

Global Trends towards a Spatially Enabled Society

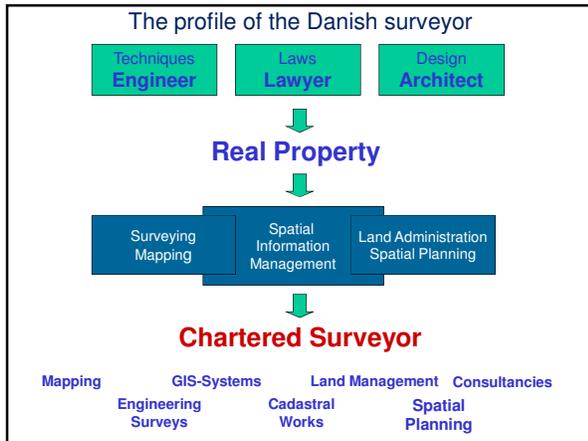
Prof. Stig Enemark
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AREAL OG EJENDOM 2009 - NORGES JORDSKIFTEKANDIDATFORENING
 VESTBY I AKERSHUS, NORGE, 24-25 SEPTEMBER 2009

The global surveying profession

The core disciplines:

- **Surveying and mapping** (land, engineering, buildings, marine)
- **Geospatial information management** (GIS, remote sensing, analysis, and presentation)
- **Cadastral management** (boundaries, land tenure arrangements)
- **Land valuation and economics** (expropriation, compensation, taxation)
- **Land use planning and development** (design and implementation)



The Surveyors Profile



- The profile and role of the surveyors varies a lot throughout the world
- In the UK the surveying profession includes branches such as building surveying and quantity surveying that in most EU countries are undertaken mainly by architects
- In many EU countries cadastral surveying is a core discipline undertaken by licensed surveyors, while this activity does not exist in the UK
- In Norway.....

Facing the global agenda



Congratulations Norway

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
- Spatially enabled government**
 - The significant role of the cadastre
- The role of FIG**
 - Capacity development to face the challenges

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

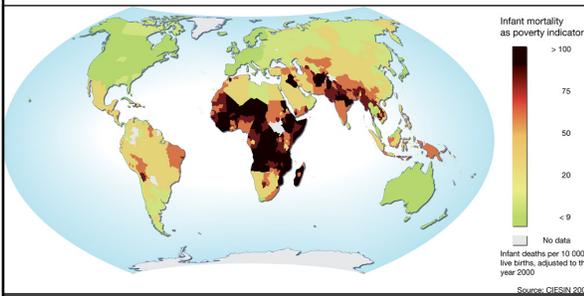
The Millennium Development Goals

- 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

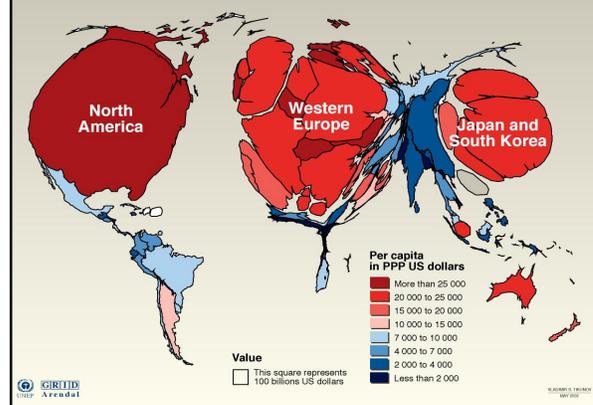
Goal 8: Develop a Global Partnership for Development

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

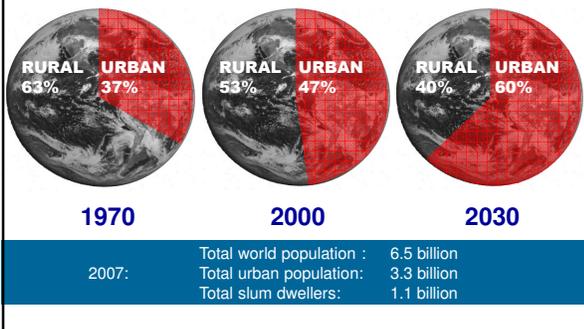
World status of poverty



Gross Domestic Product



Urban population growth



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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Current  policies

Is the role of the surveyors changing ?

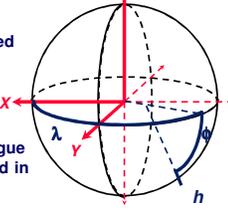
The role of surveyors is changing

- **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

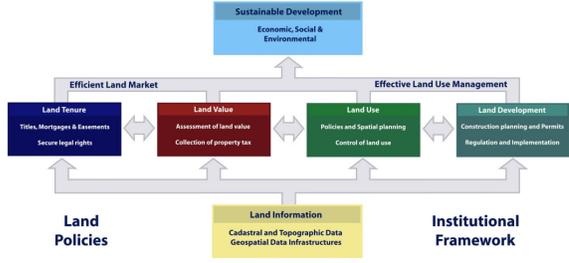
- Enables description of position as latitude, longitude and height and underpins all geo-spatial data;
- Characteristics:
 - Coverage - initially local but has evolved to national and continental;
 - Measurement – initially ground based, labor intensive, now more efficient using GNSS;
 - Data management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



LAS provide the infrastructure for implementation of land policies and land management strategies in support of sustainable development.

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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.

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

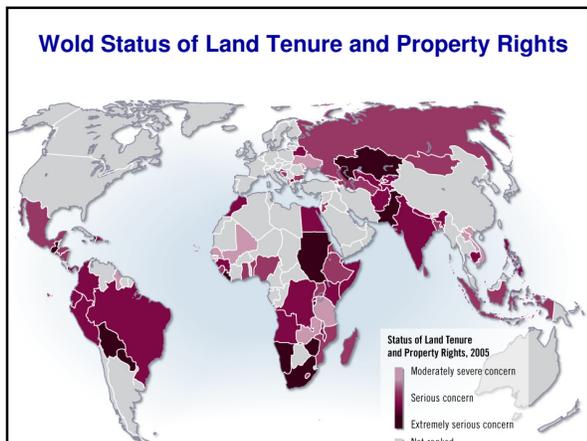
"Civilised living in market Economies is not simply due to greater prosperity but to the order that formalised property rights bring"

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 ?

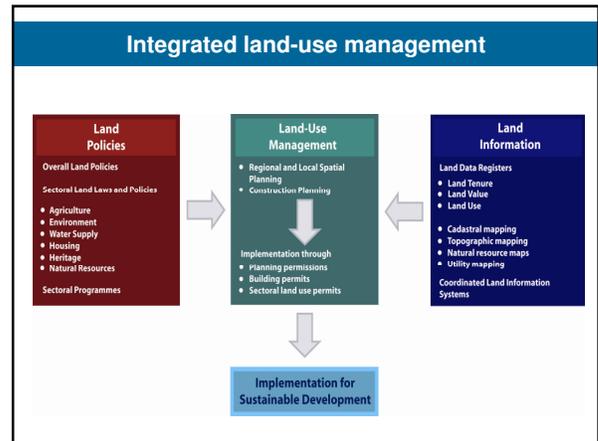
- People in general can participate in the land market; widespread ownership; everybody can make transactions and have access to registration
- The infrastructure supporting transactions must be simple, fast, cheap, reliable, and free of corruption.
- The system provides safety for housing and business,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

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

Property Restrictions

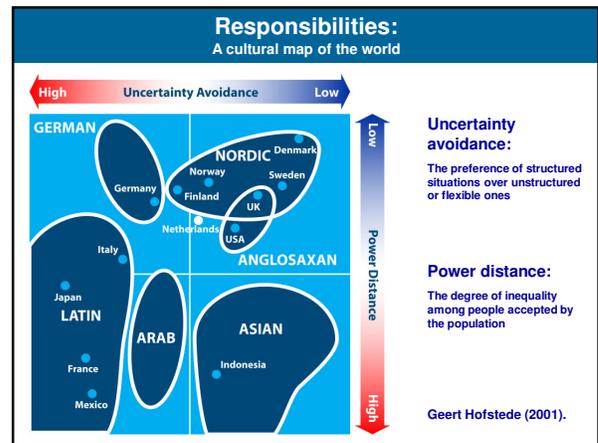
- two conflicting approaches

- **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.



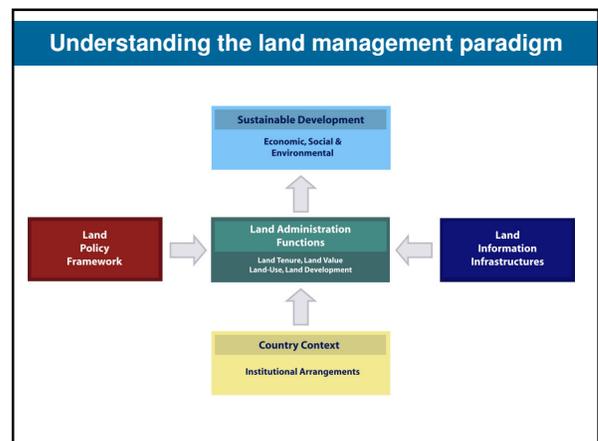
Three core principles

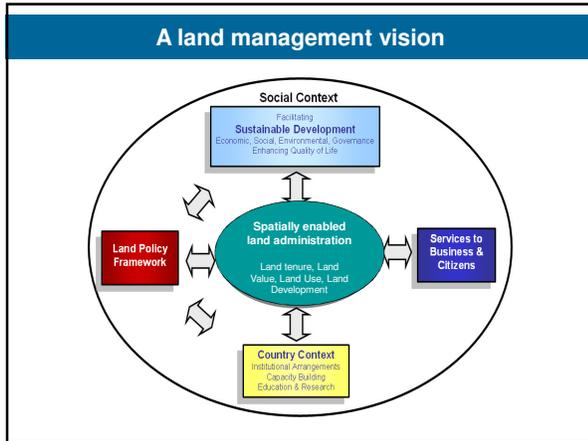
- **Decentralisation of planning responsibilities**
 - Local representative democracy responsible for local needs
 - Combining responsibility for decision making with accountability for economic, social and environmental consequences.
 - Providing monitoring and enforcement procedures
- **Comprehensive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



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Place matters

Everything happens somewhere

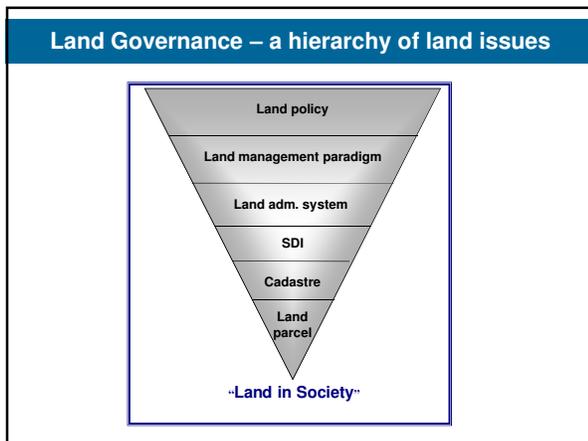
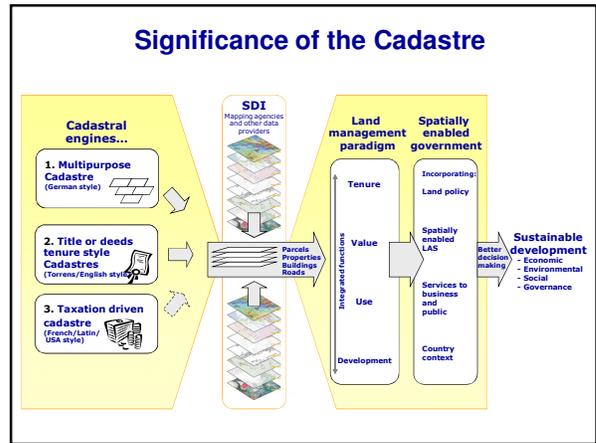
If we can understand more about the nature of “place” where things happen, and the impact on the people and assets on that location, we can plan better, manage risk better, and use our resources better.

“Heading toward spatial enabled society”

Spatially Enabled Government

A spatially enabled government organises its business and processes around “place” based technologies, as distinct from using maps, visuals, and web-enablement.

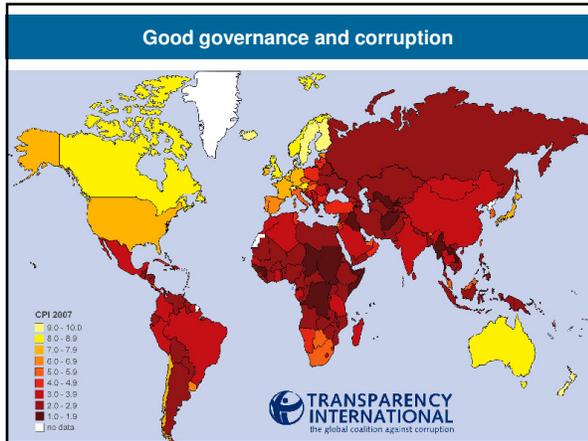
The technical core of Spatially Enabling Government is the **spatially enabled cadastre**.



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



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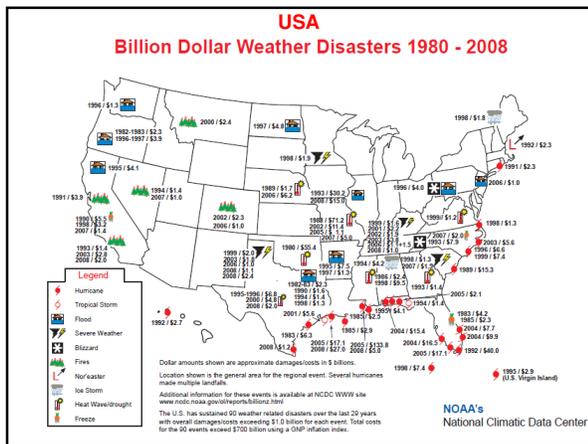
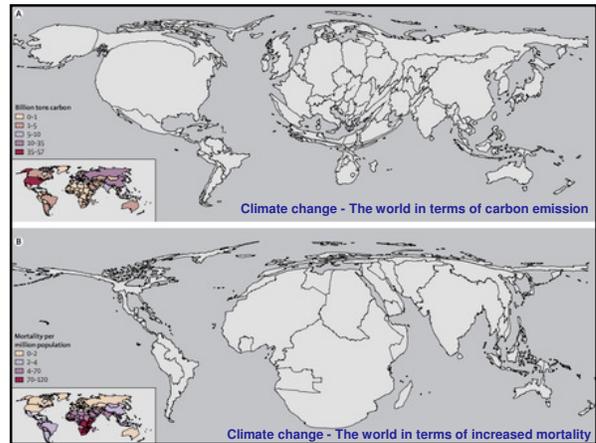
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Facing the new challenges

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**

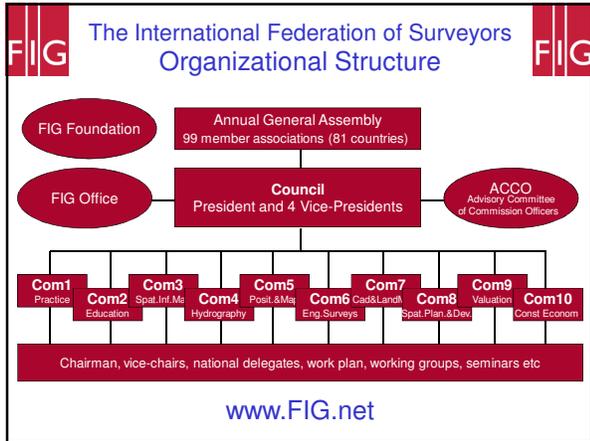


The role of the surveying profession

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 professional and institutional development at national level
 - **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,



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 MDGs.

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

