

Surveying: Supporting the Global Agenda and Serving Society

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THE SURVEYOR: PARTNER IN NATIONAL DEVELOPMENT
 GHIS/CASLE/FIG CONFERENCE
 ACCRA, GHANA, 22-28 FEBRUARY 2010

Outline of presentation

- The global agenda**
 - Facing the Millennium Development Goals
- From measurement to management**
 - The changing role of the surveyors
- Land governance**
 - Managing land rights, restrictions, and responsibilities
- Peri-urban development**
 - Water, sanitation and tenure
- The role of FIG and the surveying profession**
 - Professional, institutional and global development

Current policies

Do Surveyors have a role to play in the global agenda?

Yes !

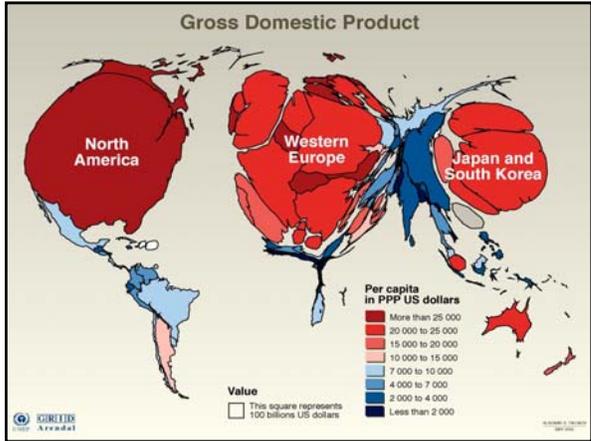
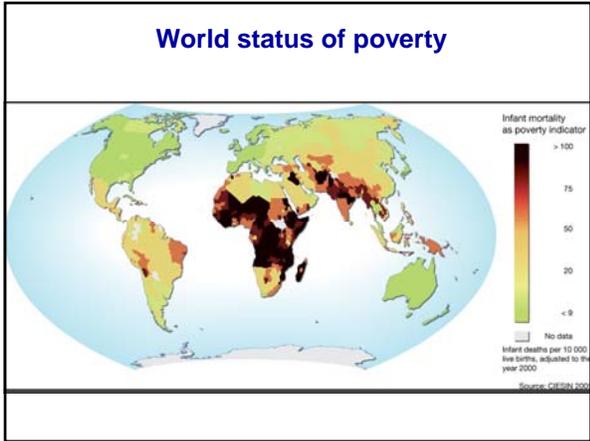
Simply, no development will take place without having a spatial dimension

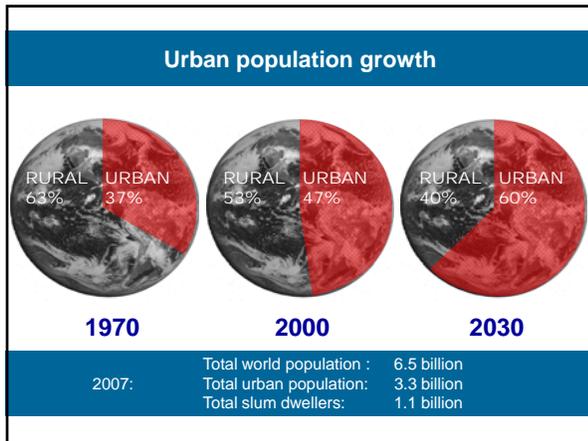
And no development will happen without the footprint of the surveyor

The Millennium Development Goals

- Goal 1: Eradicate extreme poverty and hunger
- Goal 2: Achieve universal primary education
- Goal 3: Promote gender equality and empower women
- Goal 4: Reduce child mortality
- Goal 5: Improve maternal health
- Goal 6: Combat HIV/AIDS, malaria and other diseases
- Goal 7: Ensure environmental sustainability**
- Goal 8: Develop a Global Partnership for Development**

The framework includes 18 targets and 48 indicators enabling the ongoing monitoring of annual progress





It is all about:

People, human rights, engagement and dignity
Politics, land policies and good governance
Places, shelter, land rights, and natural resources
and Power, decentralisation and empowerment

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The role of surveyors is changing

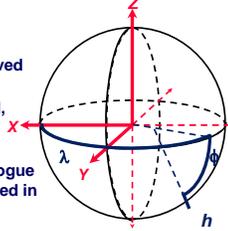
- **From measurement**
 Surveyors will still be high level experts within measurement science, but due to technology development the role is changing more into managing the measurements
- **To management**
 Surveyors will increasingly contribute to building sustainable societies as experts in managing land and properties

The land professionals

Positioning infrastructures

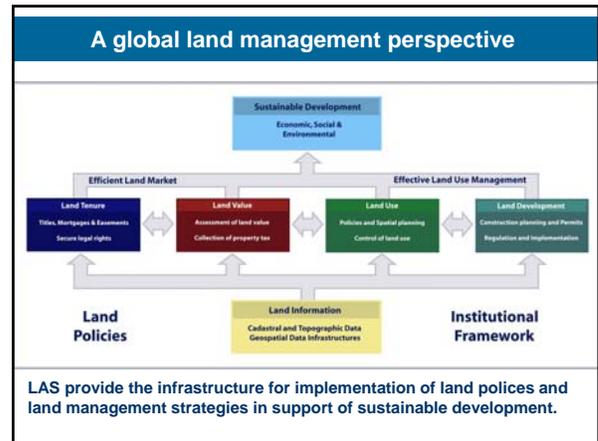
Versus traditional Geodetic Datum

- Enables description of position as latitude, longitude and height and underpins all geo-spatial data;
- Characteristics:
 - Coverage - initially local but has evolved to national and continental;
 - Measurement - initially ground based, labor intensive, now more efficient using GNSS;
 - Data management - initially very analogue but now a key part and often integrated in Spatial data Infrastructures (SDI)



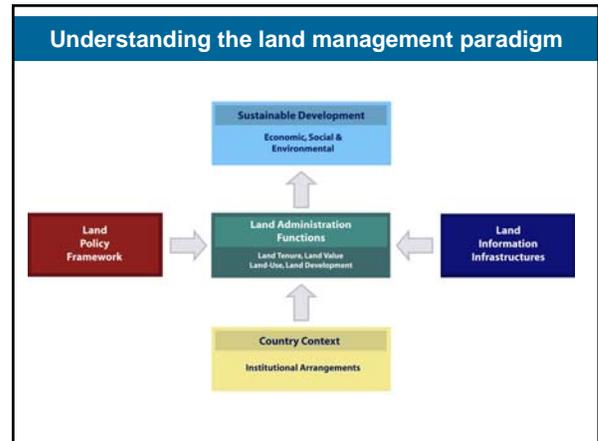
Positioning infrastructures are the only truly global infrastructure underscoring capture and management of spatial data world wide

Source: Matt Higgins, Washington, 2009



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Land governance

Land governance is about the policies, processes and institutions by which land, property and natural resources are managed.

This includes decisions on access to land; land rights; land use; and land development.

Land governance is about determining and implementing sustainable land policies.





The increasing role of property rights

"Civilised living in market Economies is not simply due to greater prosperity but to the order that formalised property rights bring"

Hernando de Soto – 1993

Continuum of rights (GLTN-agenda)

From: illegal or informal rights

To: legal or formal rights

What is a good property system ?

- People in general can participate in the land market; widespread ownership; everybody can make transactions and have access to registration
- The infrastructure supporting transactions must be simple, fast, cheap, reliable, and free of corruption.
- The system provides safety for housing and business, and for capital formation

Only 25-30 countries in the world apply to these criteria.

A worldwide Comparison of Cadastral Systems

Cadastral Template
A Worldwide Comparison of Cadastral Systems

Cadastral country reports based on a jointly developed FIG/IGU template. Established under UN mandate by Resolution 4 of the 19th UNCCAP in Okinawa, Japan in July 2003. UN endorsement for cooperation with UN/ECE VIPLA, UN/ECA COOL, and POIDEA.

Data per Country
See updates: 21 Jan 2019, 42 countries

as of: Select a Country

as of: Select a Country

II. Principles and Statistics
See updates: 9 Jan 2019, 42 countries

1. Cadastre Principles
2. Population
2.3 Farms
2.7 Professionals

Latest Updates

- Country report of Guinea (31 Dec 2017)
- Country report of Guinea (8 Aug 2017)
- Country report of Nepal (18 Oct 2016)
- Update of Latvia and Netherlands (2 Aug 2016)
- Country report of Austria as 30th country (18 Jan 2016)
- Country report of Latvia (21 Oct 2015)
- Country report of Tanzania (12 Jul 2015)
- Country report of Panama (28 Apr 2015)
- Country report of Honduras (7 Jan 2014)
- Country report of Venezuela (10 Spain) (29 May 2014)

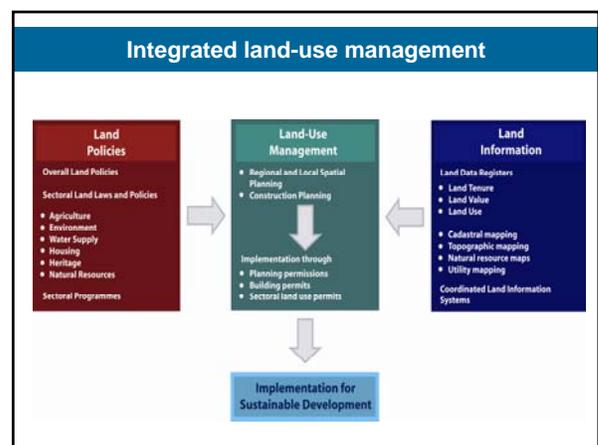
The "Cadastral Template" has been developed by a research group at the Department of Geomatics of the University of Melbourne. It consisted of Prof. Jan Williamson, Dr. Abbas Rajabifard, and Daniel Staudler, supported by Prof. Stig Eriksen from Aalborg University, Denmark.

www.cadastraltemplate.org

Property Restrictions

- two conflicting approaches

- **The free market approach** (current debate in the US)
 - Land owners should be obligated to no one and should have complete domain over their land.
 - The role of government to take over, restrict, or even regulate its use should be non-existent or highly limited.
 - Planning restrictions should only be imposed after compensation for lost land development opportunities
- **The central planning approach** (European perspective)
 - The role of democratic government include planning and regulating land systematically for public good purposes.
 - A move **from** every kind of land use being allowed unless it was forbidden **to** every change of land use is forbidden unless it is permitted and consistent with adopted planning regulations and restrictions.



Property Responsibilities

- Responsibilities relate to the social, ethical commitment or attitude to environmental sustainability and good husbandry
- Individuals are supposed to treat land and property in a way that conform to cultural traditions and ways of good ethical behaviour.
- Therefore, systems for managing access and use of land vary throughout the world according to historical development and cultural traditions.

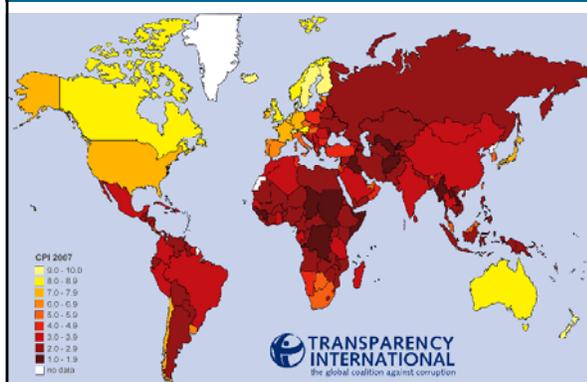
Good governance is:



- **Sustainable and locally responsive:** It balances the economic, social, and environmental needs of present and future generations, and locates its service provision at the closest level to citizens.
- **Legitimate and equitable:** It has been endorsed by society through democratic processes and deals fairly and impartially with individuals and groups providing non-discriminatory access to services.
- **Efficient, effective and competent:** It formulates policy and implements it efficiently by delivering services of high quality
- **Transparent, accountable and predictable:** It is open and demonstrates stewardship by responding to questioning and providing decisions in accordance with rules and regulations.
- **Participatory and providing security and stability:** It enables citizens to participate in government and provides security of livelihoods, freedom from crime and intolerance.
- **Dedicated to integrity:** Officials perform their duties without bribe and give independent advice and judgements, and respects confidentiality. There is a clear separation between private interests of officials and politicians and the affairs of government.

Adapted from FAO, 2007

Good governance and corruption



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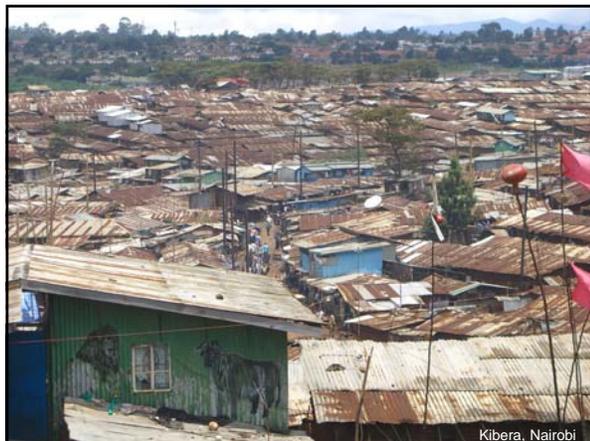
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Goal 7: Ensure environmental sustainability

Goal 7. Ensure environmental sustainability*

Target 9. Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources	25. Proportion of land area covered by forest
	26. Land area protected to maintain biological diversity
	27. GDP per unit of energy use (as proxy for energy efficiency)
	28. Carbon dioxide emissions (per capita) [Plus two figures of global atmospheric pollution: ozone depletion and the accumulation of global warming gases]
Target 10. Halve by 2015 the proportion of people without sustainable access to safe drinking water	29. Proportion of population with sustainable access to an improved water source
Target 11. By 2020 to have achieved a significant improvement in the lives of at least 100 million slum dwellers	30. Proportion of people with access to improved sanitation
	31. Proportion of people with access to secure tenure [Urban/rural disaggregation of several of the above indicators may be relevant for monitoring improvement in the lives of slum dwellers]





Global development partnership with UN-Habitat

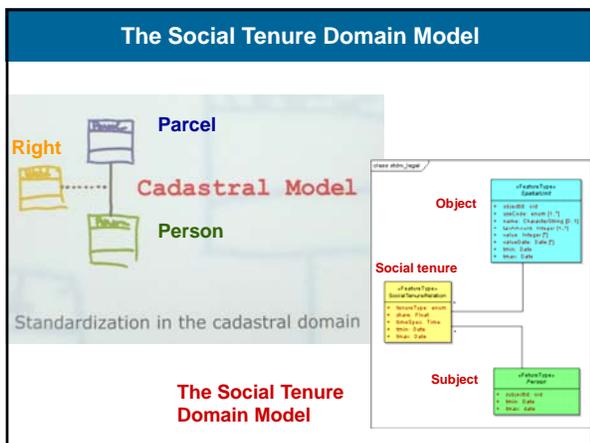
Informal settlements

Traditional cadastral systems do not provide for security of tenure in informal settlements.

A more flexible system is needed for identifying the various kind of social tenure existing in informal settlements.

Such systems must be based on a global standard and must be manageable by the local community itself.

ITC cooperates with UN-Habitat, ITC and the World Bank to develop the **STDM** model that is designed as a basic land tool for poverty alleviation.

Building a Core Model

Modeling the relation between Objects – Subjects – Social Tenure

- Objects** ("where"): Not only an identified (measured) parcel – but a range of objects such land parcels, buildings, etc and identified in various ways – such as one point, street axes, photos, etc.
- Subjects** ("who"): Not only a (legal) person – but a range of subjects such as person, couple, groups of people, unidentified groups, authority, etc,
- Social tenure** ("what"): Not only ownership and formal legal rights – but also range of informal, indigenous and customary rights as well financial issue such group loans and micro credit.



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Facing the new challenges

Focusing on land Governance and achieving the MDGs, also includes facing the big challenges of the new millennium:

- Climate change
- Food shortage
- Energy scarcity
- Urban growth
- Environmental degradation
- Natural disasters
- Global financial crisis

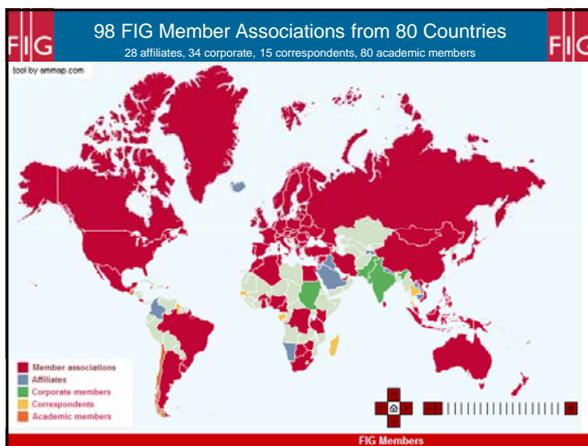
**All these challenges relate to governance and management of land
The surveyors – the land professionals - play a key role**

The role of the surveying profession

Land governance and management is a core area for surveyors/geo-spatial profession. It will require:

- High level geodesy models to predict future change
- Modern surveying and mapping functions to support management and implementation
- Spatial data infrastructures to support decision making on the natural and built environment
- Secure tenure systems
- Sustainable systems for land valuation, land use management and land development
- Systems for transparency and good governance

Land governance is a cross cutting issue confronting all traditional silo-organised land administration systems.



The Role of FIG

- **Professional Development**
 - Global forum for professional discussions and interactions through conferences, symposia, commission working groups,
- **Institutional Development**
 - Capacity building through Institutional support for educational and institutional development at national level – **Africa Task Force**
- **Global Development**
 - Cooperation with the UN agencies, FAO, UN-Habitat and World Bank, and sister organisations through Joint Board of Geospatial Information Societies.
- **Information and Communication**
 - website, annual review, publications
- **FIG Office**
 - administration, finances,

Professional Development

Annual working weeks
 Hong Kong 2007
 Stockholm 2008
 Eilat 2009
 Marrakech 2011
 Rome 2012
 Abuja, Nigeria 2013

Biennial regional Conferences
Ghana 2006
 Costa Rica 2007
 Hanoi 2009

FIG Congress every four years
 Sydney 2010

Commission work plans
 10 technical commissions
 Interaction with national delegates

Commission working groups, workshops and seminars
 Interaction with national delegates

Accra, Ghana, March 2006



Global Development

FAO, projects on capacity building, good governance, land economics,

UN-HABITAT, partner in the GLTN network, projects on informal settlement, informal development, gendered land tools, etc....

World Bank, joint activities; publications, and joint conference March 2009 on Land Governance in support of the MDGs

Global partnership is the link that drives development for achieving the global agenda such as the MDGs




Global recognition → national recognition → local recognition

FIG publications



WWW.FIG.NET

The role of FIG

FIG intend to play a strong role in building the capacity to design, build and manage National surveying and land Administration systems that facilitates sustainable Land Governance in support of the Millennium Development Goals.



"Building the capacity for taking the land policy agenda forward"

The XXIV FIG International Congress 2010

Sydney, Australia – 11 to 16 April



www.fig2010.com

The future belongs to our children

