

# A Cadastral tale

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### Denmark at a glance



- Hovedstad
- Landdistrikter
- Ejerskabsgrænser ca. 500
- Internationale grænser
- Kommunalgrænser
- Motorvej
- Hovedlandeveje
- Regioner
- Kommuner i øverg
- Opretholdte færdveje
- Regionale strømer
- Store nationale motorveje og ferier

43,000 sq km

5 mill inhabitants

One third lives in the capital area

Flat country

70 % agriculture

10 % urban

7000 km coastline



### The Surveyors House - the FIG home base



Landinspektørernes hus  
The Surveyors' House

 Den danske Landinspektørforening  
The Danish Association of Chartered Surveyors

 International Federation of Surveyors  
Fédération Internationale des Géomètres  
Internationale Vereinigung der Vermessungsingenieure

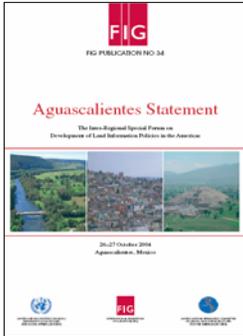
## The Message



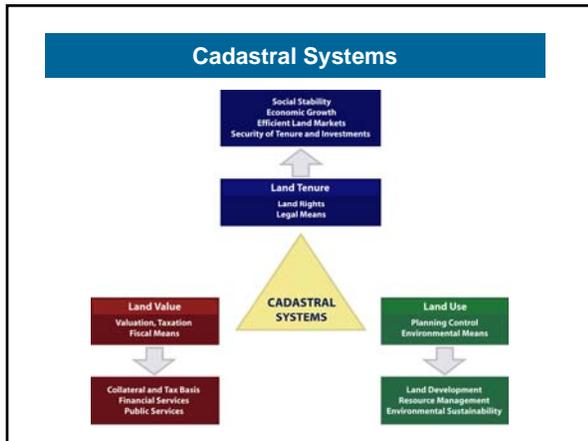
A Global Effort

- A well tailored Cadastral System is acting as a backbone in society.
- Cadastral Systems are country unique but seem to merge into a global Land Administration Model serving some basic societal needs within: land tenure, land value, land-use, and land development. This paper attempts to build an overall understanding.
- There is a need for capacity development in terms of establishing the necessary educational, professional and institutional standards in the field of land administration.
- **Land Administration Systems therefore need high-level political support and recognition.**

## The Aguascalientes Statement



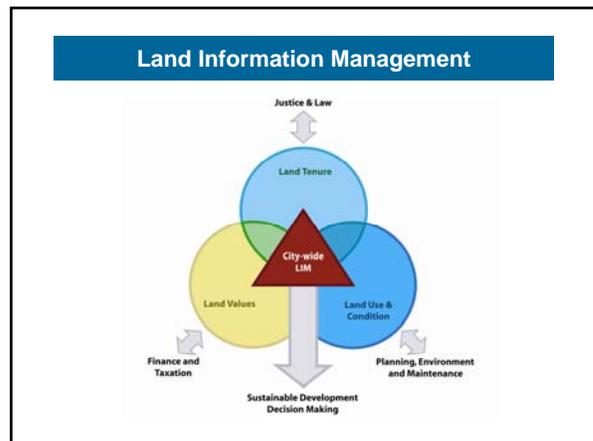
- Foster modern land policies and associated SDI's
  - to better support social, economic and environmental sustainability
- Determine policies and programs for educational and institutional capacity building
  - to ensure the development of appropriate land administration systems and associated spatial data infrastructures
- Develop appropriate institutional, legal, and technical processes
  - to integrate land administration, cadastre, and land registration functions with topographic mapping programs within the context of a wider national strategy for SDI.



## Cadastral Systems



- The identification of land parcels in the cadastral system provides the basic infrastructure for running the interrelated systems within the areas of Land Tenure, Land Value, and Land-Use.
- Even though cadastral systems around the world are clearly different in terms of structure, processes, and actors; they are increasingly merging into a unified global model.
- This is due to some global drivers: globalisation and technological development. These trends supports establishment of multi-functional information systems with regard to land rights and land-use regulations.
- A third global driver is sustainable development with its demand for comprehensive information on the environmental conditions in combination with other land and property related data.



## Development and Sustainability

"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

Legend:  
 French System (Yellow)  
 German System (Blue)  
 English System (Green)  
 Torrens System (Red)  
 Diagonal indicates a mixed system

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.

## Comparing Land Registration Systems

Parameters for comparison:

- Property Definition
  - Where and how it is defined
  - Legal/economic/physical concept
- Property Determination
  - General/fixed boundaries
  - determination process
- Property Formation
  - Process, institutions and actors - who does what
  - Role of the surveyors
- Property Transfer
  - Process, institutions and actors - who does what
  - legal consequences

## A worldwide Comparison of Cadastral Systems

**Cadastral Template**  
 A Worldwide Comparison of Cadastral Systems

Categories of country groups based on a study developed by IAGLR FIG Working Group 3, established under IAGLR mandate by the resolution of the 1998 IAGLR C. GP in Chiba, Japan in July 2003. IAGLR endorsement by resolution with IAGLR, IAGLR, IAGLR, IAGLR, and IAGLR.

**Data per Country**  
 1. Land use  
 2. Land cover  
 3. Land ownership  
 4. Land tenure  
 5. Land rights  
 6. Land registration

**Field Definitions**  
 1. Role of cadastral map in SD

**Principles and Statistics**  
 1. Land use  
 2. Land cover  
 3. Land ownership  
 4. Land tenure  
 5. Land rights  
 6. Land registration

**Latest Updates**  
 1. Development of the IAGLR Working Group 3  
 2. Development of the IAGLR Working Group 3  
 3. Development of the IAGLR Working Group 3  
 4. Development of the IAGLR Working Group 3  
 5. Development of the IAGLR Working Group 3  
 6. Development of the IAGLR Working Group 3

**Plantilla Catastral - México**

Select another Country:  Field Data | Field Definitions | Home

**México (Estados Unidos Mexicanos)**

I. Informe sobre el País  
 A. Contexto Nacional  
 B. Marco Institucional  
 C. Sistema Catastral  
 D. Mapas Catastrales  
 E. Cuadernos e Informes Referenciales

II. Principios y estadísticas catastrales  
 1. Procesos catastrales  
 2. Estadísticas catastrales

pdf file of complete country report (172K) This page was last updated on 18 Apr. 2004

**I. Informe sobre el País**

Persona a contactar: Mario Alberto Reyes Ibarra, Director General, Dirección General de Geografía, Instituto Nacional de Estadística, Geografía e Informática (INEGI), México. Information provided on 12 Apr. 2004

Dirección postal: Av. Héroe de Nacozari # 2301 sur, puerta 7 primer nivel, Fraccionamiento Jardines del Parque, Aguascalientes, Ags. 20270 México, MÉXICO. Email: mario.reyes@inegi.gob.mx

A. Contexto Nacional México Top of Page | Home

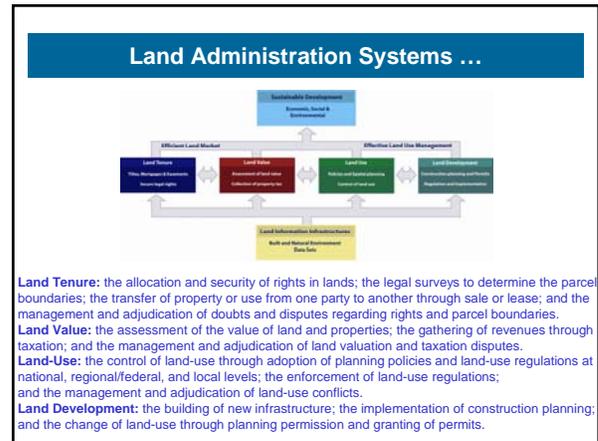
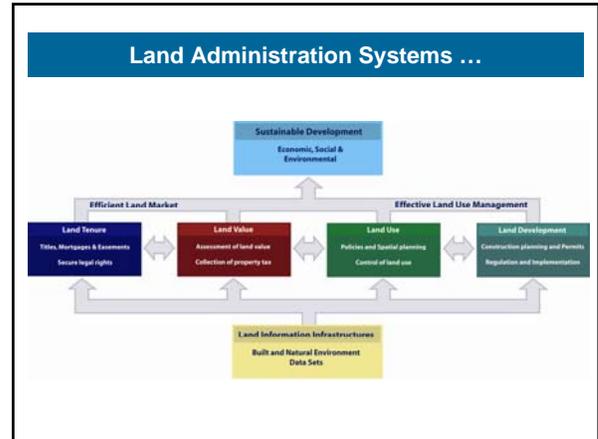
Contexto Geográfico: Puebla. Población total en el año 2000: 97,483,412

## Evolution of Western Land Administration Systems

	Feudalism - 1800	Industrial revolution 1800-1950	Post-war reconstruction 1950-1980	Information revolution 1980-
Human kind to land evolution	Land as wealth	Land as a commodity	Land as a scarce resource	Land as a community scarce resource
Evolution of cadastral applications	Fiscal Cadastre Land valuation and taxation paradigm	Legal Cadastre Land market paradigm	Managerial Cadastre Land management paradigm	Multi-purpose Cadastre Sustainable development paradigm

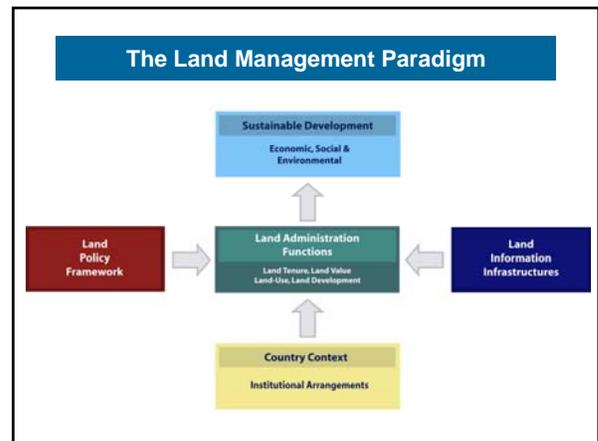
### Evolución de los sistemas de ordenamiento territorial en el mundo occidental

	Feudalismo - 1800	Revolución industrial 1800-1950	Reconstrucción de posguerra 1950-1980	Revolución informática 1980-
Evolución de la relación seres humanos – tierra	La tierra es riqueza	La tierra es una mercancía (commodity)	La tierra es un recurso escaso	La tierra es un recurso escaso de la comunidad
Evolución de las funciones del catastro	Catastro fiscal Paradigma de la valuación y tributación de la tierra	Catastro jurídico Paradigma del mercado de la tierra	Catastro gerencial Paradigma del manejo de la tierra	Catastro multipropósito Paradigma del desarrollo sostenible



**Land Tenure:** the allocation and security of rights in lands; the legal surveys to determine the parcel boundaries; the transfer of property or use from one party to another through sale or lease; and the management and adjudication of doubts and disputes regarding rights and parcel 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 national, regional/federal, and local 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.

- ### ...Land Administration Systems
- A Framework of must include:
    - Define and distinguish between different legal forms of land tenure
    - Define how to establish and secure legal rights in land
    - Establish administrative systems and clear responsibilities for
      - land transfer
      - property formation
      - mortgage and forced sales
    - Coordinate legislation for
      - planning, land use, land value, land registration
  - Specify the administrative role of the agencies and actors involved





### The Land Management Paradigm

- The organizational structures for land management differ widely between countries. Within this country context, the land management activities can be described by three components in support of sustainable development.
- Land policies are part of the national policies on promoting objectives such as economic development, social justice, equity and political stability. Relates to security of tenure, efficient land markets, real property taxation, land use control, environmental management etc.
- The operational component of the land management paradigm is the range of land administration functions that ensure proper management of rights, restrictions and responsibilities.
- The land administration functions are based on and facilitated by land information infrastructures that provide complete and up-to-date information about the built and natural environment.

The flowchart shows 'Country Context' and 'Institutional Arrangements' at the base, leading to 'Land Administration Functions' (which includes 'Land Policy Framework' and 'Land Information Infrastructures'). This leads to 'Sustainable Development' (Economic, Social, and Environmental).

Land Management is the processes by which the resources of land are put into good effect.

[WWW.ddl.org/thedanishway](http://www.ddl.org/thedanishway)

## THE DANISH WAY

AN INTERNATIONAL PUBLICATION SERIES ON SURVEYING, CADASTRE AND LAND MANAGEMENT IN DENMARK

1 Land Administration in Denmark 199, Denmark - 11 pages	6 The Surveying Profession in Denmark 192, Denmark - 13 pages
2 Spatial Planning in Denmark 199, Denmark - 11 pages	7 Land and Environmental Management in Denmark 199, Denmark - 12 pages
3 The Land Market in Denmark Jens Wolthers - 11 pages	8 Property Valuation and Taxation in Denmark Jens Wolthers - 15 pages
4 The Surveyors' Tribunal Jens Wolthers - 12 pages	9 Spatial Information Management in Denmark Michael Borch-Lundgaard - 13 pages
5 Code of Surveying Practice 196, - 9 pages	10 Topographic Mapping in Denmark Søren Rindberg Nielsen - 13 pages

The publications are available at: [www.ddl.org/thedanishway](http://www.ddl.org/thedanishway)

Publications in print can be purchased from: The Danish Association of Chartered Surveyors, The Danish Association of Landowners, Denmark, P.O. Box 44, DK-2800 Charlottenlund, Denmark. Phone: +45 3886 1070 Fax: +45 3886 0512 Email: [ddl@ddl.org](mailto:ddl@ddl.org)

### Capacity Development

- In many countries, the national capacity to manage land rights, restrictions, and responsibilities is not well developed in terms of mature institutions and the necessary human resources and skills.
- In this regard, the capacity building concept offers some guidance for analyzing the capacity needs and developing adequate responses at societal, organizational and individual levels.

### Capacity Building – what is it ? ...

- Capacity Building is a complex issue
- The conventional concept is closely related to education, training and Human Resource Development
- Capacity is the ability of individuals and organizations or organizational units to perform functions effectively, efficiently and sustainable (UNDP, 1998)

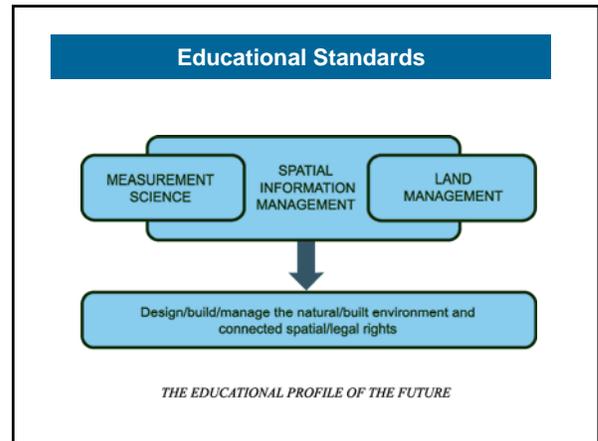
### ... Capacity Building – what is it ?

It is two-dimensional:

- Capacity Assessment**  
A structured and analytical process whereby the various dimensions of capacity are assessed within the broader systems context, as well as evaluated for specific entities and individuals within the system.
- Capacity Development**  
The process by which individuals, groups, organisations, institutions and society increase their ability to:
  - perform core functions, solve problems, define and achieve objectives;
  - understand and deal with their development needs in a broader context and in a sustainable manner (OECD Definition).

### Capacity Development

- Educational standards
- Professional standards
- Institutional standards



### Professional Standards

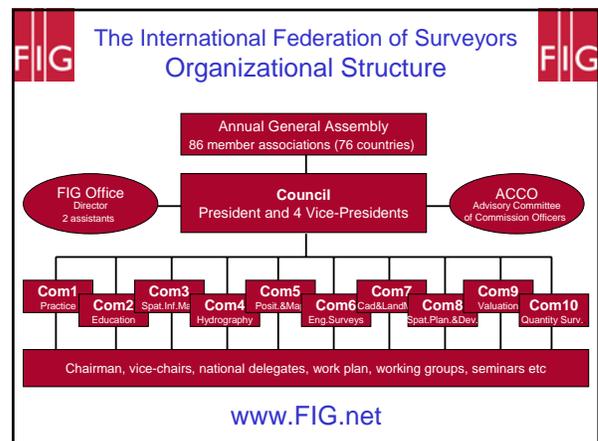
- Professional structures must reflect the new land management paradigm
- National associations will have to develop structures that accommodate a modern interdisciplinary profile.
- This includes adoption of ethical principles and model codes of professional conduct suitable for performing this modern role.

### Institutional Standards

- Institutions are "the rules of the game". Property right is such an institution in society – the cadastre is a facilitator to make it work
- Promote adoption of comprehensive land policies and a holistic approach to land management
- Establish a clear split of duties and responsibilities between national and local government based on the principles of good governance
- Develop appropriate institutional, legal and technical processes to integrate land administration and topographic mapping programs within the context of a wider national land policy

### The role of FIG

What is the role of in this regard?



## 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](http://WWW.FIG.NET)

## Final Remarks



- The objective of this paper is to build an overall understanding of the land management paradigm.
- Land Administration Systems, in principle, reflect the social relationship between people and land. Such a system is not just a GIS. It is the manager of property assets, natural resources and environmental conditions in urban as well as and rural areas.
- Land administration systems are not an end in itself but facilitate the implementation of land policies within the context of a wider national land management framework.
- There is a need for capacity development in terms of establishing the necessary educational, professional, and institutional standards.
- Land administration therefore need high-level political support and recognition.
- This calls for increased international co-operation. FIG is prepared to invest in such corporative efforts.

## Last Remark



**Thanks  
for your  
Attention**