

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

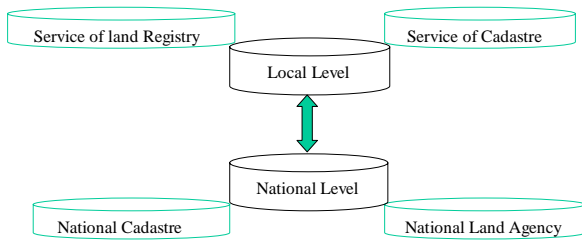
Moroccan Cadastral History

- Juridical Cadastre**
- 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: DCFTT

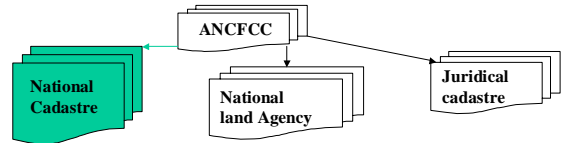
Moroccan Cadastral History

- 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

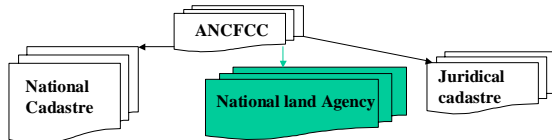


Cadastre: Moroccan context



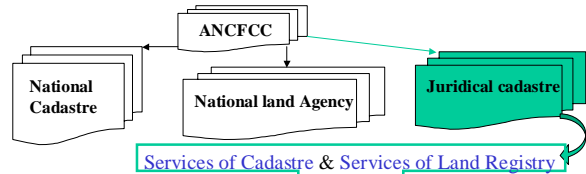
- An official register
- An inventory system
- A marriage of (a) technical record with (b) authoritative documentary record
- A normally parcel-based and up-to-date land information system
- A systematic description of the land units within an area: rural zones for agriculture development

Cadastre: Moroccan context



- An official register
- An inventory system
- A marriage of (a) technical record with (b) authoritative documentary record
- A systematic description of the land units within an area: urban & suburban for public land

Cadastre: Moroccan context



- An official register
- A unique identification of every land parcel: within a **property**
- A normally **property**-based and up-to-date land information system containing a record of interests in the land
- A marriage of (a) technical record with (b) authoritative documentary record

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

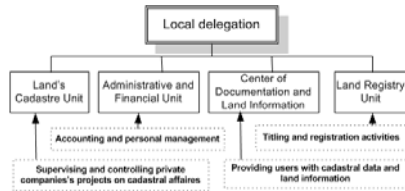


Figure 1: Local delegation in a proposed organizational Structure Chakir (2001)

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: Vision 2006

- **Characteristics:**
 - Recommends pilot projects as practical steps to achieve gradually the project
 - Omits the National Land Agency's products
 - Relationship between juridical and national cadastre in terms of technical issues
- **Requirements**
 - Needs clear steps to build the system at different levels
 - Supports the three components of the 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:

Driving forces

- 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:

Driving forces

- 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:

Principles

- 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

Towards a multipurpose system:

New Vision

- **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

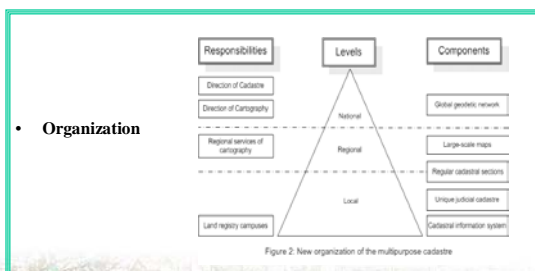
Towards a multipurpose system:

New Vision

- **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

Towards a multipurpose system:

New Vision



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

Conclusion

- **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: 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)