Surveying: Supporting the Global Agenda and Serving Society

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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.

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.

World status of poverty

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
Urban population growth

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<th>Year</th>
<th>Rural</th>
<th>Urban</th>
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<tr>
<td>1970</td>
<td>63%</td>
<td>37%</td>
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<td>2000</td>
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2007: Total world population: 6.5 billion
Total urban population: 3.3 billion
Total slum dwellers: 1.1 billion

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Total slum dwellers: 1.1 billion

It is all about:

People, human rights, engagement and dignity
Politics, land policies and good governance
Places, shelter, land rights, and natural resources
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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### Understanding the land management paradigm

**Sustainable Development**
- Economic, Social & Environmental

**Land administration**
- Functions
  - Land information infrastructures
  - Country Context
  - Institutional Arrangements

**Good land Governance is about**

**Building a sustainable future**

Surveyors play a key role
Interests in land

Land administration systems are the basis for conceptualising rights, restrictions and responsibilities related to people, policies and places.

Rights:
- Registration and security of tenure positions

Responsibilities:
- Social, ethical commitment to environmental sustainability and good husbandry

Restrictions:
- Planning and control of land-use and land development

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.

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.

A worldwide Comparison of Cadastral Systems

www.cadastraltemplate.org

Integrated land-use management
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 integrates the service provision at the closest level to citizens.
- **Legitimate and equitable**: It has been endorsed by society through democratic processes and mediates 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 the service 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 bias and give independent advice and judgements, and respect confidentiality. There is a clear separation between private interests of officials and politicians and the affairs of government.

Adapted from FAO, 2007

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Goal 7: Ensure environmental sustainability

| Target 1 | Integrate the principle of sustainable development into country policies and programmes and ensure the loss of environmentally sensitive ecosystems.
| Target 2 | Improve access and control of children by early child development programmes.
| Target 3 | Reduce the number of infant deaths by one-third with new-born and child mortality.
| Target 4 | Reduce the number of underweight children by one-third among children aged under 5 years.
| Target 5 | Reduce the number of women who die in childbirth by three-quarters.
| Target 6 | Reduce the number of people who suffer from malnutrition by one-third among children under 5 years.
| Target 7 | Reduce the proportion of people without access to safe drinking water.
| Target 8 | Reduce the proportion of people without access to sanitation.
| Target 9 | By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers.

Lagos
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 kinds 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.

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.

The Social Tenure Domain Model

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 as 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 as group loans and micro credit.
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.
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

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

The future belongs to our children

The XXIV FIG International Congress 2010

Sydney, Australia – 11 to 16 April

www.fig2010.com