

# Surveyors facing the global agenda

**Prof. Stig Enemark**



President

Aalborg University, Denmark

GEO-SIBIRIA-2009  
NOVOSIBIRSK, RUSSIA, 21-23 APRIL 2009

## Greetings from Copenhagen

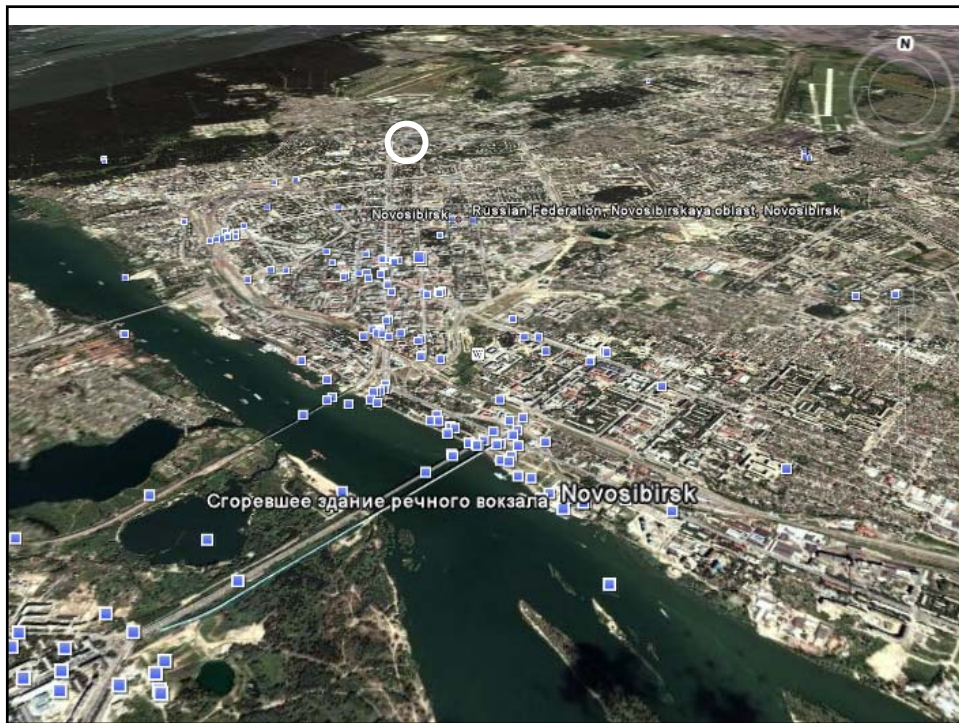
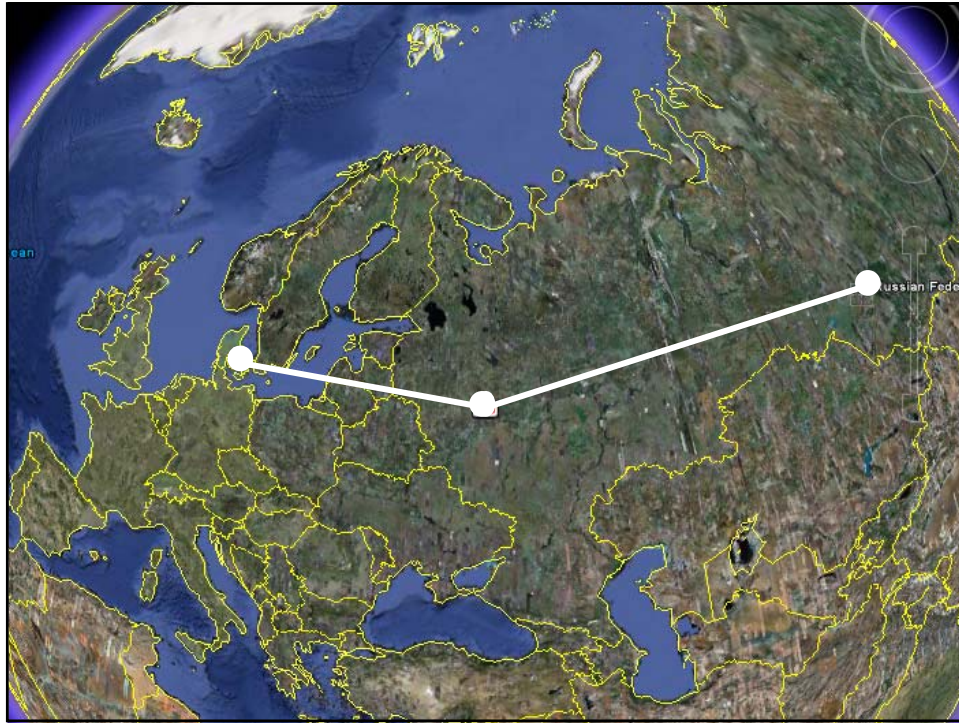


Greetings from the **FIG** home base



Aalborg – my home town





## Place matters

Everything happens somewhere

If we can understand more about the nature of “place” where things happen, and the impact on the people and assets on that location, we can plan better, manage risk better, and use our resources better.

“Heading toward spatial enabled society”

## 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

### The role of FIG

- Capacity development

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

Yes !

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

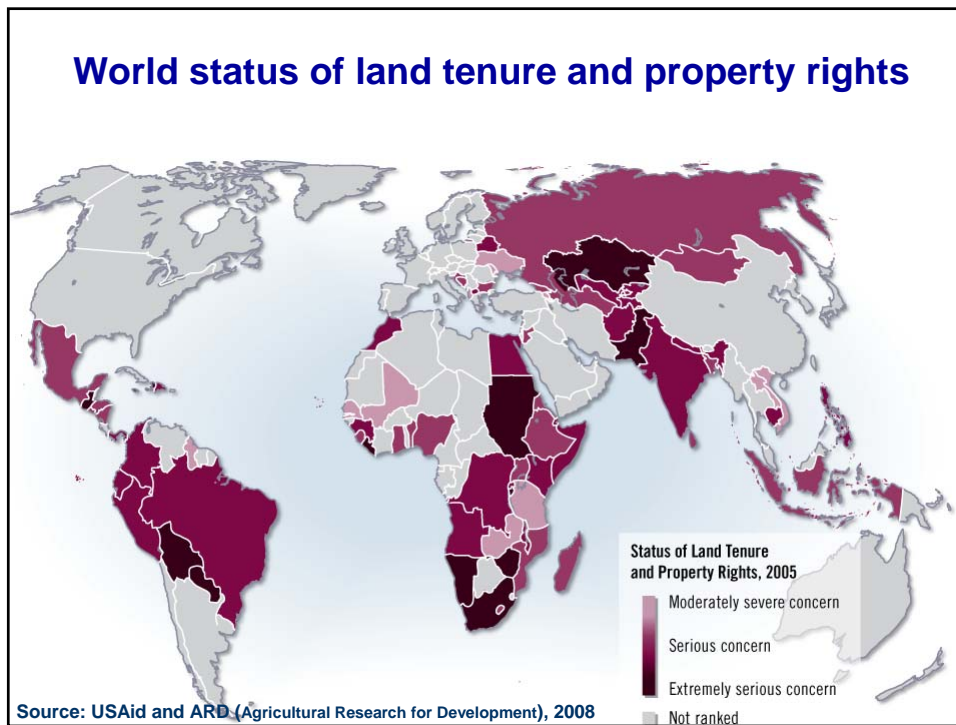
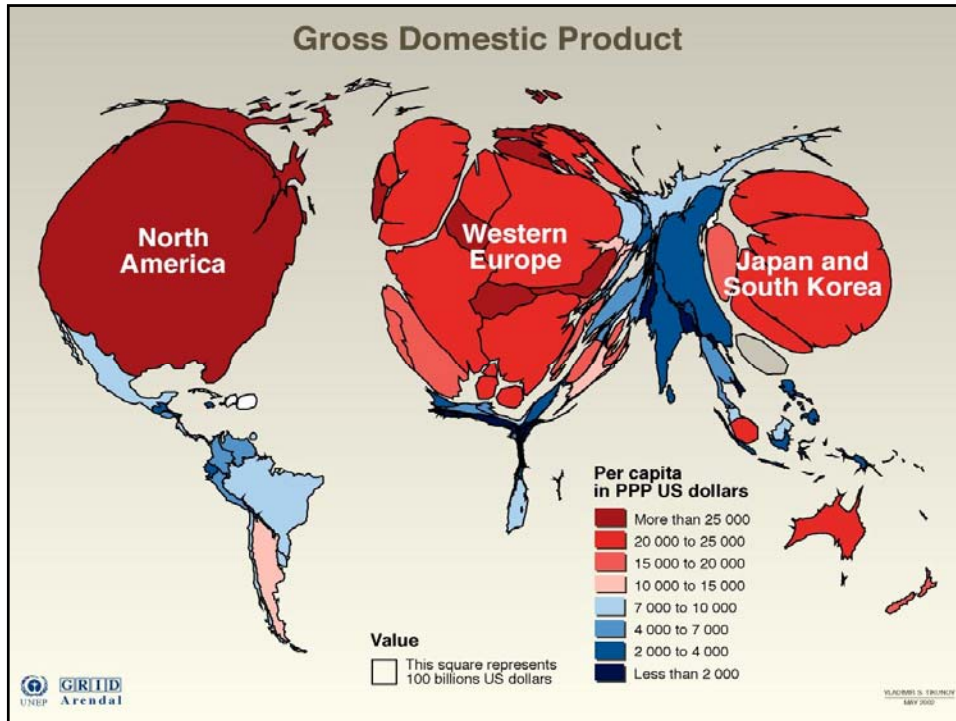
And no development will happen without the footprint of the surveyor

## The Millennium Development Goals

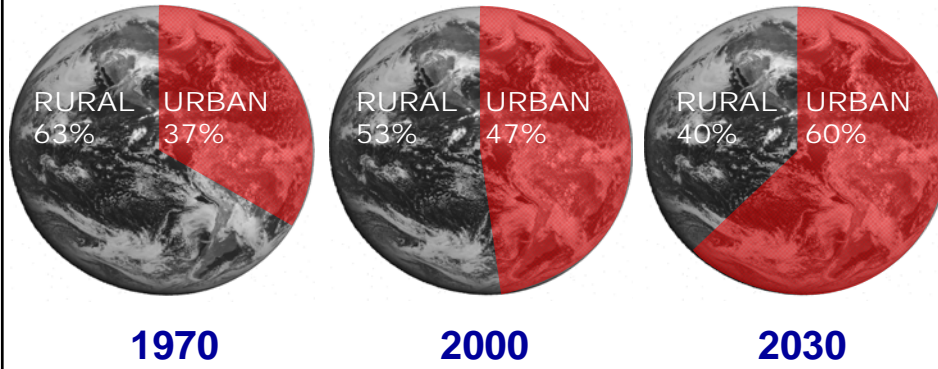
- Goal 1: Eradicate extreme poverty and hunger
- Goal 2: Achieve universal primary education
- Goal 3: Promote gender equality and empower women
- Goal 4: Reduce child mortality
- Goal 5: Improve maternal health
- Goal 6: Combat HIV/AIDS, malaria and other diseases
- Goal 7: Ensure environmental sustainability

**Goal 8: Develop a Global Partnership for Development**

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



## Urban population growth



2007:

Total world population : 6.5 billion  
Total urban population: 3.3 billion  
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  
and **Power,** decentralisation and empowerment



## 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

The role of FIG

- Capacity development

Is the role of the surveyors changing ?

### 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

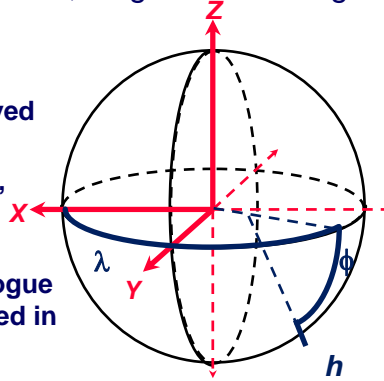
- **To management**

Surveyors will increasingly contribute to building sustainable societies as experts in managing land and properties

*The land professionals*

## Positioning infrastructures Versus traditional Geodetic Datum

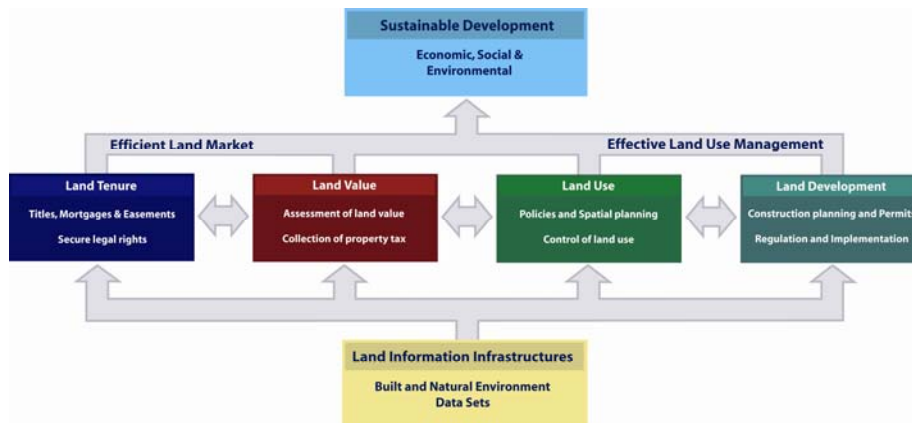
- Enables description of position as latitude, longitude and height and underpins all geo-spatial data;
- Characteristics:
  - Coverage - initially local but has evolved to national and continental;
  - Measurement – initially ground based, labor intensive, now more efficient using GNSS;
  - Data management - 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

## A global land management perspective



## 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

The role of FIG

- Capacity development

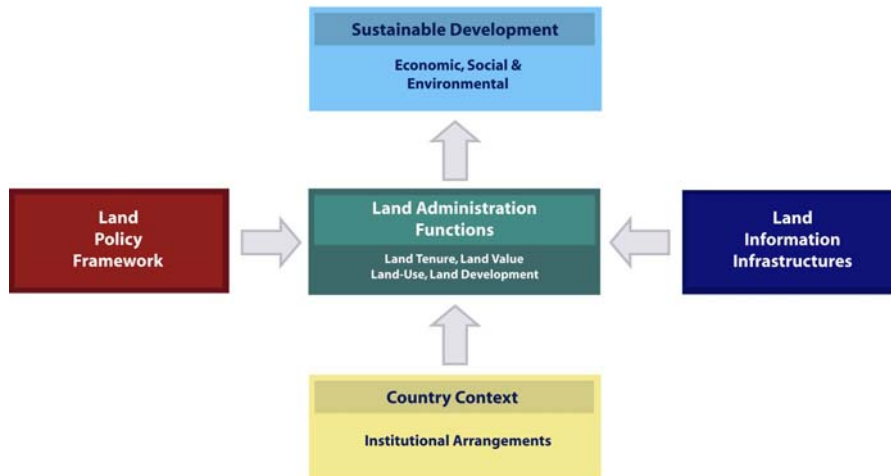
## Land governance

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.

## Understanding the land management paradigm

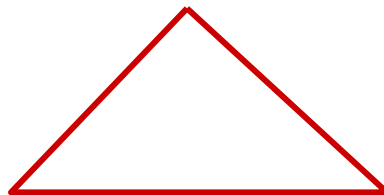


## Interests in land

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

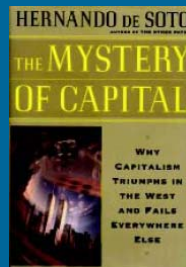
### Restrictions:

Planning and control of land-use and land development

## The increasing focus on property rights

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

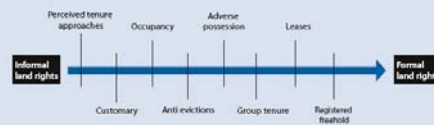
*Hernando de Soto – 1993*



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



PCGIAP-Working Group 3  
"Cadastral"



The University of Melbourne  
Department of Geomatics



FIG-Commission 7  
"Cadastral and Land Management"

### Cadastral Template

#### *A Worldwide Comparison of Cadastral Systems*

Cadastral country reports based on a jointly developed PCGIAP/FIG template.  
Established under UN mandate by Resolution 4 of the 16th UNRCC-AP in Okinawa, Japan in July 2003.  
UN endorsement for cooperation with UN-ECE WPLA, UN-ECA CODI, and PCIDEA.

#### Data per Country

(last update: 31 Dec 2007, 42 countries)

as .htm Select a Country

as .pdf Select a Country

#### Field Definitions

#### I. Data per Data Fields

(last update: 4 Jan. 2008, 42 countries)

Select a Field

#### II. Principles and Statistics

(last update: 4 Jan. 2008, 42 countries)

- 1.1 Cadastral Principles
- 2.1 Population
- 2.3 Paroels
- 2.7 Professionals

#### Documents

- Questionnaires for Download (English, Español, Portugues)
- Publications
- Administrative Documents

#### Latest Updates

- Country report of Cyprus (31 Dec 2007)
- Country report of Norway (6 Aug. 2007)
- Country report of Israel (16 Oct. 2008)
- Updates of Latvia and Netherlands (5 Aug. 2008)
- Country report of Austria as 39th country (15 Jan. 2008)
- Country report of Latvia (28 Oct. 2005)
- Country report of Tanzania (12 Jul. 2005)
- Country report of Finland (28 Apr. 2005)
- Country report of Namibia (7 Jun. 2004)
- Country report of Venezuela (in Spanish) (28 May 2004)

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



[www.cadastraltemplate.org](http://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.
  - 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.
  - In principle any change of land use is forbidden unless it is permitted and consistent with adopted planning regulations and restrictions.

## Central planning approach: three core principles



### Decentralisation of planning responsibilities

- Local representative democracy responsible for local needs
- Combining responsibility for decision making with accountability for economic, social and environmental consequences.
- Providing monitoring and enforcement procedures

### Comprehensive planning

- Combining aims and objectives, land-use structure planning, and land use regulations into one comprehensive planning document covering the total jurisdiction

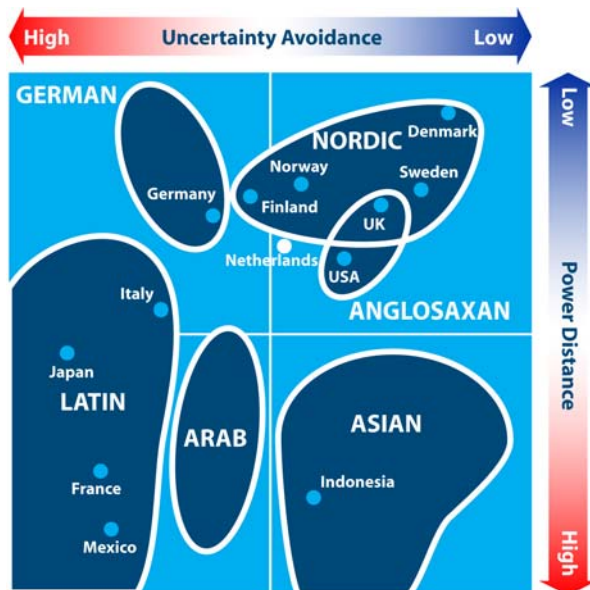


### Public participation

- Providing awareness and understanding of the need for planning regulations in respond to local needs.
- Legitimising local political decision making

## Responsibilities:

Social, ethical commitment to the environment and good husbandry



### Uncertainty avoidance:

The preference of structured situations over unstructured or flexible ones

### Power distance:

The degree of inequality among people accepted by the population

A cultural map of the world

Geert Hofstede (2001).



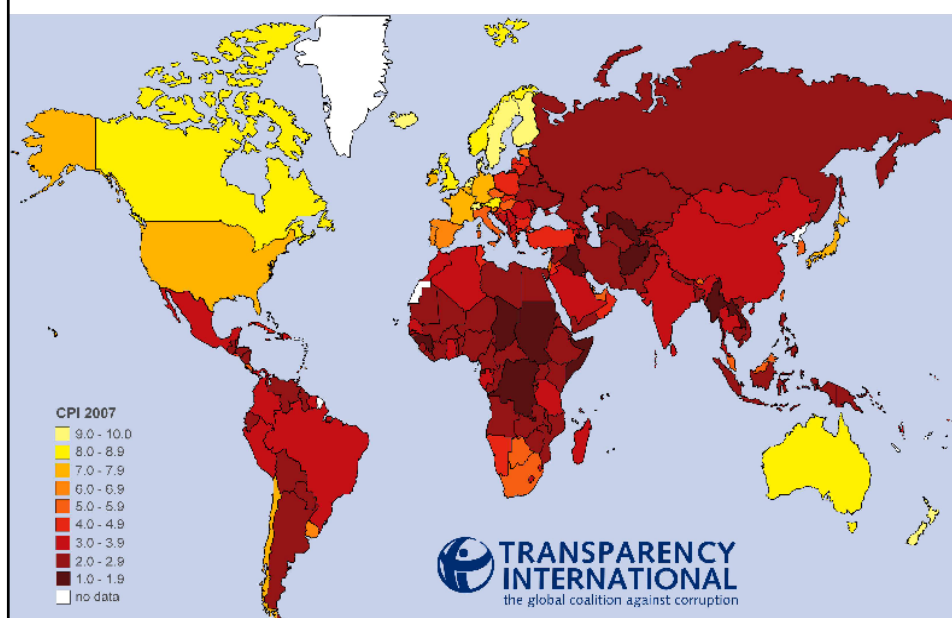
## Good governance is:



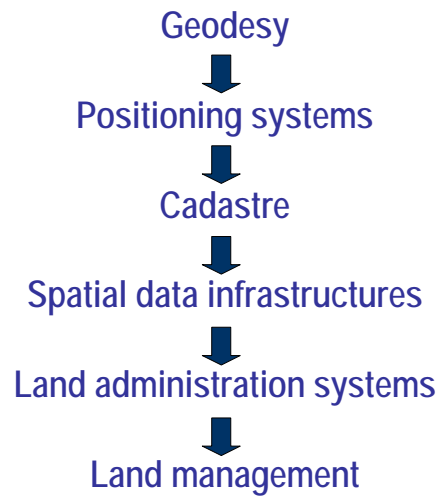
- **Sustainable and locally responsive:** It balances the economic, social, and environmental needs of present and future generations, and locates its service provision at the closest level to citizens.
- **Legitimate and equitable:** It has been endorsed by society through democratic processes and deals 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



## Integrating geodesy, cadastre, and land management



International seminar on Integrating Geodesy, Cadastre and land management, Novosibirsk, 20 April 2009.

## Outline of Presentation

The global agenda

- Facing the Millennium Development Goals

From measurement to management

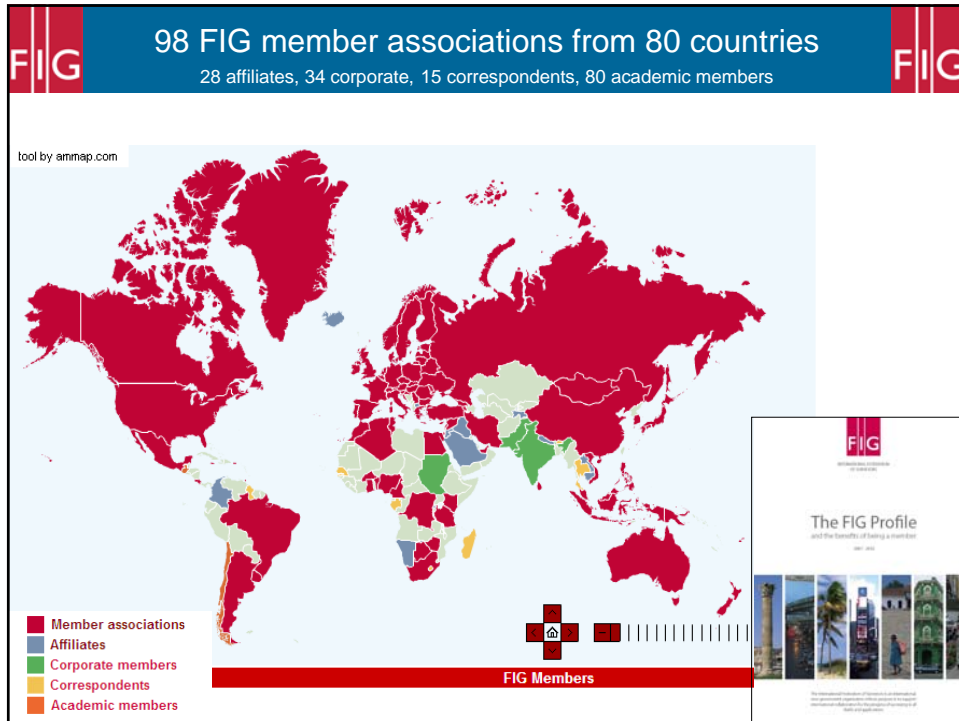
- The changing role of the surveyors

Land governance

- Managing land rights, restrictions, and responsibilities

**The role of FIG**

- Capacity development



## The role of **FIG**

- **Professional development**
  - Global forum for professional discussions and interactions
  - Conferences, symposia, commission working groups, .....
- **Institutional development**
  - Institutional support for educational and professional development at national and international level
- **Global development**
  - Cooperation with international NGO's such as the UN agencies, World Bank, and sister organisations
  - Joint activities and common policy-making to reduce poverty and enforce sustainable development

## FIG publications




## Facing the new challenges

Contributing to achieving the MDGs - towards development, security and human rights for all. This also include 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

 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 MDGs.

“Building the capacity  
for taking the land policy agenda forward”

XXIV  International Congress 2010



[www.fig2010.com](http://www.fig2010.com)

11 – 16 April 2010



*Facing the Challenges  
- Building the Capacity*



**Thank you  
for your attention**