption that, particularly in the context of land administration and tenure, a single global standard risks being (1) too complex for truly humble, informal urban or rural markets in the least-wealthy nations, while simultaneously being (2) not sophisticated enough to handle a complex range of special assumptions and market options for highly developed urban environments. Thus, poorly conceived standardization may be inappropriate for either scenario and inherently not fit for its intended purpose. To further illustrate this point, the paper will examine how the newly proposed International Land Measurement Standard could be used as part of a continuum approach by examining its application in three geographically, economically, and culturally diverse countries: The United Kingdom, Peru, and Mozambique.

Key Words:

Best practices, global standards, land transfer, surveying

Introduction

In an increasingly globalized world, best practices and the need for standardization are prevalent. Global standards facilitate the smooth flow of commerce and help unify state policies around universally important themes. In the context of many higher-level land related issues, such as environmental preservation, this is no less true. However, when standardization discussions touch functional areas like land administration best practices, ensuring tenure security, or title transfer, critical issues become far more complex and culturally nuanced. In such contexts, discussions are not simply tied to land as an economic asset, but are more intimately tied to people's homes, security, and, in the case of agricultural land, even their livelihoods (livelihood being separate from the economic value of the underlying land itself). In these instances, the urge to standardize must be balanced with objective evaluations of the degree to which any particular standard is "fit for purpose" (FFP). The rush to impose standards on issues that are inherently complex and not readily simplified, particularly in connection to land, should be carefully considered and undertaken cautiously. A standard that is important in concept but only works in certain instances can be disruptive and may even worsen the very conditions it is intended to improve.

This paper introduces the concept of a "standardized spectrum". In other words, it advocates for a continuum of market appropriate standards through which countries can progress over time, rather than strict adherence to a single, prescribed overarching standard. This concept is predicated on the underlying assumption that, particularly in the context of land administration and tenure, a single global standard risks being (1) too complex for truly humble, informal urban or rural markets in the least-wealthy nations, while simultaneously being (2) not sophisticated enough to handle a complex range of special assumptions and market options for highly developed urban environments. Thus, poorly conceived standardization may be inappropriate for either scenario and inherently *not* fit for its intended purpose.

Currently, the concept of "continuum" is often limited to a discussion of land rights in the context of different forms of tenure. While this is appropriate, it is also incomplete; the concept of a continuum has far wider application to land related services and governance. It can be used to provide a more complete description of different levels of sophistication in land transfers processes, market data transparency, land registry development, and the functionality of other critical land related institutions, such as court systems. Each of these elements are equally important in a holistic discussion about functional real estate markets and effective land governance, yet capacities vary radically across different countries and regions. It follows that any attempt to impose a global standard must account for such differences in order to be meaningful. Failure to do so imposes a strict binary interpretation wherein a particular country's institutions may be functioning, but are technically judged as "failing" because they do not comply with the full standard in its entirety. This is obviously an inaccurate result. To avoid such scenarios, a continuum approach should be used in the development and evaluation of standards that aim to support land related services and institutions.

To further illustrate this point, the paper will examine how the newly proposed International Land Measurement Standard (ILMS) could be used as part of a continuum approach by examining its application in three geographically, economically, and culturally diverse countries: the United Kingdom, Peru, and Mozambique. The paper will first briefly introduce the ILMS, which has recently been created as an international principle based standard for recording and reporting information and material relevant to land transfers. The paper will then provide an overview of the real estate markets, relevant private sector professional valuation and surveying organizations, and customary land transfer practices in each of the three subject countries. Select components of the ILMS model will be applied to each distinct market. The resulting functionality will be considered in a discussion examining ILMS performance in accommodating the underlying range of different market conditions. Though immediate and full

applicability may have been the driving intent in the creation of the ILMS, the degree to which it can be applied in stages, or have a meaningful partial application, increases the likelihood of its use in developing nations such as Mozambique. Sound fitness for purpose across a range of country scenarios contributes to the ILMS's global application and scalability. This is critical for determining whether the ILMS can - or cannot - contribute to modernizing land service delivery and organizations and engage private sector practitioners. The paper will conclude with an evaluation of the role of the ILMS in contributing to the strengthening of land governance in each of these markets. The results are important for determining the global fitness for purpose of the ILMS and implications for its supporting value to high-level global initiatives such as the United Nation's Sustainable Development Goals.

Note that the ILMS is not meant as a policy device or instruction to Government land agencies, but should be primarily viewed as a tool based on the field/site observations and investigations of a land professional (or para-surveyor/appraiser). Perhaps not all data elements will be available and those that are can be judged within a robust risk analysis as to their accuracy and providence. The ILMS is, at heart, aspirational.

Discussion of the International Land Measurement Standard

The International Land Measurement Standard (ILMS) is supported by an international coalition of more than 30 members and was developed by a special Standard Setting Committee appointed by the coalition in 2016. It enters an international best practices space that is already heavily populated with property-based standardization initiatives, such as the FAO's Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT); ISO's Land Administration Domain Model (LADM); International Valuation Standards (IVS). ILMS seeks to find its own niche by incorporating both a standard and a reporting framework pertaining to the transfer of land and other real property. To achieve its goals, ILMS defines the basic, minimum information that should be collected (if available) and reported across seven key component areas during transfer of rights over land – either as an individual parcel or during the large scale assembly of multiple parcels (ILMS 2017):

1. Land tenure
2. Land parcel delimitation and description (boundary)
3. Site/land area
4. Land use
5. Services
6. Building
7. Land valuation.

Property Address/Identifier:							
	Component	Basis	Date (dd/mm/yy)	Conveyancer Verification (Formal/Informal)	Documentary Support	ILMS status	Risk Status
1	Land Tenure						
2	Parcel Identification (Boundaries)						
3	Site/Land Area						
4	Land Use						
5	Services						
6	Building						
7	Land Valuation (Transfer Price)						

Fig 1. The ILMS land transfer and reporting standard consists of 7 key elements required during a 'due diligence' process to enable and de-risk the process. This also creates land data feedback 'loop' where elements such as valuation can be improved as land data becomes available.

The ILMS also contains an agreed 'geospatial survey accuracy table' which for the first-time outlines what is agreed by geospatial output and its relationship to scale and achievable accuracy. An enormous milestone for the global geospatial surveying professional.

Each individual component area has a further suggested sub-list of more detailed information that may be collected and reported. Through the capture of data, ILMS seeks to promote transparency within markets, standardization of land transfers, fair compensation, and consistency in cross-border transactions. Notably, the ILMS is intended to function even in the absence of a state-run Land Information System (LIS). In an effort to ensure that the standard would be sustainable and practical when applied by surveyors in the field, the SCC designed it to be (ILMS 2017):

1. Flexible in the spatial data capture approaches to provide for varying use and occupation.
2. Inclusive in scope to cover all tenure and all land.
3. Participatory in approach to data capture and use to ensure community support.
4. Affordable for the government to establish and operate, and for society to use.
5. Reliable in terms of information that is authoritative and up-to-date.
6. Attainable to establish the system within a short timeframe and within available resources.
7. Upgradeable with regard to incremental improvement over time in response to social and legal needs and emerging economic opportunities.

In basic terms, ILMS is:

1. A framework for reporting on land assets' and land asset transactions of people and legal entities.
2. A basis for collecting asset and transactional information to identify what is on the ground, what information is available and the quality of the available information, rather than what is legislated for or implied.
3. A set of principles for transparency, integrity and consistency in land asset reporting in support of reporting systems such as the International Financial Reporting System (IFRS).
4. Flexible and non-prescriptive, so they can be adopted incrementally/partially in line with the fit-for-purpose land administration principles, thereby advancing best practice for reporting on land assets.
5. A due diligence process that informs the overall investment analysis. The process will draw on many sources of information and corroborate them so any unknowns can be found and risks assessed or costed.
6. A basis for determining fair compensation for the land asset.
7. A basis to implement an Open Data System (including for example Public Law Restrictions PLR)

And ILMS is not:

1. A detailed technical specification for spatial measurement although measurement is integral to several ILMS elements (parcel identification, land area etc)
2. The basis for a new 'best' Cadastral or Land Administration system.
3. A replacement for any existing guidelines or standards, such as the FAO Voluntary Guidelines (FAO (VGGT)), Land Administration Domain Model (LADM) or Social Tenure Domain Model (STDM).
4. Instructive of governments for the development of new or revised legislation.
5. Designed to track national progress towards the UN Sustainable Development Goals.
6. Concerned with the collection of data to create or update national or international databases.

Unlike many standards, ILMS is not inherently prescriptive but seeks to include the key Fit for Purpose concepts of flexibility and scalability into its structure and use. This makes it quite similar to the high level, principles based standards approach of the International Valuation Standards and quite unlike the prescriptive technical standards of International Standards Organisation (ISO). The land professional is encouraged to use professional judgement and gather only what information is available, which is consistent with a classical Western surveyor's site investigation and due diligence process. In some markets (developed economies) all seven elements and substantial resources pertaining to sub-data elements might be available, whilst in many others (developing and transition markets) that might not be the case. The biggest challenge to the ILMS is in instances when it might simply not be consulted. For example, it is unlikely that a surveyor would be aware of an informally occurring transfer or that either party to the transfer would be aware of the ILMS's existence. Note, this paper takes it as taken as a given

that informality exists for a myriad of reasons and that informal exchange will continue. Further, formalised systems without inbuilt flexibility, scalability, and capacity development have a habit of returning to a state of informalisation. However, while the ILMS may not initially be used in every informal scenario, it does till have value in informal applications. Specifically, the ILMS may be able to demonstrate its strengths as part of a robust post-formalisation protocol for transfer and during large-scale acquisition or its very application could act as a potential catalyst for formalisation and tenure security. In such scenarios, the ILMS can provide a robust, high-level framework within which to work and also give some 'benchmark' indication of how one market might compare to another.[1]

On an individual parcel basis, a closer examination of the building component of the ILMS helps to highlight some of the issues that may arise. The complete instructions for this component are as follows:

Building Component

All Building(s) contained within the perimeter of the Land should be checked to ensure that the Building(s) complies with all the appropriate planning and other regulations and building codes. In instances where the Building(s) is ancillary to the authorised use of the Land, in addition to the above the following details should be provided:

- *Unique parcel identifier for each individual land parcel: where applicable, an official designation*
- *Aerial Image including the date the image was created*
- *Photograph of the Building(s) façade and date the image was created*
- *Current use or, if dilapidated, the previous use of the Building(s)*
- *Record of current or previous Building occupation*
- *Statement on all buildings and structures whether authorised or unauthorised*
- *Perimeter measurements of the Building (IPMS 1)*
- *Percentage of Land Occupied by Building(s)*
- *Area of any ancillary hard surface*
- *Relevant Certification/Documentation (i.e. local government building and planning certificates).*

If applied prescriptively, many (if not all) informal buildings would not meet the sub-element of "complies with all the appropriate planning and other regulations and building codes". Additionally, under this component, informal buildings would require a "statement on all buildings and structures whether authorised or unauthorized" to be recorded for the parcel (ILMS 2017). The very existence of an

[1] Currently the only real way of comparison is through the World Bank 'doing better business' registration of property index and/or the World Bank Land Governance Assessment Framework LGAF: http://www.worldbank.org/en/programs/land-governance-assessment-framework.

unauthorized building in many countries is sufficient reason for the parties of a transaction to intentionally exclude any formal recordation for fear that such a declaration will lead to government taxation, taking, demolition, or other retribution. Further, in cases of adverse possession, hostile invasions, or other forms of squatting, surveyors are unlikely to be given access to a property and may be forcibly dissuaded from completing any type of recordation. Thus, in an informal market, and if prescriptively applied, ILMS will most likely be excluded and even actively resisted.

However, the ILMS does not require all of the various elements to be verified and filled-in, but only as many as are available during the site survey and investigation. The various sub-elements of the building component may or may not be included; for example, in some instances, simply noting the fact that a building exists on a parcel may be the limit of what is possible or appropriate. Valuation is, of course, improved as more data becomes available and in some instances the provision of services may be connected to taxation. This aspect of "fiscal formalisation" may prove just as strong as titling and lead to a fairer compensation process during acquisition for those in informal transactions. It is therefore essential that ILMS remains high level, non-prescriptive, and flexible in its application in order to maintain its usefulness.

It is not necessary to evaluate the applicability of the ILMS through a strictly binary standard. In other words, rather than determine its value by an "all or nothing" rubric, it can be assessed based on its application as part of a continuum approach. While the sub-elements of the building component described in the previous paragraph may not be suitable for informal transfers, many other aspects might be. For example, even in an informal scenario a surveyor could potentially take photographs of a building and comment on its use and occupancy (this is the case in both Peru and Mozambique). The various sub-elements of the ILMS model must be used selectively based on the reality of the particular market in order to remain flexible and retain functionality in accommodating a range of different market conditions. As the ILMS continues to undergo an open and global consultation process, it would be wise to underline that its primary strength is as a robust, flexible, high-level framework and that the inclusion of sub-elements that are perceived to be prescriptive will undermine the adoption and effective implementation of the standard. The various sub-elements/components must be explicitly defined as non-prescriptive and serve only as examples of what could be obtained within a particular element.

Case Study Review of the Appropriateness of ILMS

To further determine whether or not the ILMS can be used as part of a continuum approach, we examine its application across three distinct land transfer scenarios in three geographically, economically, and culturally diverse countries: Mozambique, Peru, and the United Kingdom. With respect to land transfer scenarios, we consider (1) a large-scale acquisition of infrastructure, (2) a transfer for investment, and (3) the acquisition of informal property in urban context. Each of the following country-specific sections will provide an overview of the national real estate market, relevant private sector professional valuation and surveying organizations, land transfer practices, and the applicability of the ILMS in each of the three study scenarios.

Mozambique

With a per capita GDP of just $382, which falls well before the Sub-Saharan Africa average of $1,464 and the World average of $10,191, Mozambique has been included on the United Nation's list of Least Development Countries (LDC) since 1988 (World Bank WDI 2018; UN 2017). Among the country's challenges are inequality, food sustainability, corruption, literacy, and health care.

Figure 2

World Bank Doing Business Report	
Overall rank: 138 out of 190	(1 is the best rank)
Registering property: 104 out of 190	(1 is the best rank)
Transparency International Corruption Perception Index	
Score: 27	(100 is the best score)
Overall rank: 142 out of 176 countries	(1 is the best rank)
Heritage Foundation Rule of Law	
Property Rights score: 40.6	(100 is the best score)

Private land ownership is not permitted in Mozambique, as per Articles 109 - 111 of the Constitution and Article 3 of the 1997 Land Law (Constitution 2004; Land Law 1997). Nonetheless, as outlined in Article 12 of the Land Law, citizens can gain usufruct rights to land by:

> *a) occupancy by individual persons and by local communities, in accordance with customary norms and practices which do not contradict the Constitution;*
>
> *b) occupancy by individual national persons who have been using the land in good faith for at least ten years;*
>
> *c) authorisation of an application submitted by an individual or corporate person in the manner established by this Law.*

Use rights are known as DUATs after the Portuguese acronym for "direito de uso e aproveitamento dos terras", and can be registered as "titles" or held without registration "in good faith". The treatment of rural and urban DUATs is distinct and urban municipalities are responsible for machining their own cadasters while the Ministry of Justice maintains the Real Property Registry (Registo Predial) (World Bank 2017; Van Den Brink 2008). In urban areas, DUATs can be transferred without specific government permission, leading to an unregulated secondary property market (USAID, Mozambique 2016). Further complicating matters is that fact that customary and communal rights may not be recorded, although title registration of DUATs is expected to become compulsory with future code reforms. A Land Information Management system has been in place since 2015 and a new Ministry of Land, Environment and Rural Development was created to handle land administration; yet the recordation process remains complex, relatively expensive, and responsibility is distributed across several different uncoordinated agencies (World Bank 2017). Perhaps unsurprisingly, informality and tenure conflicts are common in Mozambique, particularly with indigenous lands (USAID, Mozambique 2016). Recent urbanization has further exacerbated the informal sector and put increased pressure on infrastructure. The registration of DUATs, whether urban or rural, is limited by literacy, government capacity, complex procedures, cost, and lack of public awareness; further, there is significant doubt as to whether the government issues and enforces DUATs equitably.[2]

[2] For a more complete discussion of DUATs and other property law in Mozambique, see the 2016 USAID Country Profile Property Rights and Resource Governance: Mozambique.

There are several programs aimed at improving conditions in Mozambique, including the on-going UK Aid Mozambique Land Action (MOLA) project and a proposed World Bank project. MOLA, a £15.5 million project running from 2015-2021, focuses on promoting land tenure security by formalizing land rights, assisting with the issuance of DUATs, and enchaining cadastral services and capacity (UKAid website; UKAid 2015). The proposed World Bank project, which would include a $100 million grant, also focuses on regularization, demarcation, and issuances of DUATs (World Bank 2017). Both programs envision the use of modern surveying and cadastral standards for the delimitation and demarcation of parcel boundaries; however, a more sustainable approach may involve the simplification of existing surveying practices, which engage poorly with current conditions, to help improve valuation and taxation results (Zebong et. al 2017).

The valuation profession in Mozambique is fragmented. Global firms provide sophisticated valuation services to clients using chartered surveyors and individuals registered with the South African Council for the Property Valuers Profession; RICS standards and International Valuation Standards Committee guidelines are used (Broll website; PrimeYield website). However, compliance with international best practices is voluntary and not universally affordable. Further, with a literacy rate of only 50.5%, it is reasonable to assume that there may be a shortage of professionals available in any particular field, including surveying (UNESCO website). Professional capacity is a major issue in Mozambique (and all developing nations) and before any standards, even high-level principles such as ILMS, can gain traction, a robust educational, regulatory, and professional strategy needs to be in place to provide the land professionals (or para-surveyors/appraisers) of the future.

ILMS application in scenario 1: large-scale acquisition of infrastructure

Foreign investment interest in infrastructure projects, particularly in Africa, is on the rise. Yet, due to a range of legal and economic risks, investors assign hefty country risk premiums to investments across a range of project types: infrastructure; bridges, tunnels and toll roads; pipeline and other energy transmission; energy/power generation projects; water and waste water management; airport and seaport; railways; and general infrastructure (PWC 2015). Infrastructure projects in any sector are typically billion-plus dollar undertakings and often involve the state acting as a partner in some capacity to a foreign firm, development bank, or aid agency. As such, legitimacy of process and the highest-level of government resources are available with respect to any necessary or underlying real estate. Equally, the cost of a professional valuation is easily absorbed. Assuming that an appropriately professionally and

technically trained individual is involved in the acquisition, it is reasonable to assume that the various ILMS components can be easily integrated into the valuation report.

ILMS application in scenario 2: investment

The market for commercial real estate development and investment in Mozambique can be volatile. Five years of continuous development activity has arguably led to oversupply and many sub-markets have now slowed, with both residential and office rental rates being heavily discounted (Casamozambique 2016). However, valuations are required for financial statements, lending, insurance and other business operations that require corporate investors to seek professional valuation services regardless of market conditions (Broll website). So long as high-value corporate investments in commercial properties continue, particularly by foreign investors needing assurance with respect to the legitimacy of the transaction, so too will the need for professional valuation services. For these services, the ILMS can likely be deployed either fully or nearly so, depending on circumstances. However, not all investment is large-scale or made by sophisticated corporations. Private investment and small, medium, or entrepreneurial firms (depending on definition) may not have the obligation to assuage stakeholder concerns about transactions. Thus, they may actively seek to avoid or minimize their participation with a robust valuation and/or other formal transactional procedures. This could be the result of (1) customary or social norms that are considered sufficient to support the transaction, (2) a response to the difficulty of doing business and registering property in Mozambique, or (3) could be the more nefarious result of a culture of pervasive corruption. The purpose of this paper is not to analyze the motives behind such investment behaviors; rather, it is to identify areas of concern with respect to the use of the ILMS. In the case of smaller, private real estate investments, the degree to which the ILMS could and would be used is unclear.

ILMS application in scenario 3: acquisition of informal property in urban context

It will be difficult for ILMS to gain traction in the informal market in Mozambique if it is perceived as being prescriptive. Informal settlements are increasing is size and complexity and are (1) by their nature, individual informal transactions are not reported, (2) parties to an informal transaction may be uneducated and entirely unaware that a survey service is available or that the ILMS exists, (3) in the case where the informal transfer involves impoverished parties, as is often the case, the parties are likely not be able to afford a valuation survey, and (4) in a country with such widespread corruption as Mozambique, there may be a disincentive for compliance even by those that are aware of and can afford any kind of

professional land and property service. As a further point, reluctance to declare informality, even if protected by "good faith" or customary rights, may be increased because land ownership in Mozambique rests with the state and use rights can be rescinded by the government. However, while individual informal transfers between locals may not engage with the ILMS, it could be employed by the government when large numbers of informal plots are targeted for acquisition either for service provision (alongside taxation) or for compensation due to removal. As part of such 'formalisation by taxation' initiatives (alongside the provision of services), ILMS could be a robust framework for informal owners to gain some kind of recognition and understand the intrinsic value of their 'rights' to property so as to better engage with the acquiring authorities, legal system, and compensation terms. This approach has been piloted by Namati in Africa as a method of protecting informal/communal land rights by a process of understanding value rather than achieving title ownership.[3] Once introduced in this way, the ILMS may help preserve formality in future transactions.

Peru

Peru is a stable, moderately wealthy Latin American country featuring a per capita GDP of $6,049, just below the average of $8,311 for the Latin American and the Caribbean (World Bank WDI 2018). Property markets in Peru feature a combination of formal and informal systems. Despite decades of titling efforts and land registry reform originally led by the Commission for Formalization of Informal Property (COFOPRI), informality is still prevalent.[4] Even after the efforts of a World Bank urban titling project from 1998 to 2004, only about 50% of the land in Peru has been titled (USAID, Peru 2016; World Bank 2005). Adverse possession and invasions, particularly of unregistered land, are common (Hawley et al 2018; McDermott and Obeng-Odoom 2017). Current research suggests that approximately 25% of the population now lives in informal housing and fewer than 8% of land transfers are formally being registered (Gutierrez and Molina 2016; Hawley et al 2018). Indeed, Peru's scores across a range of global indicators, as shown in Figure 1, do not suggest an obviously well-functioning and reliable formal market.

[3] For further information see: https://namati.org/resources/chapter-valuation-of-community-lands-and-natural-resources/

[4] See Gutierrez and Molina (2016) and McKechnie (2005) for a comprehensive background on title and registry history in Peru.

Figure 3

World Bank Doing Business Report	
Overall rank: 58 out of 190	(1 is the best rank)
Registering property: 44 out of 190	(1 is the best rank)
Transparency International Corruption Perception Index	
Score: 35	(100 is the best score)
Overall rank: 101 out of 176 countries	(1 is the best rank)
Heritage Foundation Rule of Law	
Property Rights score: 58.3	(100 is the best score)

Formal property transfers are guided by various titles of the Civil Code of Peru and registration in the real estate registry, RPI (Registro Predial Inmueble), is administered by the national registries body SUNARP (Superintendencia Nacional de los Registros Publicos) created by Law No. 26366 (SUNARP website). Registration of property is not strictly compulsory, although it is necessary for protecting ownership from claims and for recording mortgages (Civil Code of Peru, Articles 1128, 2016, 2022).[5] The Civil Code also allows for the conversion of ownership through adverse possession over the course of five or 10 years, depending on circumstances (Civil Code of Peru, Article 950). In the formal land transfer process, a notarized contract is required in order for a transfer to be officially recorded by SUNARP in the RPI (SUNARP Registro de Predios). The process involves five steps and takes approximately 8 days on average (World Bank 2018). Informal transfers are often governed by social/customary practices or involve hostile invasion. Registration is not necessary for taxation, obtaining utilities, nor the valuation of land in Peru.

[5] For a more complete review of laws related to land and real property, see the 2016 USAID Country Profile Land Tenure and Property Rights: Peru.

Valuation practices are prescribed by law in Ministerial Resolution 172-2016 (Resolution 173) and are governed by the professional surveyors organization *Cuerpo Técnico de Tasaciones del Perú* (McDermott and Obeng-Odoom 2017; Hawley et al 2018). Practices exist for valuing both registered and unregistered land. The standards for data collection outlined in Resolution 172 are comprehensive and specific. For example, according to Chapter 2, Article 6, the surveyor must include the following details:

1. Name of the natural or legal person requesting the appraisal.
2. Name of the owner or possessor.
3. Registration situation of the property.
4. Object of the appraisal.
5. Method and Regulation used.
6. Date of ocular [visual] inspection and / or date to which the appraisal is referred.
7. Location of the property.
8. Zoning and current use of the property.
9. Area of the building and area of the land.
10. Borders and perimeter.
11. Description of the property:
    a. General description (land or property).
    b. Distribution plant.
    c. Technical characteristics of the building.
    d. Complementary works and fixed and permanent installations.
    e. Antiquity, state of conservation and depreciation.
12. Characteristics and Infrastructure of urban services of the surroundings of the property.
13. Easements.
14. Liens and charges.
15. Source and origin of the information.
16. Observations.

Further Articles in Chapter 2 provide additional descriptions about each of these data points.

ILMS application in scenario 1: large-scale acquisition of infrastructure

The intricacy of the current processes of due diligence for the acquisition of formal land and property in Peru increases the time, cost, and complexity of land assembly. The ILMS could be quite easily introduced as a more robust framework to provide insight into development costs and land issues. Indeed, valuation practices and current land records in Peru do seem to support the data capture required for all seven key ILMS elements, as well as many of the non-prescriptive sub-elements. ILMS implementation and adoption would also allow external organisations an insight in the land market in Peru. Given the existing level of sophistication in the valuation profession in Peru, it is highly likely that the ILMS can be combined with existing practices. A formal valuation would apply to any large infrastructure acquisition or development project, because the high-profile and significant value are likely

to subject participants to governmental scrutiny. Also, as was the case in Mozambique, the government may itself be involved in some way. Again, there is a serious issue of professional capacity and in the case of Peru the issue that informal ownership is not 'valued' by professionals.

ILMS application in scenario 2: investment

Commercial property markets in Peru have been performing well, especially the multifamily and office markets (Cushman & Wakefield 2017; Fagenson 2017). Companies participating in the formal sector, particularly those with legal status and fiduciary obligations to shareholders, are likely to insist on a formal transaction that will allow ILMS data to be easily captured. However, not all investment necessarily implies formality and scenarios that involve dubious motives, such as tax avoidance, make it less certain that the transfer will be ILMS compliant. However, such deviation in the investment market seems less likely than in Mozambique because of the comparative ease of doing business and registering property in Peru, as well as the existence of a known and regulated valuation profession.

ILMS application in scenario 3: acquisition of informal property in urban context

The ILMS is unlikely to be applicable to individual informal transfers in Peru for many of the same reasons that apply in Mozambique: lack of awareness, cost, and refusal to participate in formal processes and institutions. This may not be the case when a large number of informal properties have to be 'acquired' for the provision of services and urban infrastructure. The widespread and increasing informality in Peru does not suggest that participants of informal transfers will modify behavior and report that a land transfer (or invasion) is occurring. Also, there may be direct efforts to avoid some of the documentation envisioned by the ILMS, particularly because taxation is not tied to registration in Peru.

United Kingdom

The UK is part of the G7 group of high income nations, a leading economic power in the European Union (dependent on Brexit policy issues March 2019) and a former global colonial power. UK national GDP is $2.648 trillion with an individual citizen GDP of $42.622 (World Bank). Although the UK languishes at 47 in the World Bank 'doing better business – registration of property' index it can boost of an extraordinarily efficient and effective model of recurrent and non-recurrent property taxation which equates to 4.2% of national GDP whilst the OECD average is 1.9% (USA 2.7%). The UK has had a very

long history of land administration, private property ownership rights (a concept exported to much of the world along with cadastral concepts such as the Torrens system) and valuation. In some ways this long 'tail' of land law, transfer processes, land registration and parcel identification has increased the stages need to 'exchange' between parties resulting in low index score of 47.

It should also be remembered that the UK is four nations (England, Wales, Scotland & N Ireland). Proof of ownership is by entry in the land register. HM Land Registry (England and & Wales) back this by an indemnity fund providing compensation for fraud or error – the state guarantee of title. Proof of title of unregistered land & property is by means of title deed. It may surprise many to learn that nearly 15% of the UK is 'unregistered' and that 'compulsory registration on transfer' was enacted in the early 1990's. However, this again underlines the long history of land ownership in the UK and the fact that some large, landed estate have not changed ownership for decades, if not 100's of years (Saltford Manor near Bath is mentioned in the Domesday book, the great land and property survey (the world's first fiscal cadaster) carried out in 1086)

There is well-established legislation and a strong legal protection of individual property rights in the UK with several key legislative devices in place such as:

- Land Registration Act (LRA 2002)
- Compulsory Purchase Act 1965
- Planning and Compensation Act 1991
- Landlord and Tenant Act 1985

The key HM Government agencies are:

- Ordinance Survey GB (National Mapping Agency)
- HM Land Registry (Registers of Scotland RoS)
- Valuation Office Agency (VOA)
- Rural Payments Agency (RPA)

The UK has a highly developed property valuation infrastructure and long established professional property profession that enables lenders to have a high degree of confidence in the value of the assets against which loans are secured. Royal Institution of Chartered Surveyors (RICS established 1868) is professional body for valuers, surveyors, land agents and development surveyors. The RICS sets standards for entry to the profession and continuing professional development. It also enforces professional and ethical standards. RICS regulates all chartered surveyors and operates a specialist Valuation Registration Scheme VRS. Valuation standards are contained within the Red Book which

adheres to the global International Valuation Standards Council (IVSC) standards. Professional capacity is not an issue within this developed market with number of professionally qualified valuers being high and access to vast amounts of 'comparable' valuation and other forms of data providing a strong infrastructure. In the UK there is approximately one qualified valuer for every 2000 persons. By contrast for Romania it is estimated at 1:8,000 and in Hungary 1:18,000 (R Grover 2008).

Figure 4

World Bank Doing Business Report	
Overall rank: 7 out of 190	(1 is the best rank)
Registering property: 47 out of 190	(1 is the best rank)
Transparency International Corruption Perception Index	
Score: 81	(100 is the best score)
Overall rank: 10 out of 176 countries	(1 is the best rank)
Heritage Foundation Rule of Law	
Property Rights score: 93.8	(100 is the best score)

As already the due diligence protocols and processes of land transfer are well established within a strong legal framework (unregistered property is 'compulsory' registered at the point of legal transfer) so negating the need for a separate 'informal' process. However long-established systems such as the UKs can also have an in-built complexity especially in the context of land assembly, mass transfer and land referencing. ILMS, by providing a high-level principles template should help streamline the often-fraught process of land assembly.

ILMS application in scenario 1: large-scale acquisition of infrastructure

ILMS will be applicable across the globe although many high-income nations (OECD) will be already be 'ILMS compliant'. This suggests that the essential land data elements of ILMS are already available although it should be remembered that during land acquisition, land assembly and land referencing processes can differ from authority to authority, agency to agency and organisation to organisation

creating a miasma of differing levels of authoritive data. ILMS helps create a primary, basic land data standard for each or an assembly of land parcels better enabling land acquisition, valuation and compensation processes – an essential and very costly element of all infrastructure projects. In high income countries land referencing is the formal investigation stage of rights held in land. It includes data relating to factors including ownership, environmental reports, and land plans and deeds. Land referencing enables 'land assembly' and can take on a para-legal hue, ILMS enables this process and helps practitioners and clients understand the potential 'risks' within the data elements. ILMS works well within the current industry due diligence protocols for land transfer (the Law Society – https://www.lawsociety.org.uk/support-services/advice/articles/searches,-risk-and-due-diligence/) indeed the 7 essential data elements are integral to the UK due diligence as a very minimum with a depth of data required (and available) for all.

ILMS really comes into its own when engaged with large scale acquisition and complex land assembly projects. It allows for numerous parcels to be evaluated and has already been built into a number of software solutions www.landassembly.net
Land Assembly specialists have also integrated the Land Administration Domain Model (LADM) and ILMS into coding for use on UK and international projects.

ILMS application in scenario 2: investment
Infrastructure, land and property investment is all about the management of 'risk'. The removal or transfer of 'risk' from one party to another is a key element of investment in this context and ILMS is careful to include an inbuilt 'risk' analysis for each of the 7 key elements. In the context of the UK, the flexibility and scalability of ILMS becomes apparent as the sub divisions within each element become populated by available data. ILMS avoids prescription by allows practitioners to only report on what they can see, acquire, research or access about a specific parcel. For investors this 'risk' analysis of a large complex land assembly project is crucial and helps provide a 'true' picture of project costs (in the case of infrastructural development) or potential liabilities in the case of land investment. ILMS also has the potential to work the other way. Corruption and criminal activity can be a major issues for global property centre's such as London http://www.transparency.org.uk/press-releases/faulty-towers/#.WnszjP6sles
Access to transparent data sources can help, ILMS is robust enough to be integrated into Blockchain/Distributed Ledger Systems that can viewed by all involving (included the Inland Revenue).

Land Securities (one of the UK's largest land developers) has recently announced its Blockchain initiative, a global first for a property organisation.

ILMS application in scenario 3: acquisition of informal property in urban context

This scenario is not applicable in the UK due to absence of 'informal property' (as understood in the developing world). However, the inherent strength of ILMS as robust high-level protocol for 'assembly' would be very useful during the acquisition stages of urban infrastructure and service development. The 'acquisition' stages of the London CrossRail (http://www.crossrail.co.uk/news/crossrail-in-numbers#) took a special Act of Parliament, changes to the 'compensation code' and several years to complete. This was an immensely complex process and cost a significant % of the overall project cost of £14.8 billion. Land based financing and land value uplift issues have come to the fore during several large infrastructural developments in the UK and the application of ILMS should help this process gain even more traction. In reality, property owners significantly benefit from publicly financed infrastructure both in terms of increased value and access to improved services. In the UK, there is a mounting policy drive for a better understanding and application of 'land value capture' – ILMS should provide a strong platform for understanding 'risk' within the development land valuation process and enabling better land value to be added to infrastructure costing. In the context of 'due diligence', ILMS provides a simplified platform for each individual property and land parcel to be assessed and the individual elements to be risk identified.

Discussion

The goal of the ILMS is to create guidance that should be applicable across the globe and relevant to contemporary social and land related initiatives. Thus, it must engage with on-going global discussions surrounding formalisation, tenure security, human rights, and titling programs. Indeed, land formalisation and tenure security initiatives have been in operation for many years (World Bank has provided $ billions in funding) and two major international agreements have made them even more essential. United Nations member's states endorsed the 2030 UN agenda and committed to implement the Sustainable Development Goals (SDG's) and the New Urban Agenda (NUA) featured at the World Urban Forum 09

event in Feb 2018.[6] Both the SDG's and the NUA have featured in previous editions of the Land Journal and RICS, as are many international organisations, are keen to engrain SDG measures within international and national initiatives. This is no different for ILMS, which is directly linked SDG goals 1, 2, 5, 9, 11, 15, 16, the Land Portal have recently developed an intensive online resource which brings land based indicators and targets together.[7]

Figure 7

Many high-income nations (OECD) will be already be 'ILMS compliant', which suggests that the essential land data elements of ILMS are already available. However, it should be noted that during land acquisition, land assembly and land referencing processes can differ from authority to authority, agency to agency and organisation to organisation creating a miasma of differing levels of authoritive data. Within this complex environment, the ILMS seeks to helps create a primary, basic land data standard for each or an assembly of land parcels better enabling land acquisition, valuation and compensation processes – an essential and very costly element of all infrastructure projects. In high income countries land referencing is the formal investigation stage of rights held in land. It includes data relating to factors including ownership, environmental reports, and land plans and deeds. Land referencing enables 'land assembly' and can take on a para-legal hue, ILMS enables this process and helps practitioners and clients understand

[6] For more information see: http://habitat3.org/the-new-urban-agenda/
[7] For more information see: https://landportal.info/book/sdgs/

the potential 'risks' within the data elements. Low/Middle income nations cannot support the fee levels required by many professionals in the west and a new combined way of thinking and practicing is needed to support large scale acquisition and development across the globe. ILMS fits perfectly into this model as does the new RICS Land pathway.

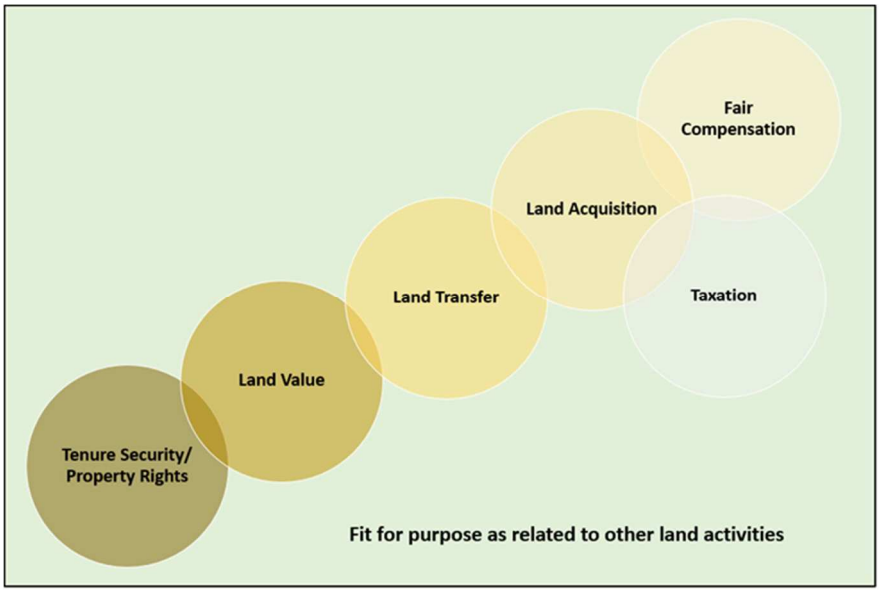

Fig 8. Land professionals work within a 'continuum' of land related processes from the establishment of tenure security to valuation, transfer (ILMS) and then into acquisition, compensation and taxation. Each process is reliant on the other but not necessarily sequentially. A land valuation and/or taxation receipt can be used to establish tenure security without the need for formalisation and titling. Land based financing is now seen as a crucial element of the New Urban Agenda
http://blogs.worldbank.org/sustainablecities/secret-sauce-making-new-urban-agenda-success

The ILMS is also directly linked to the new UN FAO Valuing land tenure rights – technical guide 11 (https://shar.es/1N9OQZ). This technical guide covers the issues associated with the identification and valuation of tenure rights for different purposes, and provides guidance on how to ensure that valuations are undertaken in a fair, reliable and transparent manner that comply with international norms.
UN Habitat/Global Land Tool Network (GLTN) are just about to release a ground breaking new guide on the 'valuation of unregistered land'[8] while UN GGIM are working with UNECE on basic land parcel definitions and have referenced ILMS and the forthcoming RICS Research 'valuation of unregistered

[8] For more information see: http://mirror.gltn.net/index.php/land-tools/themes/land-based-financing

land'; both feature ILMS underlining its future role within land based financing and the potential establishment of land markets.[9]

Conclusion

An evaluation of the role of the ILMS in contributing to the strengthening of land governance in each of the three case study countries, Mozambique, Peru, and the U.K., reveals both potential and challenges. These observations are important for determining the global fitness for purpose of the ILMS and implications for its supporting value to high-level global initiatives such as the United Nation's Sustainable Development Goals. ILMS supports global consistency by setting standards for classifying, defining, measuring, analysing, presenting and reporting land information which can be applied at a project, regional, state, national or international level. The ILMS is, therefore, both a standard and a framework for reporting. The initial 'what ILMS is' and 'what it is not' points are important and during the consultation process it has become more apparent that the fact that ILMS is designed to be 'flexible and non-prescriptive' is a powerful incentive for future adoption. This also links ILMS directly to the Fit for Purpose (FFP) concept and ILMS, due to its non- prescriptive nature, is meant to be 'aspirational' rather than rigid. Regardless of its intent, however, the *perception* that the ILMS is a prescriptive standard remains a challenge, especially where high levels of informality of ownership and use occurs. Future consultations will hopefully help the ILMS to more fully embrace applicability across a continuum of different countries, cultures, gender issues and levels of market sophistication.

While more work remains to be done, the ILMS represents a major step forward; never before have so many professional organisations worked in collaboration to try to bring some element of clarity to an often chaotic and opaque process. ILMS also challenges land professionals to step back from a limited focus on geospatial technological advances and embrace a deeper understanding of markets, legislation, finance and people.

[9] For more information see: http://ggim.un.org/meetings/2017-Sweden/

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