

Underpinning Land Management

- A major challenge for the global surveying profession

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Aalborg University, Denmark

**INT. CONGRESS ON GEOMATICS, SURVEYING ENGINEERING AND TOP-CART 2008
VALENCIA, SPAIN, 18 – 21 FEBRUARY 2008**

Greetings from Copenhagen



Greetings from the Home Base



Aalborg – my home town



Outline of Presentation

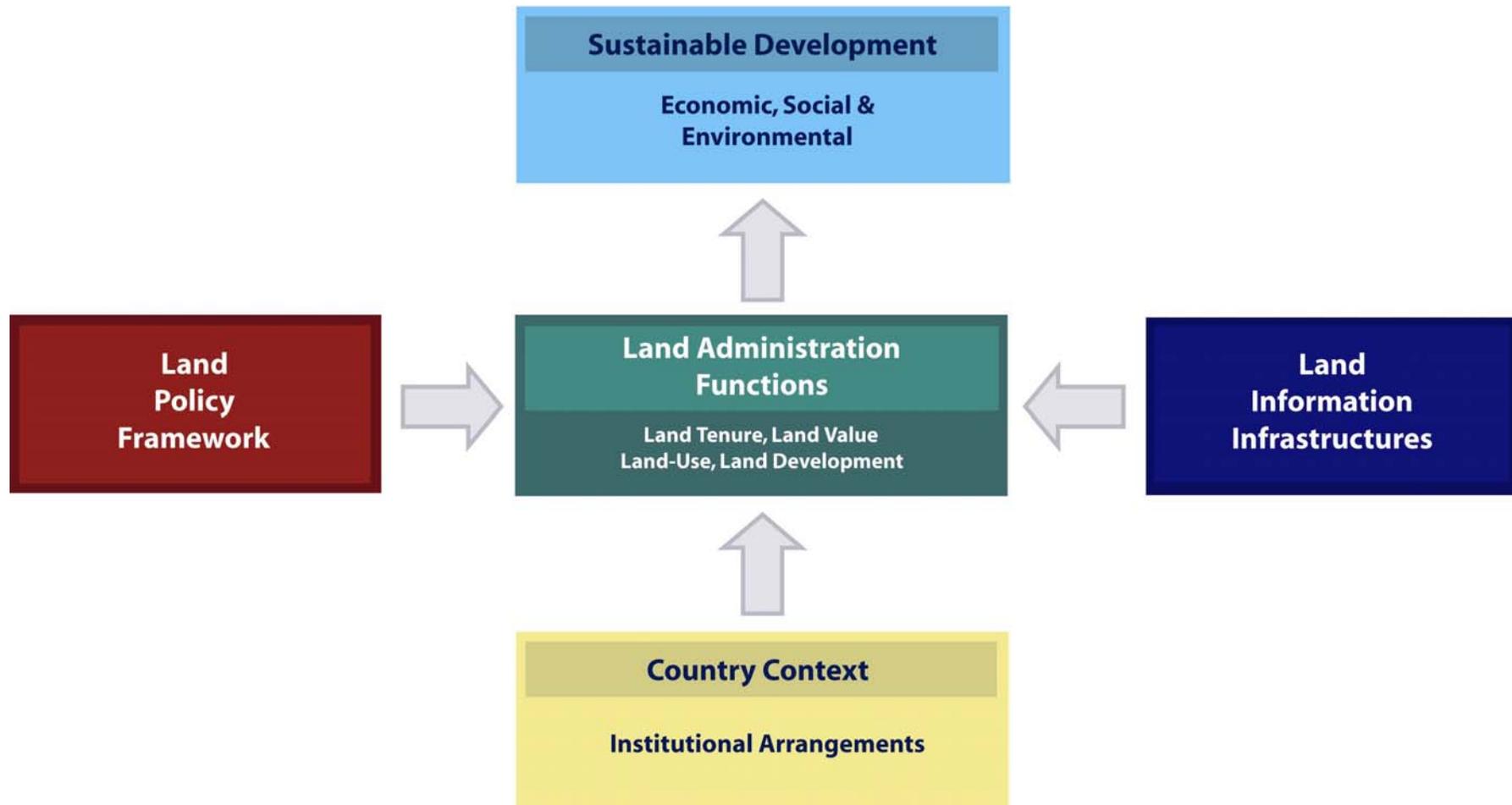
Underpinning Land Management

- Rights – Restrictions – Responsibilities
- Spatially Enabled Government

The challenge for the global surveying profession

- The Millennium Development Goals
- The role of FIG and the Global Surveying Community

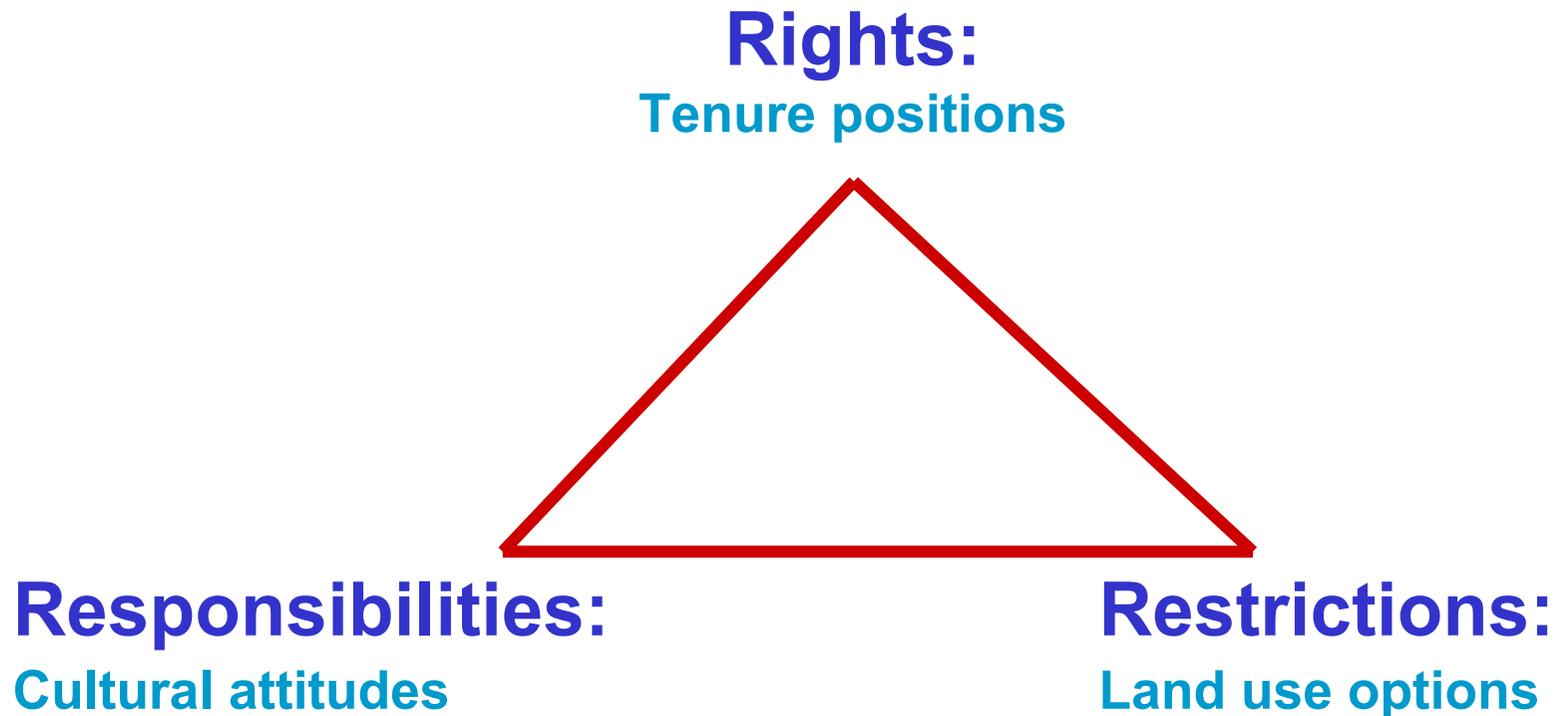
Understanding the Land Management Paradigm



Land Management includes all activities associated with the management of land and natural resources that are required to fulfill political objectives and achieve sustainable development.

Interests in land

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



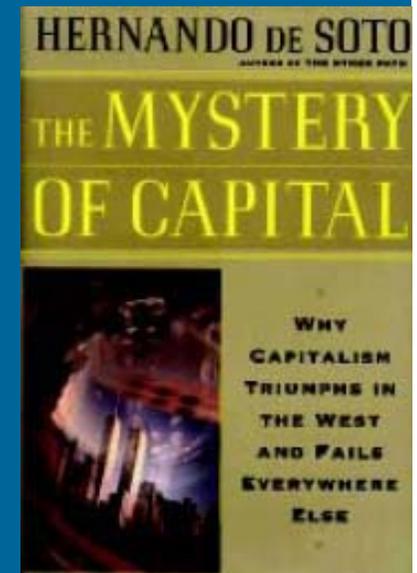
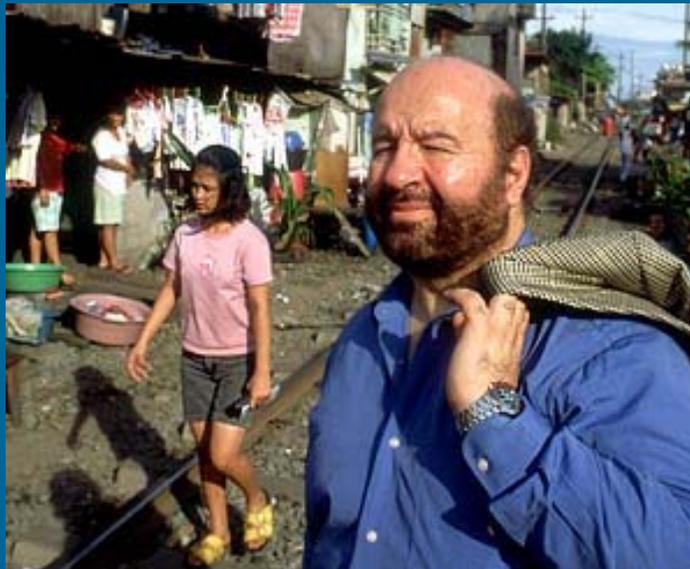
The RRR's

- **Property Rights**
 - Are concerned with ownership and tenure
 - Are normally available in the Land Registry
- **Property Restrictions**
 - Are concerned with controlling use and activities on land
 - Are normally available through planning documents or general land use provisions
- **Property Responsibilities**
 - Relate to a more social, ethical commitment or attitude to environmental sustainability and good husbandry.
 - The human kind to land relationship is dynamic.

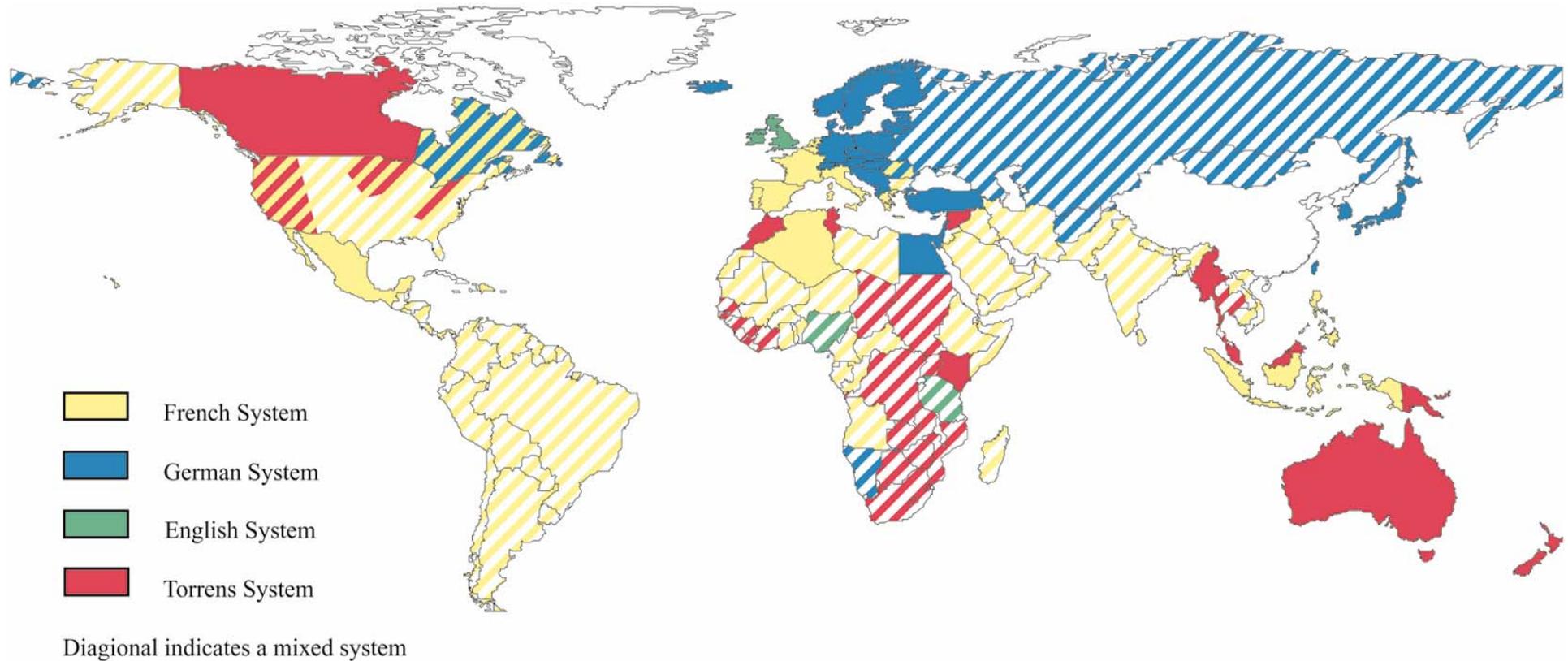
The increasing role of property rights

”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



Land Registration Systems around the World



Deeds System (French): A register of owners; the transaction is recorded – not the title.

Title System (German, English, Torrens): A register of properties; the title is recorded and guaranteed.

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

The screenshot shows a Windows Internet Explorer browser window displaying the website <http://www.cadastraltemplate.org/>. The browser's address bar shows the URL, and the menu bar includes File, Edit, View, Favorites, Tools, and Help. The toolbar contains various icons for navigation and utility. The website content features three logos at the top: the PCGIAP-Working Group 3 "Cadastré" logo, the University of Melbourne Department of Geomatics logo, and the FIG-Commission 7 "Cadastré and Land Management" logo. The main heading is "Cadastral Template" in a large, bold, red font, followed by the subtitle "A Worldwide Comparison of Cadastral Systems". Below this, a paragraph states: "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." The website is organized into three main columns. The left column, titled "Data per Country", includes a dropdown menu for "Denmark" and a "Select a Country" button, with a sub-section for "Field Definitions" and "I. Data per Data Fields". The middle column, titled "II. Principles and Statistics", lists "1.1 Cadastral Principles", "2.1 Population", "2.3 Parcels", and "2.7 Professionals", along with a "Documents" section. The right column, titled "Latest Updates", lists several country reports and updates with their respective dates. At the bottom of the page, a "Visitor locations" map is visible. The browser's status bar at the bottom shows the Windows start button, taskbar icons for "D:\Dok\fors...", "Sent Items ...", "RE: SV: Co...", "Cadastral T...", and "Microsoft P...", along with the system clock showing "13:00".

PCGIAP-Working Group 3 "Cadastré"

The University of Melbourne Department of Geomatics

FIG-Commission 7 "Cadastré 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
as .pdf

Field Definitions

I. Data per Data Fields
(last update: 4 Jan. 2008, 42 countries)

II. Principles and Statistics
(last update: 4 Jan. 2008, 42 countries)
1.1 Cadastral Principles
2.1 Population
2.3 Parcels
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. 2006)
- Updates of Latvia and Netherlands (6 Aug. 2006)
- Country report of Austria as 39th country (15 Jan. 2006)
- Country report of Latvia (26 Oct. 2005)
- Country report of Tanzania (12 Jul. 2005)
- Country report of Finland (29 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 Steudler, supported by Prof. Stig

Visitor locations

www.cadstraltemplate.org



The University of Melbourne
Department of Geomatics



FIG-Commission 7
"Cadastre and Land Management"

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Visitor locations





PCGIAP-Working Group 3
"Cadastré"



The University of Melbourne
Department of Geomatics



FIG-Commission 7
"Cadastré and Land Management"

- Select a Field
- Contact Persons
 - A - COUNTRY CONTEXT
 - A1 - Geographical Context
 - A2 - Historical Context
 - A3 - Current Political and Admin. Structures
 - A4 - Historical Outline of Cadastral System
 - B - INSTITUTIONAL FRAMEWORK
 - B1 - Government Organizations
 - B2 - Private Sector Involvement
 - B3 - Prof. Organization or Association
 - B4 - Licensing
 - B5 - Education
 - C - CADASTRAL SYSTEM
 - C1 - Purpose of Cadastral System
 - C2 - Types of Cadastral System
 - C3 - Cadastral Concept
 - C4 - Content of Cadastral System
 - D - CADASTRAL MAPPING
 - D1 - Cadastral Map
 - D2 - Example of Cadastral Map
 - D3 - Role of Cadastral Layer in SDI
 - E - REFORM ISSUES
 - E1 - Cadastral Issues
 - E2 - Current Initiatives
 - References
- Select a Field

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Land Use Restrictions

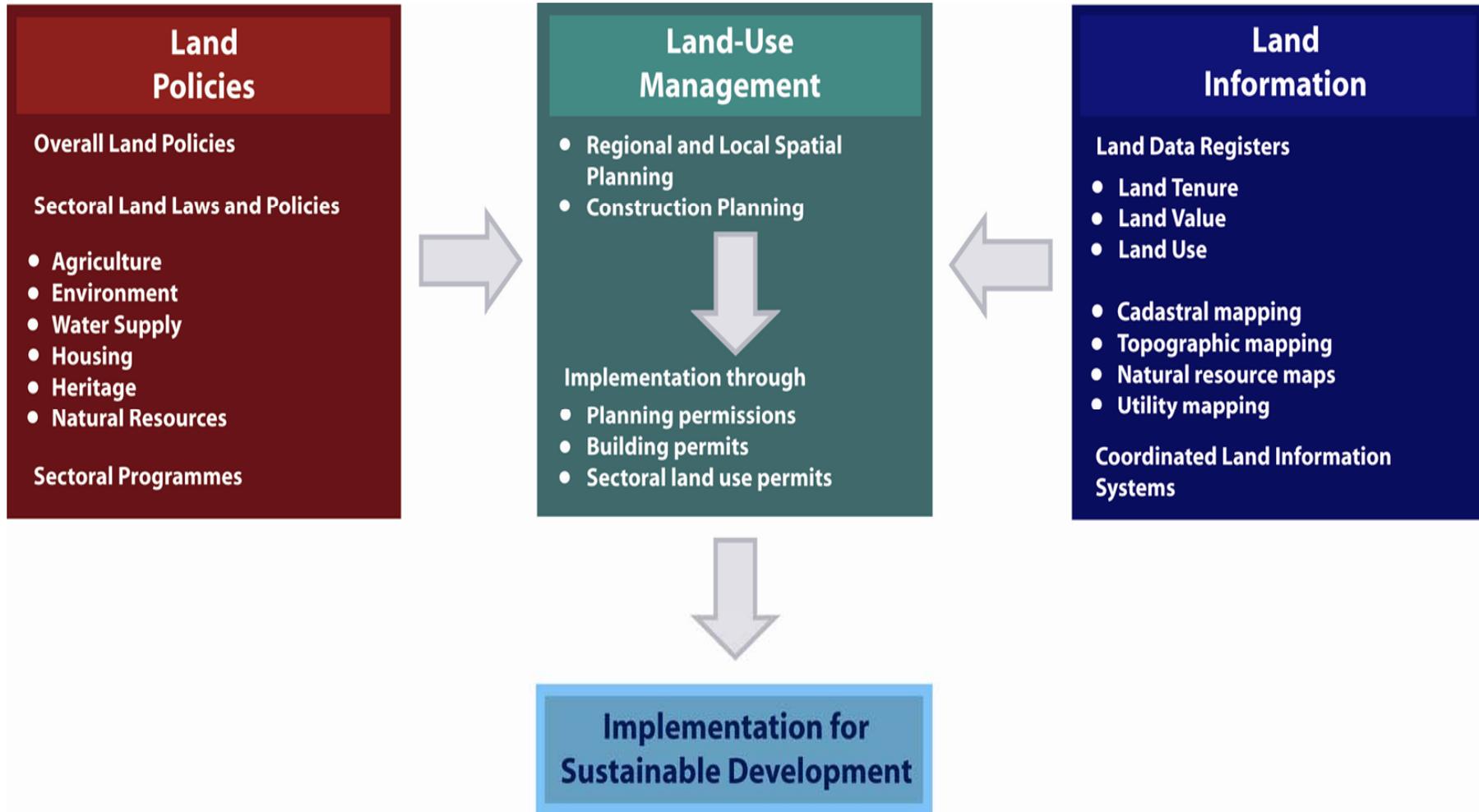
- Rights to land also include the rights of use, however:
 - The right of use is limited through public land use planning regulations and restrictions, sectoral land use provisions, and private land use regulations
 - Many land use rights are in fact restrictions that control the future use of land. The number and kind of land use restrictions is huge.
 - Land Use restrictions will normally not appear in the Land Registry, but may be available through planning documents and general land use provisions

Property Restrictions

- two conflicting approaches

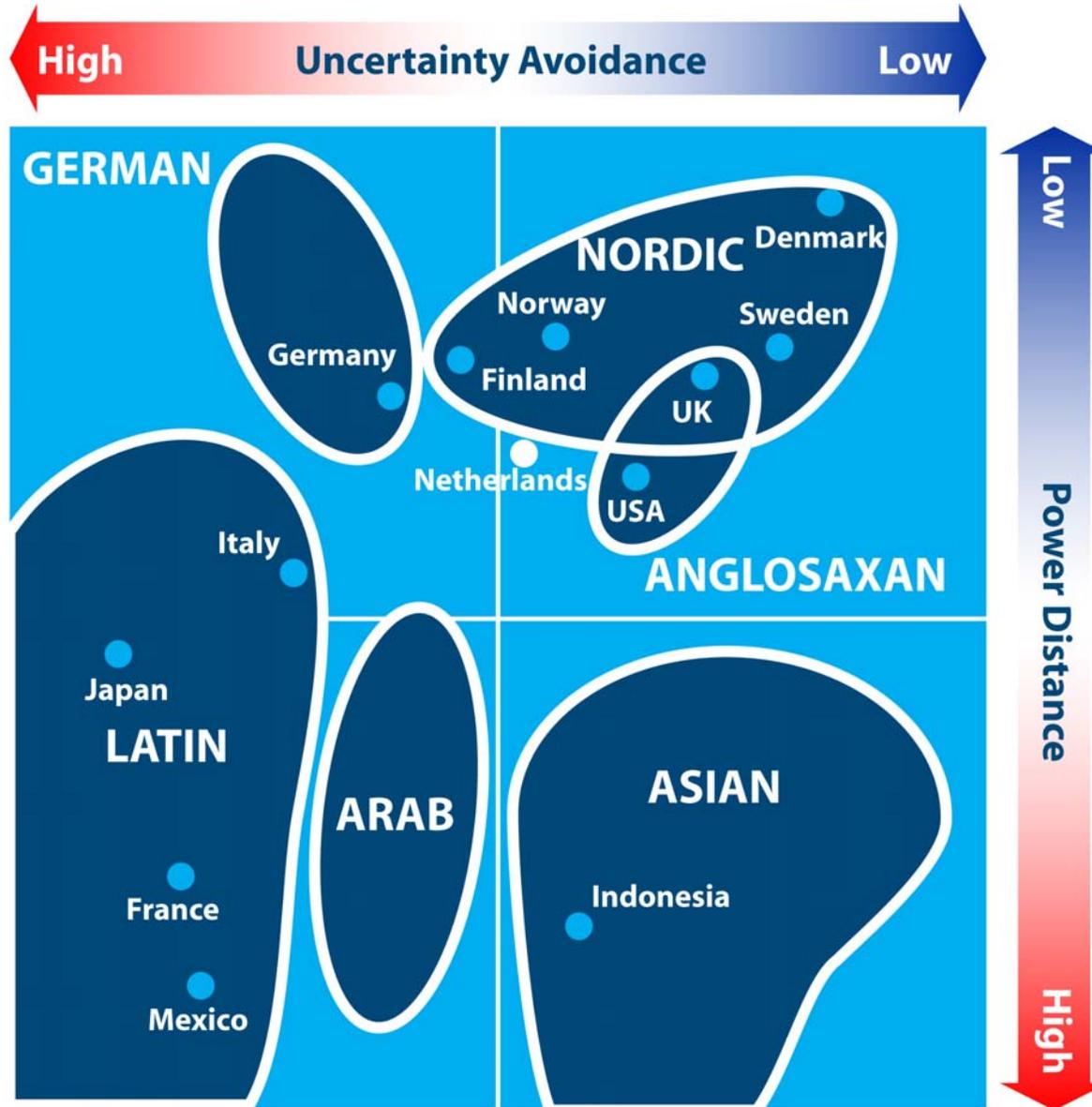
- **The free market approach** (current debate in the US)
 - Land owners should be obligated to no one and should have complete domain over their land.
 - The role of government to take over, restrict, or even regulate its use should be non-existent or highly limited.
 - Planning restrictions should 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.

Integrated land-use management



Responsibilities:

A cultural map of the world



Uncertainty avoidance:

The preference of structured situations over unstructured or flexible ones

Power distance:

The degree of inequality among people accepted by the population

Geert Hofstede (2001).
Professor of Organizational Anthropology and International Management (1985-93), Maastricht University, the Netherlands

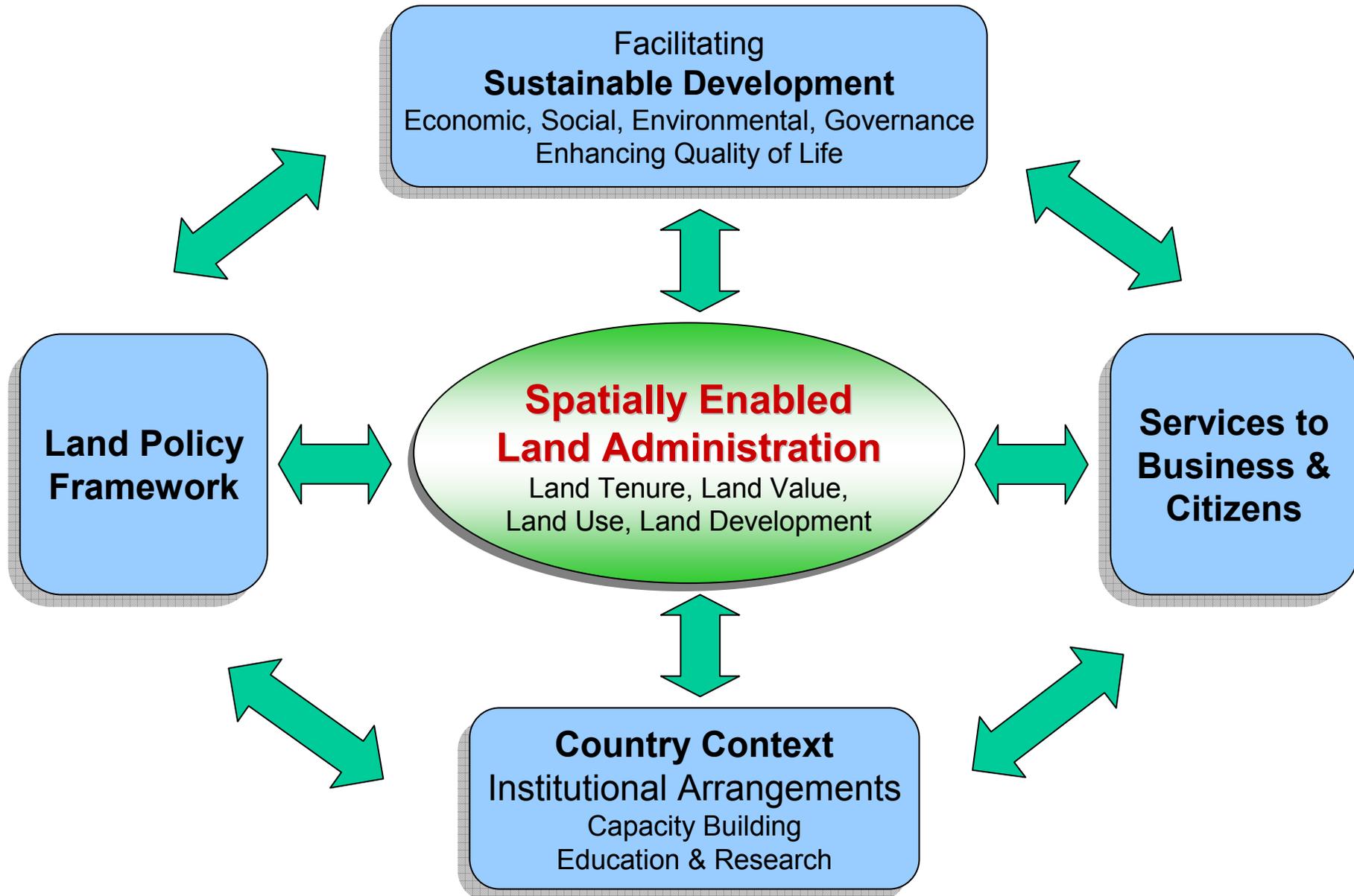
Good Governance is essential

- **Sustainability:** balancing social, economic and environmental needs while being responsive to the present and future needs of society.
- **Subsidiarity:** allocation of authority at the closest appropriate level consistent with efficient and cost-effective services
- **Equity:** Women and men must participate as equals in all decision making, priority setting, and resource allocation processes
- **Efficiency:** Public services and local economic development must be financially sound and cost-effective.
- **Transparency and Accountability:** Decisions taken and their enforcement follows rules and regulations. Information must be freely available and directly accessible.
- **Civic Engagement and Citizenship:** Citizens must be empowered to participate effectively in decision-making processes.
- **Security:** All stakeholders must strive for prevention of crime and disasters. Security also implies freedom from persecution, forced evictions and provision of land tenure security.

Adapted from UN-Habitat 2002

All kind of government includes a spatial component

A Land Management Vision



Spatially Enabled Government

Spatially enabled government is achieved when governments use **place** as the key means of organising their activities in addition to information, and when location and spatial information are available to citizens and businesses to encourage creativity.

Centre for Spatial Data Infrastructure and Land Administration
Department of Geomatics, University of Melbourne, 2006.

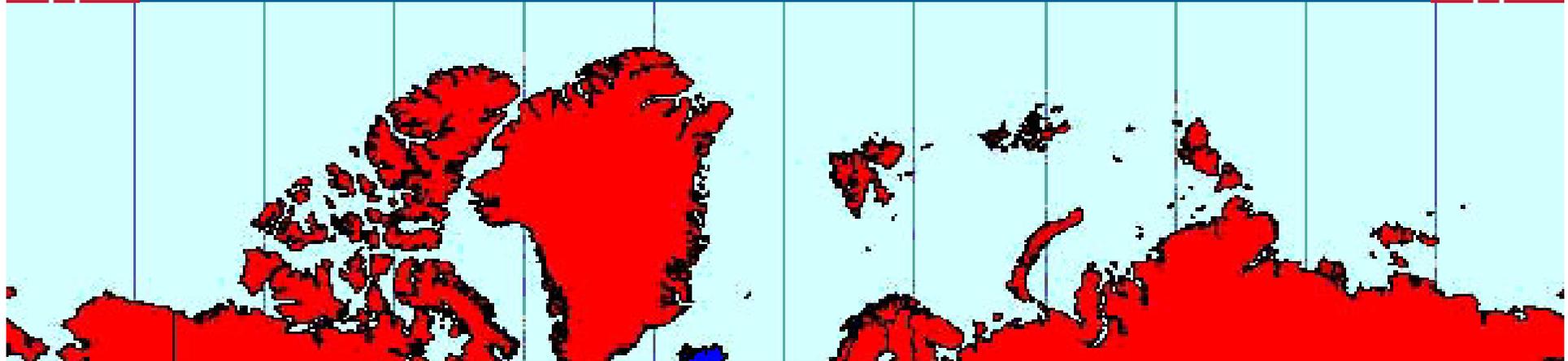
emergency response, taxation assessment, environmental monitoring and conservation, economic planning and assessment, social services planning, infrastructure planning, etc, etc

Spatially Enabled Government

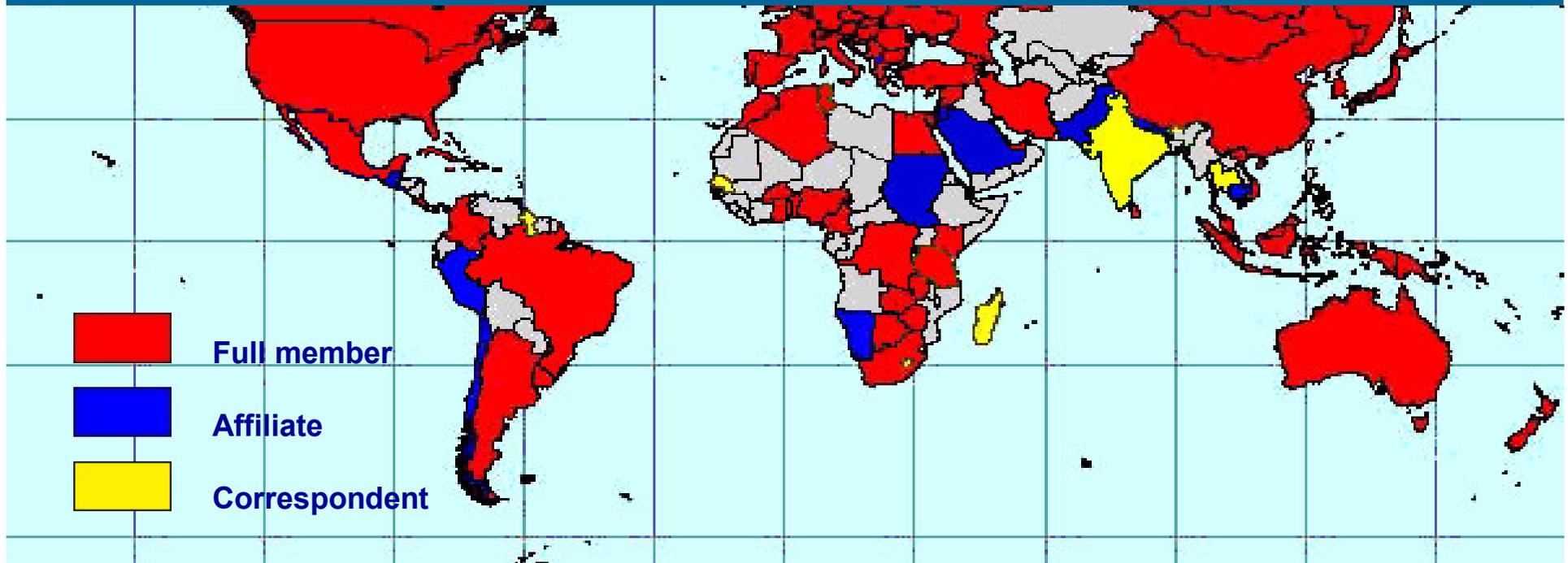
- A spatially enabled government organises its business and processes around “**place**” based technologies, as distinct from using maps, visuals, and web-enablement.
- Identification of “**the place**” in ways that are understandable by non-technical people (Google Earth)
- Capacity of businesses and citizens to manipulate the information should be organised through the use of **service oriented IT- architecture**.
- The technical core of Spatially Enabling Government is the **spatially enabled cadastre**.

101 FIG Member Associations from 85 Countries

20 affiliates, 15 corresponding, 85 academic, 35 corporate members



The Global Agenda

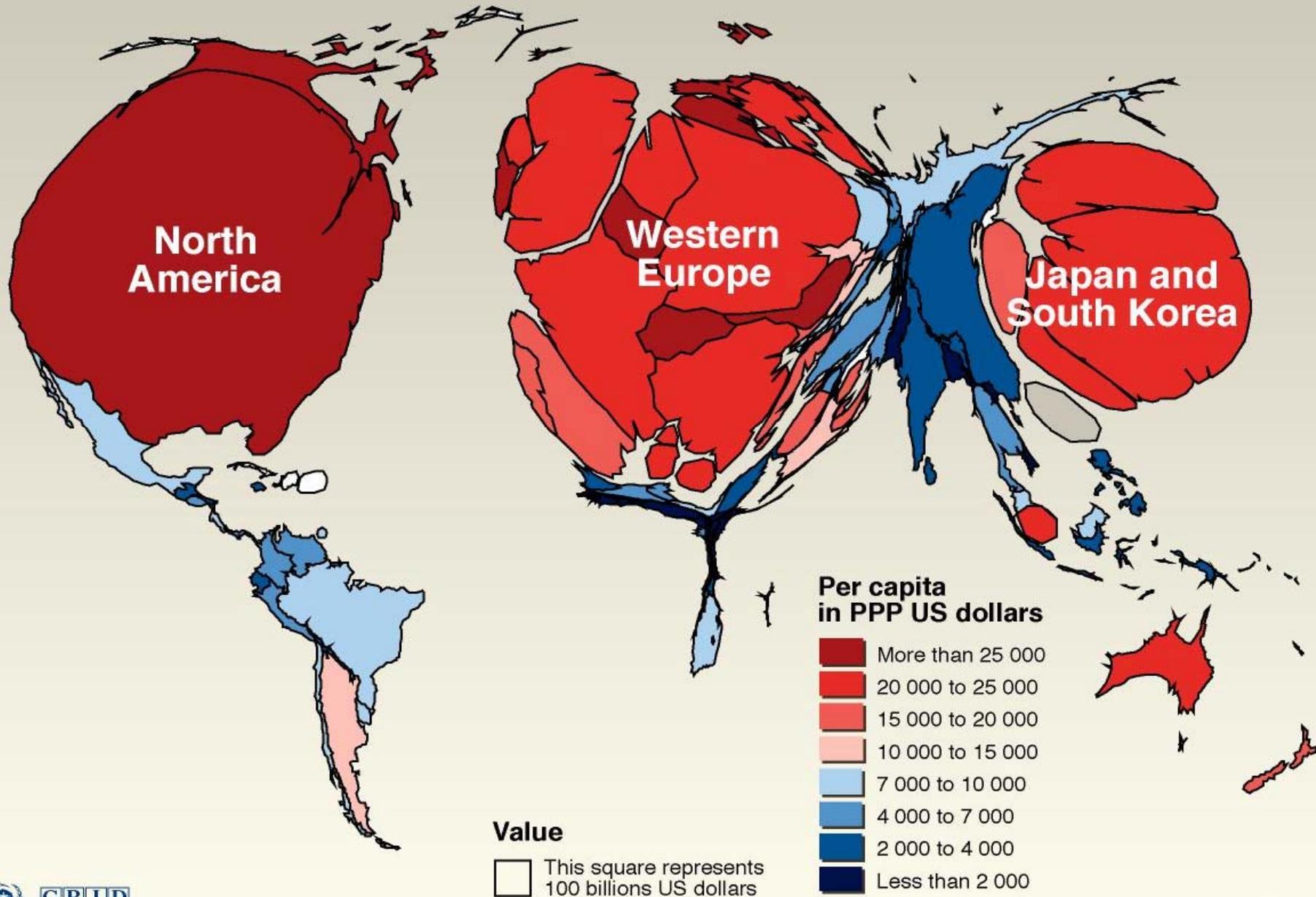


The UN Millennium Development Goals

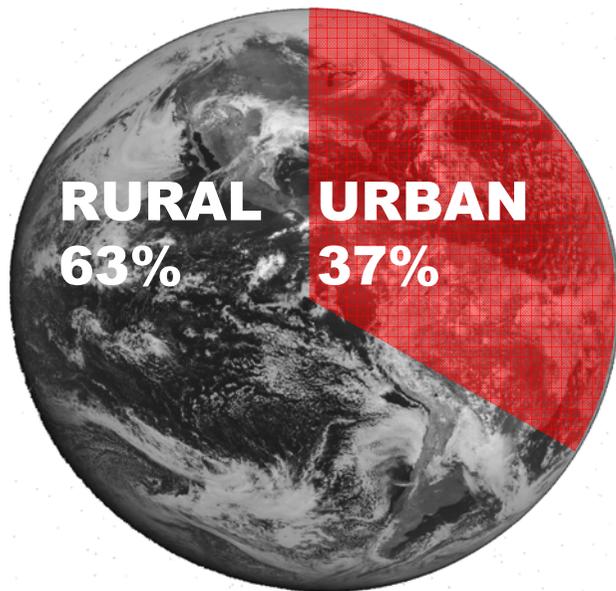
- Goal 1: Eradicate extreme poverty and hunger
- Goal 2: Achieve universal primary education
- Goal 3: Promote gender equality and empower women
- Goal 4: Reduce child mortality
- Goal 5: Improve maternal health
- Goal 6: Combat HIV/AIDS, malaria and other diseases
- Goal 7: Ensure environmental sustainability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

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

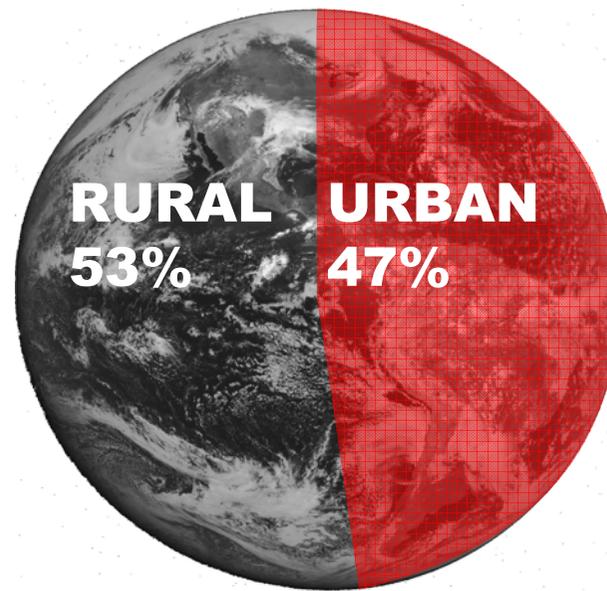
Gross Domestic Product



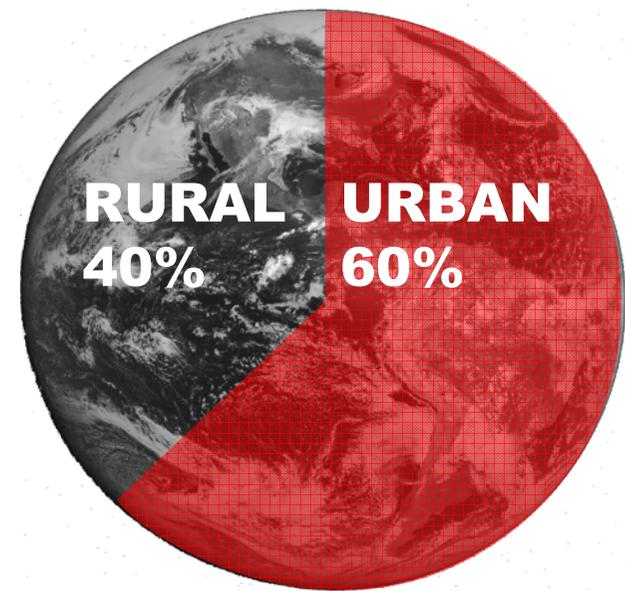
Urban population growth



1970



2000



2030

Total world population : 6.5 billion

Total urban population: 3.3 billion

Total slum dwellers: 1.1 billion (100 million to be improved by 2015)



Hong Kong



Kibera, Nairobi, 250 ha, 1 mill+ people



Kibera, Nairobi



Vietnam



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



The role of FIG

What is the role of  in this regard?

The role of the surveying profession

The MDGs is a powerful concept towards development, security and human rights for all.

The surveying profession plays a key role by providing:

- Geographic information in terms of mapping and databases on the natural and built environment
- Secure tenure systems
- Systems for land valuation, land use management and land development
- Systems for transparency and good governance

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



WWW.FIG.NET

From Cadastre to Holistic and Pro Poor Land Management

- Holding of rights to land
- Economic aspects of land
- Control of land use and development

Administering the people-land relationship through

- Land Policy
- Land Management
- Good Governance

and

- Building the capacity to deal with this

The role of FIG



Is strongly committed to the MDGs
and the UN-Habitat agenda on the GLTN

Cooperation Agreement with UN-Habitat

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: The Social Tenure Domain Model.



Cooperation Agreement with the World Bank

- Mutual representation at conferences, forums and meetings
- Mutual representation in collaborative projects
- Joint publications
- Joint promotion
- Organizing a joint WB/FIG high profile conference late 2008 at the WB headquarters in Washington DC entitled “Land Administration in Support of the MDG’s”





FIG WW Israel, May 2009

FIG Congress, Sydney, April 2010

STOCKHOLM 2008



FIG Working Week – Integrating Generations

Including the Joint FIG–UN–Habitat Seminar on
Slum Upgrading and the Importance of Financial Mechanisms
2nd Announcement

Stockholm, Sweden
14–19 June 2008





**Thank you
for your attention**