

Integrating Land Management, Cadastre and Geodesy

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INTERNATIONAL SEMINAR
INTEGRATING LAND MANAGEMENT, CADASTRE AND GEODESY IN THE CIS COUNTRIES
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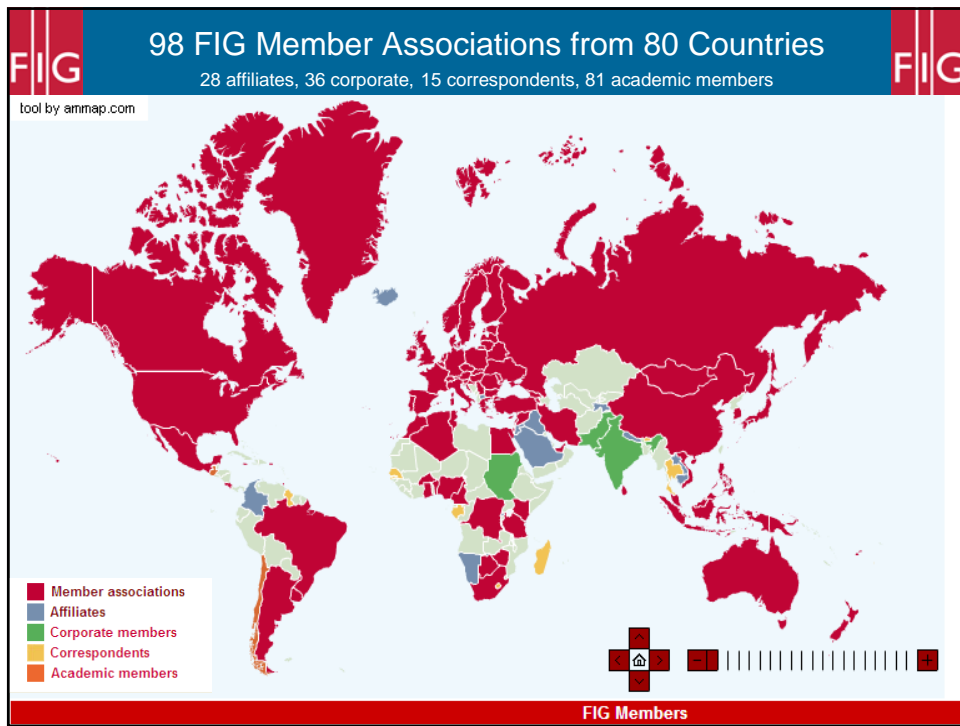
Outline of Presentation

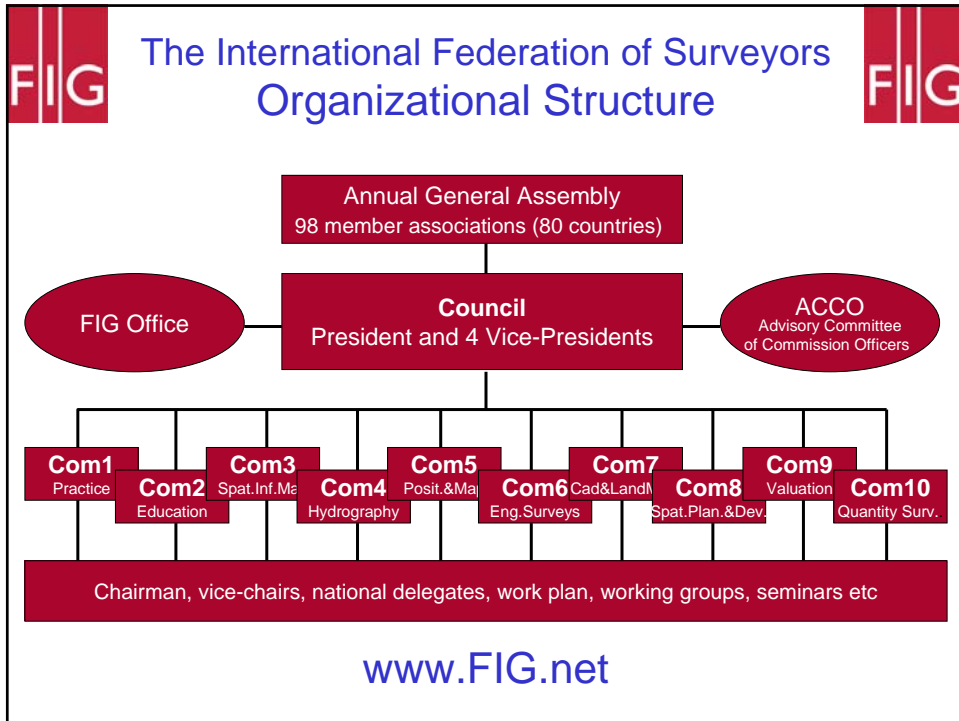
The FIG Agenda

- A global NGO
- The role of FIG

Integration of Land management, Cadastre and Geodesy

- The concepts
- The integrating toward sustainable land governance





The FIG Profile

The International Federation of Surveyors
and the benefits of being a member

How does FIG communicate?

FIG communication via operations

The benefits of being a member

“Good coordination begins with good coordinates”

“Sustainable development is not attainable without sound land administration”

“A map says more than 100 words”

Current Policies

- **Flying high**
 - Global partnership with the UN-agencies incl. the World Bank in support of the global agenda such as achieving the MDGs
- **Keeping our feet on the ground**
 - Professional and institutional development at national and local level in support of the needs of our member associations and the individual surveyors.

Current Policies

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

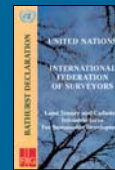
Yes !

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

And no development will happen without the footprint of the surveyor

FIG Global Partnership with

- **FAO**, projects on capacity building, good governance, land economics, etc... .
- **UN-HABITAT**, partner in the GLTN network, projects on informal settlement, informal development, gendered land tools, etc....
- **World Bank**, joint activities and publications, and joint conference March 2009 on Land Governance in support of the MDGs



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
 - Building the capacity
- **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

The Role of the Surveying Associations

- **Professional Skills**
 - High level education and training
 - CPD opportunities and requirements.
- **Professional Responsibilities**
 - Toward the clients
 - Toward society
 - Strong professional organisations
- **Professional and Ethical Codes of Conduct**
 - Providing common values of honesty, integrity, responsibility
 - Standards for delivery of professional services
 - Indemnity insurance

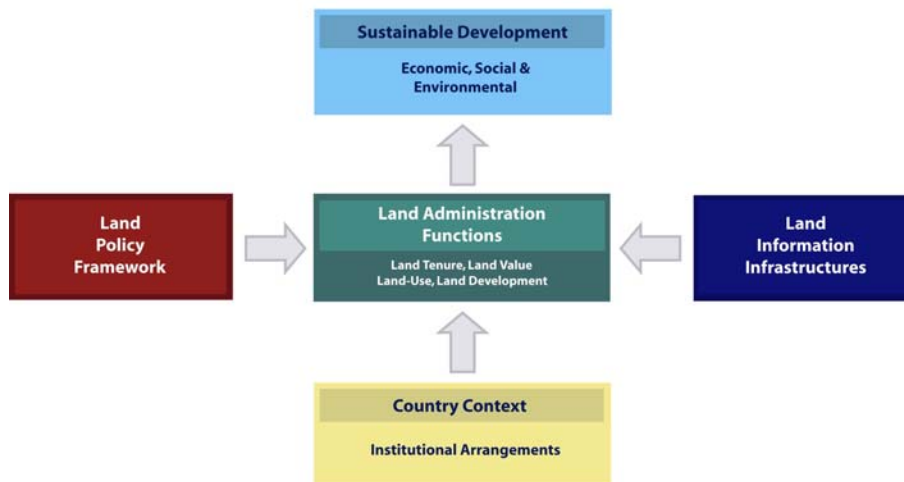
FIG publications



Integrating Land Management, Cadastral and Geodesy ?

Yes – we can!

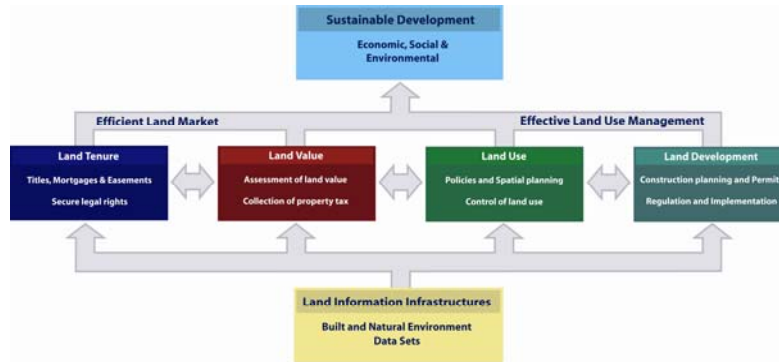
Understanding the Land Management Paradigm



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.

Land Administration Systems (LAS)

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



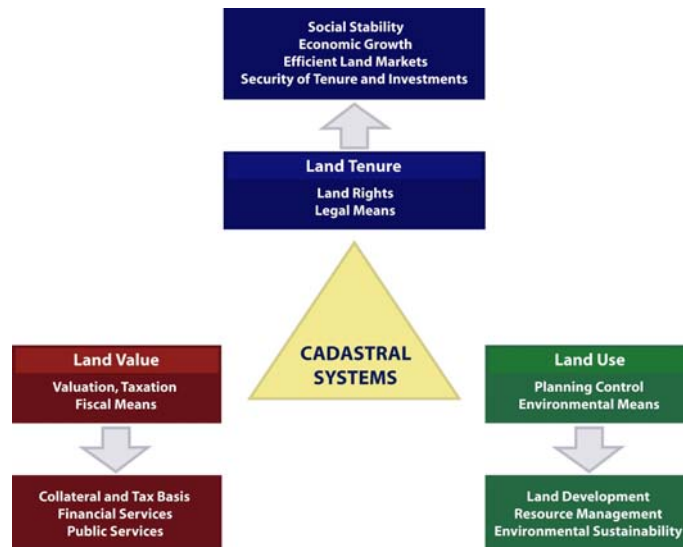
Land Tenure: the allocation and security of rights in lands; the legal surveys of boundaries; the transfer of property through sale or lease; and the management; adjudication of disputes regarding rights and boundaries.

Land Value: the assessment of the value of land and properties; the gathering of revenues through taxation; and the management and adjudication of land valuation and taxation disputes.

Land-Use: the control of land-use through adoption of planning policies and land-use regulations at various levels; the enforcement of land-use regulations; and the management and adjudication of land-use conflicts.

Land Development: the building of new infrastructure; the implementation of construction planning; and the change of land-use through planning permission and granting of permits.

Cadastral Systems



A Cadastral System

CAD NO	AREA	WAY	NO OF PARCELS
8fh	826f	0m ²	1

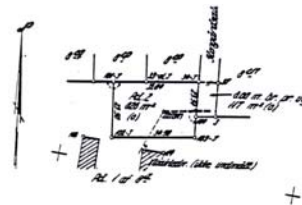
The Cadastral register identifies the land parcels by number and area



The Cadastral map identifies the land parcels geographically

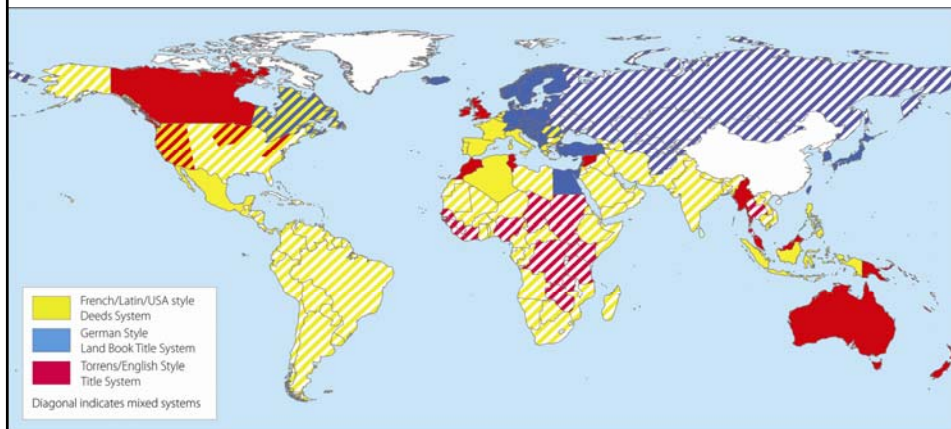
CAD NO	OWNER	MORTGAGE	EASEMENTS
8fh	DATE ...	DATE ...	DATE ...
826f	DATE ...	DATE ...	DATE ...
	DATE ...	DATE ...	DATE ...
	DATE ...	DATE ...	DATE ...

The Land Book secures the legal rights based on the cadastral identification



The cadastral measurements identify the position of the property boundaries

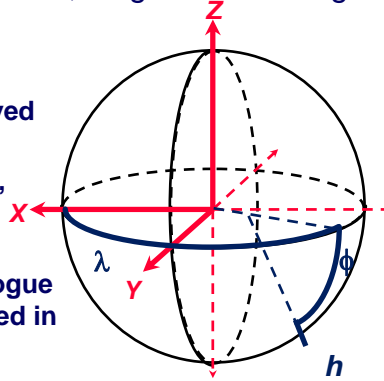
Land Registration Systems around the World



Deeds System (French/Latin/USA style): A register of owners; the transaction is recorded – not the title.
 Title System (German, Torrens/English style): A register of properties; the title is recorded and guaranteed.

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)

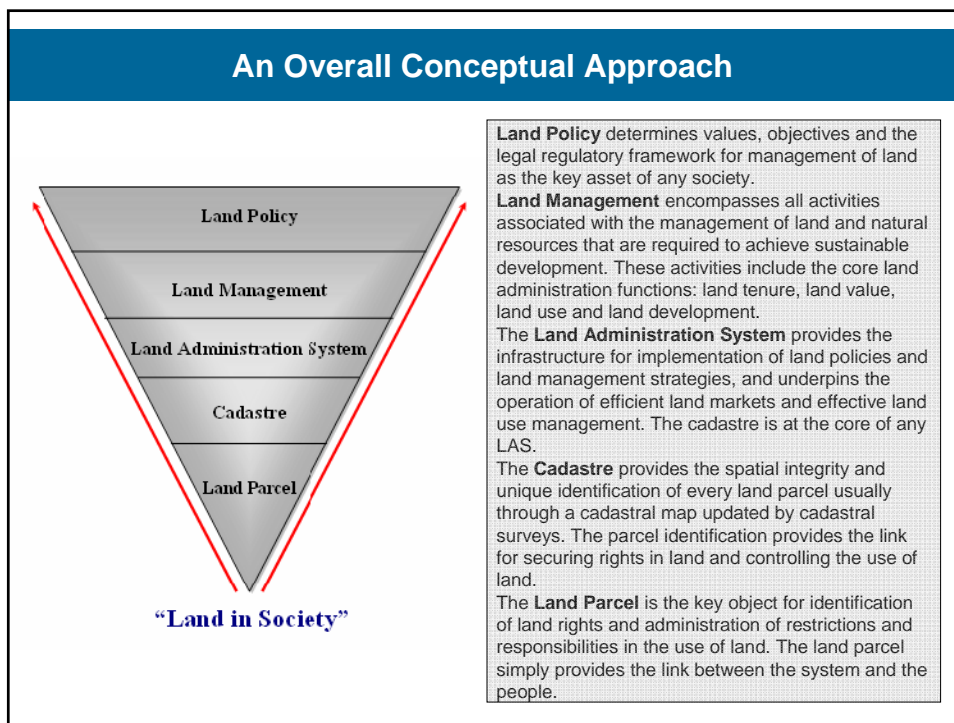
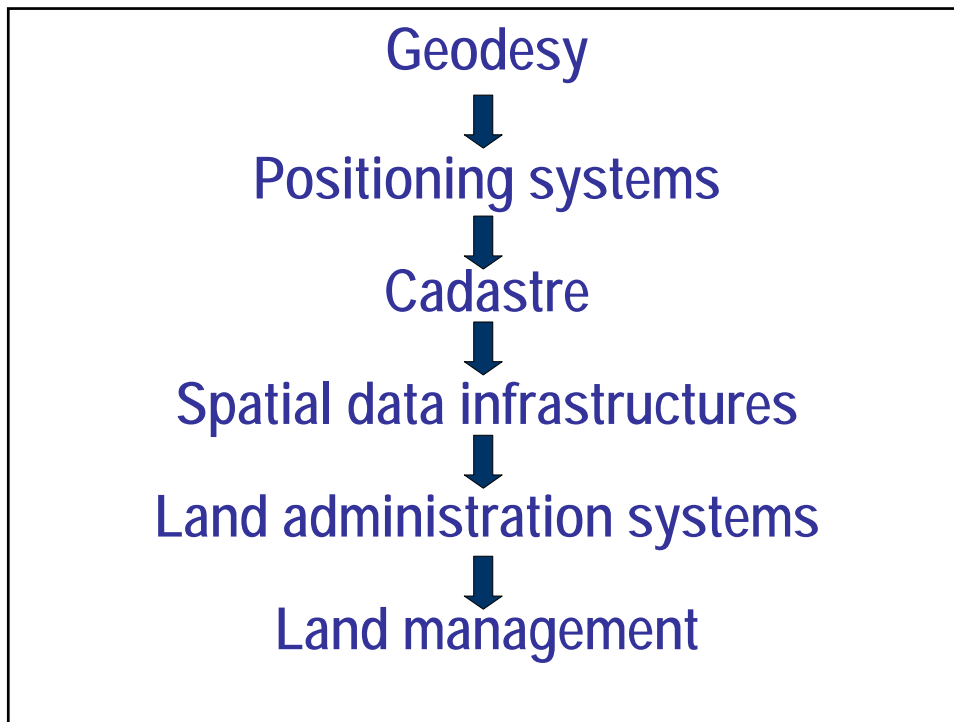


Positioning Infrastructures are the only truly global infrastructure underscoring capture and management of spatial data world wide

Source: Matt Higgins, Washington, 2009

Integrating Land Management, Cadastre and Geodesy ?

Yes – we can!



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 role of the surveying profession

Land governance and management is a core area for surveyors – the Land Professionals. It will require:

- High level geodesy models to predict future change
- Modern surveying and mapping tools 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 systems.

Thank you for your attention

