New vision towards a multipurpose cadastral system to support land management in Morocco

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Introduction
- Land and ownership:
  - Vital component of human life
  - Most profitable and secured Investment
  - Two forms of regulations in Morocco: Islamic law & titling regime
- Purpose:
  - Moroccan Cadastre and its Beneficial aspects
  - New orientations within the ANCFCC
  - New vision to build a multipurpose cadastre

Cadastre: origin and meaning
- Earliest signs: traces in Syria, Arabian Peninsula, Egypt, and China
- Capi-dastra: list of owners and their landed properties => registers
- Katastikhon: list of owners
- Meaning: several definitions

Cadastre: definitions
- An official register
- A methodically arranged public inventory
- An inventory system
- A unique identification of every land parcel
- A marriage of (a) technical record with (b) authoritative documentary record
- A normally parcel-based and up-to-date land information system containing a record of interests in the land
- A systematic description of the land units within an area

Moroccan Cadastral History
- 1915: creation of the first structure of cadastre
  - Service of Land Registry
  - Register book regime
- 1924: creation of the Cherifian Service of topography
  - Linked to the Service of land and domain recording
- 1948: creation of the division of Land Registry
  - Ministry of agriculture and Forest
  - Grouped the two former services
- 1972: creation of the direction of Land Registry and Topographic Works: DCFET

Moroccan Cadastral History
- 1973: creation of the National Cadastre
  - Exhaustive inventory of lands for farming and agriculture projects
- 1982: creation of the National Land Agency
  - Land inventory of lands in urban and suburban areas
**Moroccan Cadastre**

- Service of land Registry
- Service of Cadastre
- Local Level
- National Level
- National Cadastre
- National Land Agency

**Cadastre: Moroccan context**

- ANCFCC
- Juridical cadastre
- National land Agency
- National Cadastre
- Services of Cadastre & Services of Land Registry

**New orientations**

- Chakir’s Vision: year 2001
- Vision 2006: year 2002
- Law 58.00: year 2003

**New orientations: Chakir’s Vision**

- Adaptation of the Swiss Cadastre
- Three cadastral levels: national, regional, local
  - National Level:
    - Regulation, Coordination, and Supervision
  - Regional Level:
    - Coordinates and supervises regional activities
  - Local Level:
    - Providing cadastral data and maps
New orientations: Chakir’s Vision

- Characteristics
  - Concern only titling and registration
  - Omit national cadastre data
  - Omit national land agency data
- Requirement:
  - New system to support the three cadastral structures

New orientations: Vision 2006

- New strategy to modernize the cadastre
  - Technical, organizational, and institutional aspects
- Three principal orientations
  1. General cadastre: Extend the national cadastre to the areas with major economical activities
  2. Private sector: involve private companies to deal with cadastral, cartographic, and digitizing projects
  3. Outreach program (vulgarisation): establish appropriate outreach to promote general cadastre.

New orientations: Law 58.00

- ANCFCC as an autonomous and public agency
- Reinforces its fundamental domains:
  - Land Registry
  - Cadastre
  - Cartography
- Enlarges its responsibility

Law 58.00: fundamental domains

- Land Registry
  - Titling land properties
  - Maintenance of land ownerships
  - Maintenance of registers and archives
- Cadastre:
  - Cadastral documents to support land registration
  - Maintenance of national cadastre
  - Centralize and coordinate land inventory activities in urban and rural areas
- Cartography:
  - Establish and maintain geodetic infrastructure
  - Establish and maintain the base map
  - Compile thematic mapping
  - Maintain national photogrammetric documents
**Law 58.00: enlarged responsibility**
- Define its policy
  - Managerial aspects
  - Statute regulations concerning data delivery and exchange
  - Administrative and financial tasks
- Unique framework
  - Cadastre and cartography
  - Exhaustive land inventory
  - Conduct studies for land management and planning
- Information technology
  - Digital system
  - Geographical information systems: land and mapping
  - Data online

**Law 58.00: characteristics**
- Administering lands with modern regulations
- Statute regulations concerning data delivery and exchange
- Financial resources: benefit-cost recovery
- Basic framework for modernizing the system
- Requirements
  - Developing multipurpose cadastre based on:
    - Law 58.00
    - Moroccan context
    - International experiences
    - Cadastre 2014

**Towards a multipurpose system**
- Driving forces
- Principles and international experiences
- A new vision

**Towards a multipurpose system:**
- Unique system at the local level: Land registry utility
  - Coordination: service of cadastre and service of land registry
  - Unique reference geodetic network (difficulties)
  - Adjudication process: guarantee rights on demarcated properties
- Customer needs:
  - Efficiency: short time
  - Accuracy: exact definition of parcels and properties
- World global changes:
  - Increase security on land: globalization
  - Reinforce land regulations: restrictions and obligations

**Towards a multipurpose system:**
- Technological evolution: accelerate surveying, titling, mapping
  - Collection: photogrammetry, remote sensing, GPS, digital theodolites
  - Process: GIS, geo-statistics, geo-database, modeling, ....etc
  - Editing: huge platforms
- Government needs:
  - Efficient cadastre: land administration
  - Monitoring land market
  - Maintaining land management: redistribution, consolidation, valuation, assessment
  - Regulating legal framework and land statutes

**Towards a multipurpose system:**
- System encompassing both fiscal and juridical cadastre
- Serves multipurpose aspects:
  - Land information
  - Land management
  - Land valuation and assessment
  - Land titling
- First model: North America (McLaughlin, 1975)
- Second model: Committee on Geodesy (National Research Council, USA, 1981)
- Third model: cadastre 2014 (FIG, 1998)
Towards a multipurpose system:

**New Vision**

- **Objective:** define unique system
  - National cadastre
  - Juridical cadastre
  - National land agency
- **References**
  - Morocco: Chakir’s vision - vision 2006 - law 58.00
  - International: USA, Canada (new Brunswick, Quebec), Australia, Finland
  - On-going experiences: cadastre 2014

**Components**

1. A global geodetic network as a reference framework
2. A series of regular cadastral sections monumented as a basic grid for cadastral overlays
3. A series of large-scale maps of natural and physical resources
4. A unique judicial cadastre
5. A computerized cadastral information system

**Requirements**

- Contribution of many different departments
- Commitment between public and private sectors
- Multi-institutional committee: gradual, phased, and cumulative efforts

**Products and interests**

- Property information and ownerships
- Land zoning
- Infrastructure information
- Progressive generalization of a systematic registration
- Updated cadastral and large-scale maps

**Conclusion**

- **Multipurpose cadastre (MPCIS):**
  - Wide inventory: land, properties, natural resources, environmental features, legal aspects
  - Normally up-to-date: systematic show of land conditions
- **Driving forces for a MPCIS:**
  - New customer needs
  - New global changes
  - Technological evolution
  - Government requirement: land administration

- **New vision for a MPCIS:**
  - Framework: Law 58.00
  - Take advantages: Chakir’s perspective, vision 2006, Int. experiences
- **Components of the MPCIS:**
  - Global geodetic network,
  - A series of monumented cadastral sections,
  - A series of large-scale maps,
  - A unique judicial cadastre,
  - Computerized cadastral information system.
Conclusion

- **Requirement:**
  - Reorganizing the ANCFCC: national, regional, local
  - Multi-institutional committee: commitment
  - Large cooperation: public and private sector
- **Strategy:**
  - Don’t invent the wheel: existing experiences=>extend ideas
  - Progressive and systematic effort
  - Standardizing methods and practices: different levels

**Challenges:**

**Challenges: Farming and agriculture**
- Convenient policy to manage lands

**Challenges: 3D-Cadastre**
- Settlement, industry, tourism, infrastructure

**Challenges: Marine Cadastre**
- Coastal governance: a large littoral of 3500 km (Atlantic ocean and Mediterranean)