

International Land Measurement Standard - ILMS

1. Introduction and context
2. Land Acquisition and Transfer: a global issue
3. International standards - ILMS
4. Conclusions

'There is no such thing as an investment without property rights that are negotiable and transferable.' – De Soto

ILMS International
Land
Measurement
Standards

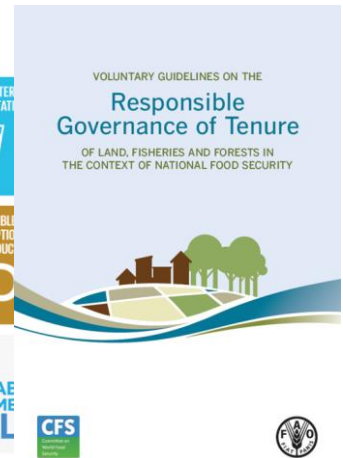
This is a generic presentation for use by all ILMS coalition members, please feel free to customise and edit according to your needs, audience and geography.

Land is a vital and limited national resource. Yet in many countries there is currently a lack of transparency both in land rights and land interests. The lack of transparency often becomes more apparent during the land transfer process. In many developing and developed countries, large tracts of land are held on informal, communal and unregistered basis's. This may result in people living with insecure tenure, the rights of legitimate owners not being recognised and the effects of opaque interests becoming overwhelming. This can make it extremely difficult to achieve the United Nations (UN) Sustainable Development Goals (SDGs) that support good land administration. <https://sustainabledevelopment.un.org>

ILMS has been debated and agreed upon by a coalition of global land professionals and organisations to help bring consistency and a form of 'due diligence' to the often difficult and high risk to the process of land acquisition and transfer. ILMS is collaborative and ground breaking and is aimed at not only policy makers, agencies and acquiring authorities but also and most importantly at field based land professionals and surveyors.

Land transfer and acquisition is a rural and urban issue, but the real action, the real pressure comes (as the image shows) rural land becomes urbanised and the pandoras box containing unplanned development, land value loss, lack of service provision, no taxation and informality is opened. High income geographies are not immune from these issues although they may manifest themselves differently as over complex, data confused and opaque non standard due diligence processes.

Land Acquisition and Transfer - a global issue



- 1,2,5,11,15,16 are directly related to Land issues
- New Urban Agenda & Rapid Urbanisation

© 2018 RICS Corporate

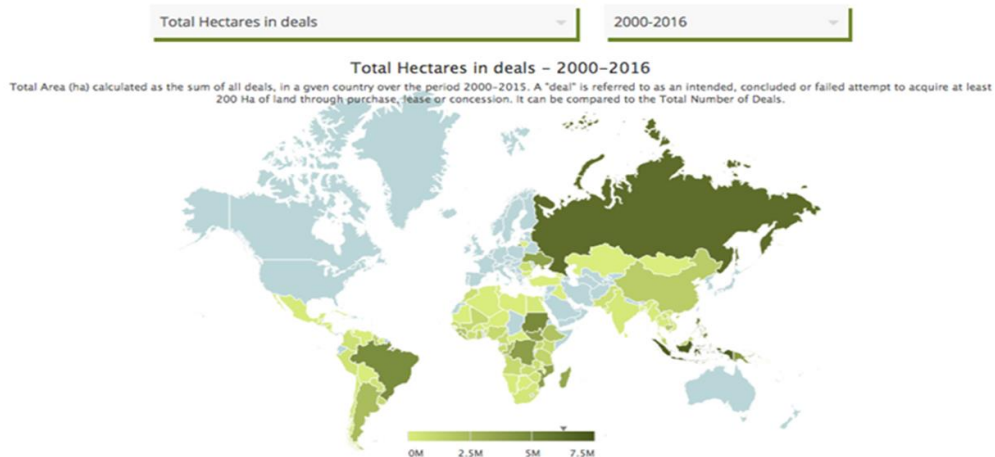
ILMS International Land Measurement Standards

Land professionals and surveyors work within numerous national and global frameworks but no more important than the UN SDGs. Land is directly related to several SDGs such as 1. No Poverty, 2. Zero Hunger, 5. Gender Equality, 11. Sustainable cities, 15. Life on land, 16. Justice & strong institutions. Land (and everything connected to it) as already mentioned is a finite resource and needs to be managed, used, owned and protected. The SDGs and their achievement by 2030 are critical for the survival of future generations. It is up to us, land professionals and surveyors, to be 'good ancestors' and use our skills appropriately. This is recognised in the seminal and increasingly important UNFAO Responsible Governance of Tenure (VGGTs) standard and it uses as the 'ultimate' global guidelines for our professions. Land and its planning, compulsory acquisition, valuation and use are central to the VGGTs. ILMS is designed to fit within this governance and global 'due diligence' umbrella.

Extra – Section 16 of the VGGT Table3 • Section 16.1: "States should expropriate only where rights to land...are required for a public purpose. States should clearly define the concept of public purpose in law, in order to allow for judicial review." • Section 16.1: "[States should acquire only] the minimum resources necessary." • Section 16.1: "[States] should respect all legitimate tenure rights holders, especially vulnerable and marginalized groups, by ... providing just compensation in accordance

with national law.” • Section 16.2: “States should be sensitive where proposed expropriations involve areas of particular cultural, religious or environmental significance, or where the land...[is] particularly important to the livelihoods of the poor or vulnerable.” • Section 16.2: “States should ensure that the planning and process for expropriation are transparent and participatory. Anyone likely to be affected should be identified, and properly informed and consulted at all stages.”

Land Acquisition – a global rural & urban issue



© 2018 RICS

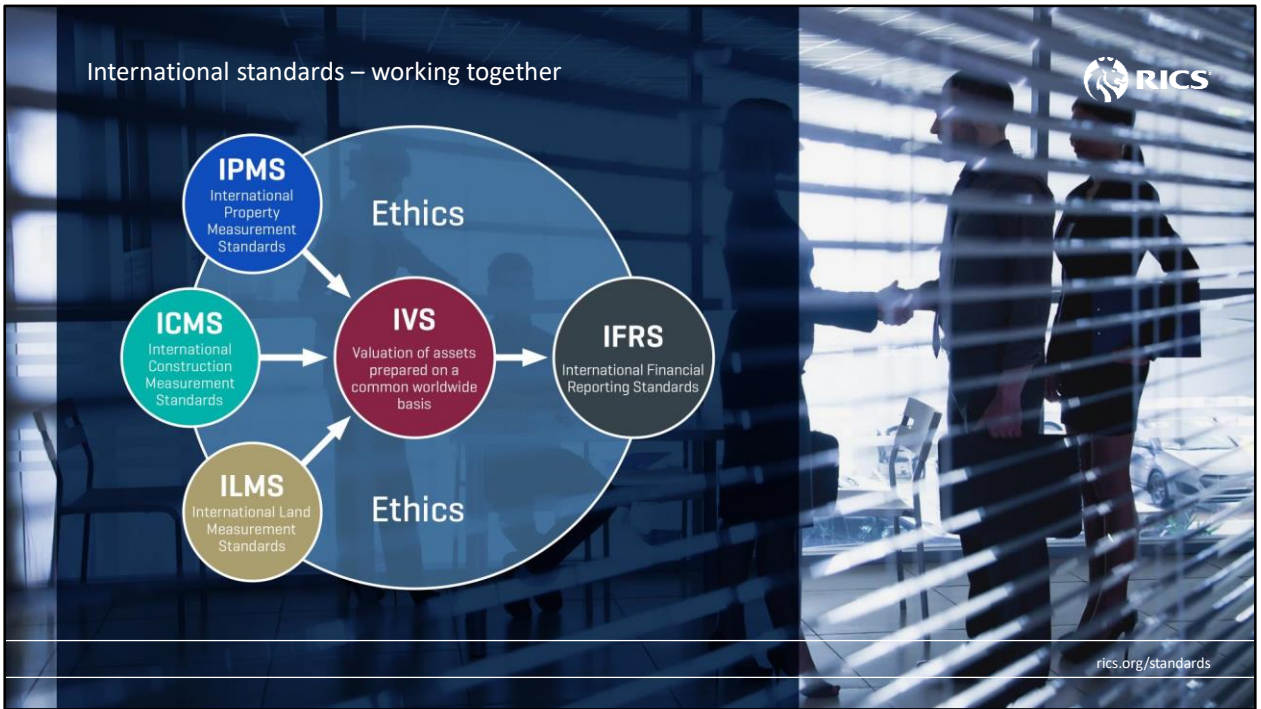
Corporate



Large scale land acquisition issues are also top of the agenda for the United Nations Habitat (“UN Habitat”), United Nations Food and Agriculture Organization (“UNFAO”) and the World Bank, especially since the adoption of the New Urban Agenda in 2016. According to the World Bank approximately 10-15 million people are displaced by development and infrastructure projects each year. In China, approximately 80 million people have been displaced by development and infrastructure projects between 1950 and 2015, the same period has seen over 65 million people displaced in India. Conflicts over land in India stall projects worth billions of dollars. An analysis of 289 cases, making up 40% of major land conflicts in India, found they affected 3.1 million people and more than \$178 billion of investment. A related issue to land disputes during acquisition is the agreed of fair and reasonable compensation to land owners or occupiers. A recent excellent PhD by Nicholas Tagliarino University of Groningen analysed 50 countries and their governance, compensation and remediation processes with regards to land acquisition. It makes disquieting reading. Many nations have yet to implement or understand the UN FAO concepts and offer only basic compensations (and other processes such as dispute resolution) to those affected by acquisition.

A lack of a transparent, robust land transfer process severely undermines the ability of national governments and international agencies to provide fair compensation on

land transfer. A fair robust due diligence land transfer standard such as ILMS will also help to underline the importance of the key principles of equity and equivalence. These principles mean that affected persons should receive “no more or no less than the loss resulting from the compulsory acquisition of their land.



ILMS also operates in conjunction with other global standards. Especially those related to land, property and finance. IFRS or International Financial Reporting Standards are a great example of an implemented global standard that has (with caveats) brought consistency, transparency and comparability to business and markets.

Global Financial reporting, using common measurement and valuation data, would lead to greater financial stability, transparency and investor confidence – in private and public environments.

Valuations, using common standards based on consistent global measurement standards, provide the basis for financial and economic stability.

Property, Land and Construction measurement need clear, consistent and global standards, promoted through professional training, endorsed & supported by governments, companies, academic bodies and other stakeholders.

Across all of these is a theme of accurate, consistent data.

All standards need to be underpinned by a globally endorsed set of **Ethical standards**. Resulting benefits are trust, assurance and best practice. Consumer and market confidence and global financial stability.

ILMS INTERNATIONAL
LAND
MEASUREMENT
STANDARDS

Uluslararası Arazi Ölçüm Standardı:
Arazi ve Taşınmaz Mal Ölçme
Çalışmalarında Özenli Durum Tespiti

Uluslararası Arazi Ölçüm Standardı Koalisyonu



ILMS is a framework for:

- ▶ Enabling the due diligence reporting process on land and property matters to take place for people and legal entities.
- ▶ Strategic guidance for reporting on land and property assets in support of reporting systems such as the International Financial Reporting Standards (IFRS)
- ▶ Advancing transparency, integrity and consistency.
- ▶ Identifying what is on the ground, what information is available and the quality of the available information, rather than what is legislated or implied. This also includes recognition of gender specific issues.
- ▶ In practice, ILMS should be adopted systematically and is capable of being used in all markets whether a functioning Land Information Systems (LIS) exists or not. ILMS provides a due diligence structure for the collection and collation of land and real property surveying information.

The ILMS land transfer and reporting standard consists of 8 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. ILMS will apply across the globe, although many high-income nations will comply with the standards already. This suggests that the essential land data elements of ILMS are now available, but during land acquisition, assembly and referencing, processes can differ between agencies and create a confusing mix of authoritative data. Devising a primary, basic data standard for each land parcel or an assembly of them better enables land acquisition, valuation and compensation processes – an essential and costly element of all infrastructure projects.

High-income countries are better positioned to carry out land referencing, the formal investigation of rights held in land through the collection of data relating to ownership, environmental reports and land plans and deeds, among other factors. Referencing also enables land assembly, and ILMS support this process by helping practitioners and clients understand the potential risks in the data elements. Low- and middle-income nations cannot afford the fees demanded by many professionals in the west, however, so a new combined way of thinking and practising is needed to support large-scale acquisition and development across the globe: ILMS match this

need perfectly. The ILMS standard contains examples of how ILMS might work in data rich and data poor regions.

ILMS is a due diligence framework and standard for land and real property surveying that supports a sustainable future both for people and legal entities. ILMS is both a standard and a due diligence framework to enable evidence-based assessment of land and property and is designed to address the current lack of transparency in land rights and land interests. ILMS recognises gender equality and pro-poor issues when gathering field information on legitimate land ownership and is also deeply connected and complimentary to other globally relevant standard and frameworks in the land acquisition and transaction space.

- Inaugural meeting of 24 coalition members at FAO HQ, Rome
- Coalition officially launched Oct 2016 (38 members (Sept 2019))
- ILMS officers
- ILMS Standards Setting Committee
- Initial global consultation: Dec – Feb 2018
- Exposure draft consultation: May – Sept 2018
- 2nd consultation end of 2018
- Over 20 drafts considered and reviews
- 6 translations (inc. Spanish, French, Russian, German, Arabic and Turkish)
- Website – www.ilmsc.org



So just what have we done to help create an effective and transparent land investment market? That recognizes complex legitimate land tenure situation, gender rights, improves security and establishes a platform for effective land transfer, acquisition and taxation. The ILMS coalition is formed of kindred national, regional and international bodies that all work within or are interested in the global land and resources sector. These bodies came together to tackle the development of a standardized Land reporting framework and would like to invite interested professional and technical institutions, learned associations and membership bodies to join in their efforts.

At the heart of all international standards is the desire to create sustainable, professional markets in an increasingly connected global economy. To move forward on this the global land professional bodies including South Africa, Ghana and delegates from Botswana and Kenya came together for the inaugural ILMS meeting at UN FAO in Rome this June 2016. The ILMS coalition now stands at 38 (Sept 2019) and formed a Standards Setting Committee to develop the ILMS standard. It was wonderful to see such a strong contingent from Africa and it does change the tone of conversation when Western nations are confronted by how little connectivity there is between western market driven systems of land reporting and those in low and middle income countries.

The independent Standard Setting Committee (SSC) was formed by the coalition in January 2017 to develop the ILMS, and included technical specialists from 18 countries and a combined expertise covering most regions of the world. The SSC largely worked together online, although it also met in person at several World Bank Land and Poverty Conferences in Washington DC, at FIG working weeks in Helsinki, and in Berlin in September 2018, with a final ground breaking meeting Brussels Jan 2019.

The final consultation document went to 25 drafts, some with small, nuanced changes and others with major edits. However, this was a cathartic and necessary process for what can be a national and localised profession. The final standards are, we believe, exactly what the coalition requested and the SSC has done an amazing job, requiring diplomacy and doggedness to achieve global consensus.

ILMS has been translated into several languages and is being adopted by numerous nations and agencies as a part of their due diligence land acquisition and transfer protocols. www.ilmsc.org

ILMS is a due diligence framework and standard for land and real property surveying that supports a sustainable future both for people and legal entities. ILMS is both a standard and a due diligence framework to enable evidence-based assessment of land and property and is designed to address the current lack of transparency in land rights and land interests. ILMS recognises gender equality and pro-poor issues when gathering field information on legitimate land ownership and is also deeply connected and complimentary to other globally relevant standard and frameworks in the land acquisition and transaction space. ILMS coalition also contains government/agency, industry and academic supporters.

ILMS Coalition officers:

Chair : James Kavanagh jkavanagh@rics.org
Vice Chair: Maurice Barbieri maurice.barbieri@clge.eu
Secretary General: Pedro J. Ortiz pjortizt@gmail.com

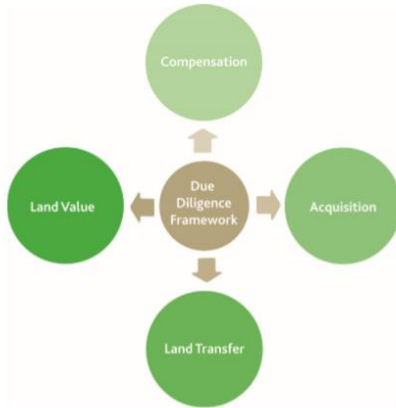
ILMS - Coalition

ILMS International
Land
Measurement
Standards



Example of some of the logo's of the 38+ professional organisations, agencies and institutions within the ILMS coalition. Canada, Samoa and Uganda have joined (2019) along with several companies.

ILMS Framework Applications



Geospatial Data Accuracy Table				
(X,Y)	(Z)	Example Sources	Legacy Plot Scale	Min. Size of Feature
+/- 50mm	+/- 10mm	Scanned surveys, measured building surveys, topographic surveys, boundary dispute surveys, area registration	1:100	50mm
+/- 100mm	+/- 50 mm	Low accuracy measured building surveys, topographic surveys, high accuracy utility tracing.	1:200	100mm
+/- 200mm	+/- 50mm	Topographic surveys, aerial imagery, LIDAR surveys, low accuracy measured building surveys	1:500	200mm
+/- 500mm	+/- 500mm	Medium scale topographic surveys, infrastructure surveys, aerial imagery, UAV/LIDAR surveys, satellite imagery, parcel demarcation, GNSS enabled demarcation	1:1000	500mm
+/- 1000mm	+/- 1000mm	National mapping, general boundary mapping, aerial and satellite imagery, rural cadastral surveys and parcel demarcation, GNSS enabled demarcation	1:2500	1000mm
+/- 2000mm	+/- 2000mm	National mapping, parcel identification (rural), aerial and satellite imagery, UN GGIM Master level 0, Fit-for-purpose level 1	1:5000	2000mm
+/- 4000mm	+/- 4000mm	Small scale national mapping, state land mapping, aerial & satellite imagery, national parks & reservations, UN GGIM Cadastre Master level 1, Fit-for-purpose level 0	1:10 000	4000mm

ILMS contains some ground breaking elements. ‘Fit for Purpose’ is not just for spatial measurement, it is also important that it is used for valuation/appraisal, land reporting and ultimately to aid compensation for large scale acquisition during compulsory purchase processes. Land professionals work in a continuum of land-related processes from the establishment of tenure security to valuation, transfer and acquisition, compensation and taxation. Graphic above. Each process relies on the others, but not necessarily sequentially. A land valuation, a taxation receipt or both 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.

ILMS also contains a customised ‘geospatial data accuracy table’ – this table is designed to allow users to differentiate between different sources of geospatial information and better understand how they can or cannot work together. It is not designed to used for geospatial data capture procedures, although it could influence the required output accuracy. This is an enormous step forward for the global land professional and geospatial process, at last we all know what we mean (and can expect) from 1:2500 scale information.

- ▶ ILMS is part of a global drive towards transparency and 'due diligence' protocols within the land and property sectors. ILMS works in conjunction with the recently released UNFAO due diligence for lawyers engaged in land acquisition (available UNFAO due diligence guide for lawyers 2019 http://www.fao.org/publications/card/en/c/C_A4709EN , the DFID/UKAID/ODI/TMP Tenure Risk Tool <https://landportal.org/library/resources/qtr-tenure-risk-tool-2019/qtr-tenure-risk-tool> LandMatrix <https://www.landmatrix.org> and with the ongoing development of global standards such as LADM. <https://www.iso.org/standard/51206.html>
- ▶ XML Data standard – ILMS as a high level protocol for other standards

ILMS – Due Diligence Worksheet						
Property Address / Identifier:						
	Component	Basis	Date	Documentary support	Author status	Information provenance (R/Y/G)*
1	Land tenure					
2	Parcel identification (Boundaries)					
3	Land area					
4	Land use					
5	Services					
6	Building					
7	Land valuation					
8	Sustainability					

*The system uses red (R), yellow (Y) and green (G), where green indicates high-quality information, yellow limited, disputed or questionable information, and red indicates no information or potentially unreliable information.

ILMS is an international principle-based standard for land and property information. Its adoption will reduce risk in land and real property surveying and promote better land governance, robust conveyancing, secure lending and land registration. At the heart of ILMS is the due diligence worksheet. Robust and unbreakable, this worksheet is designed to be used in the field and to aid the collation of 'existing' information on a parcel (or a group of parcels), along with supported evidence (if any) and a simple 'risk' indicator on the provenance of that information.

ILMS provides global consistency by setting a standard for assembling land information that can be applied at a project, local, regional, state, national or international level. ILMS is therefore both a standard and a due diligence framework to enable evidence based assessment of land and property.

ILMS is divided into five parts. The introduction details the standard's development and the drive behind it. Part 2 provides additional context around land information systems, the application of the standard and links with other international standards. Parts 3 and 4 cover the components that make up the due diligence framework and give examples of how this may be completed in both data rich and data poor environments. Key terms are then defined in part 5.

ILMS is flexible and can be adopted incrementally and/or partially in line with the sustainable fit-for purpose principles such as those being globally adopted in land administration. It will also advance best practice. Beyond due diligence, ILMS takes account of existing rights such as communal rights, tribal rights and gender rights, and considers the hierarchy of land rights within any land parcel. ILMS may prompt market demand for publicly accessible and transparent registers of land information.

The Coalition directed that ILMS should:

- serve the public interest
- focus on key land information elements, as required to de-risk and aid the land and property due diligence processes
- document the status of land tenure security and land rights
- support advancement of the SDGs.

ILMS is a framework for:

- enabling the due diligence reporting process on land and property matters to take place for people and legal entities
- strategic guidance for reporting on land and property assets in support of reporting systems, such as the International Financial Reporting Standards (IFRS)
- advancing transparency, integrity and consistency.
- identifying what is on the ground, what information is available and the quality of the available information, rather than what is legislated or implied – this also includes recognition of gender specific issues.

In practice, ILMS can be adopted systematically and is capable of being used in all markets whether a functioning Land Information Systems (LIS) exists or not. ILMS provides a due diligence structure for the collection and collation of land and real property surveying information.

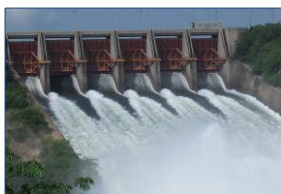
As mentioned ILMS operates within the existing due diligence frameworks, the UNFAO due diligence framework for lawyers being a case in point.

A basic data model is also being developed based on the eight key parcel data components of the ILMS worksheet.

World Bank Land & Poverty Conference 2018

Modernising Land Service delivery through the application of a continuum approach:
Examining the Appropriateness of the International Land Management Standards (ILMS)
– Kat Grimsley George Mason Uni, James Kavanagh RICS

- **3 Countries: Mozambique, Peru, United Kingdom**
- **3 Acquisition Scenarios: Large-scale infrastructure, Investment, Urban Informal**



Source: Wikipedia



Credit: P. Smith



Credit: Robin King /

World Bank conference 2018/19 – ILMS was looked at in practice (in conjunction with George Mason University Washington DC) and used in 3 countries on 3 specific land acquisition processes. Large scale infrastructure and investment were found to most relevant, although urban informal could be better facilitated by less prescription in the ‘building’ component. These findings greatly helped to inform debate and the final ILMS standard document. ILMS is currently being trialled in several countries such as Uganda and Laos.

Connecting standards - ILMS

ILMS International
Land
Measurement
Standards

VOLUNTARY GUIDELINES ON THE Responsible Governance of Tenure OF LAND, FISHERIES AND FORESTS IN THE CONTEXT OF NATIONAL FOOD SECURITY

Fit-For-Purpose

Due diligence, and agricultural

A guide on the dual responsibility of private sector lawyers on the acquisition of land

ILMS INTERNATIONAL LAND MEASUREMENT STANDARDS

Uluslararası Arazi Ölçüm Standardı: Arazi ve Taşınmaz Mal Ölçme Çalışmalarında Özenli Durum Tespiti

Implementation Standard: Land Real Estate

Uluslararası Arazi Ölçüm Standardı Koalisyonu

CFS

The new ILMS standard seeks to engage all stakeholders in the land ownership, registration, measurement and transaction process. It will also help forge direct links between land professionals and financial reporting by de-risking the land transaction process for all parties and implementing an agreed land information framework.

There is a space between the high level global 'soft' law and guidelines of the FAO Guidelines for the Responsible Governance of Land and Resources (VGGT) and the 'hard' technical implementation of land administrative systems such as Land Administration Domain Model (LADM) – the development of an agreed high level International Land Measurement Standard helps fill this void and 'connect' the standards & documents mentioned on this slide. ILMS also means that we, the land professions, have carried out our 'due diligence' and best practice protocol. This brings us into direct collaboration with lawyers and other actors (finance, for example) in our sectors.

Conclusions

- Bring consistency and transparency by informing governance and policy decisions
- Help strengthen land security and property rights by helping legitimate owners realise the economic value of their rights
- Bring land professionals closer to the investment community
- De-risk the internal and external investment in land and property
- Enable the use of 'informal data sources' and highlight risk
- Aid efficiency and fair compensation in Large Scale Land Acquisition
- Help deliver large scale infrastructure and sustainable urban expansion
- Enable technology by creating a robust land acquisition data format

Conclusions. Read direct.

But emphasis according to audience, and end on 'We as a global land profession are a critical enabling factor for the achievement of the SDGs 2030, and the due diligence ILMS standard shows that we are consistent and serious in our intent to bring justice, fairness and efficiency to the land acquisition and transfer process. This currently causes disputes, conflicts, loss of revenue, injustice, corruption, loss of land security and rights, and the inappropriate expropriation of national assets. ILMS can help bring some kind of transparency and fairness to processes that are extremely important to national security, economic development, infrastructure provision, services to the public and social cohesion.'

ILMS Coalition officers:

Chair : James Kavanagh jkavanagh@rics.org
Vice Chair: Maurice Barbieri maurice.barbieri@clge.eu
Secretary General: Pedro J. Ortiz pjortiz@gmail.com

ILMS Standards Setting Committee SSC

Chair: Rob Mahoney robmahoney@mahgeo.com
Vice Chairs : Duncan Moss Duncan.Moss@os.uk
Thomas Jacubeit Jacubeit@jacubeit.de

Website: www.ilmsc.org