

## Chapter 3

# Comprehensive Ontology Model of Moroccan Land Administration Domain Applied to the National Land Governance

**Moulay Abdeslam Adad**  
*ANCFCC, Morocco*

**El Hassane Semlali**  
*Institut Agronomique et Vétérinaire Hassan II, Morocco*

**Fatiha Ibannain**  
*ANCFCC, Morocco*

### ABSTRACT

*Moroccan land and real estate are characterized by a large number of properties and an advanced and varied typology. Among the related shortcomings is how to identify various land statuses and the stakeholders in the sector. These characteristics of land are multidimensional, including urban, suburban, and rural; land use plan; lands under formal and informal registration systems and multiple regulatory frameworks; the importance for the state, the public, and private individuals; regarding its heritage, urban planning, and taxation; the development projects in each sector; etc. The complex character and distinct fields of land administration in Morocco necessitates the creation of a unified and standardized land data model for use by all public and private actors who have a relationship to land. The present study contributes to the perception of an applied taxonomy and aims to define the basic concepts of the land domain ontology. Such expertise is a prerequisite for land governance and land policy that integrate land and real estate into national development processes.*

DOI: 10.4018/978-1-5225-5939-9.ch003

## **DEFINITIONS AND CONCEPTS**

The International Organization for Standardization (ISO) describes land administration as the process of determining, recording and disseminating information about the relationship between people and land (ISO, 2012). In this context, the term “land” may refer to “real estate”, “immovable property”, “parcel” and other terminologies used in private and professional fields related to land. Land and real estate can also refer respectively to soil and property resulting from land use like building and housing.

“Individuals” are natural and legal persons, under public or private law, who can relate to land through any kind of property right. They can also be entities belonging to the public sector and the private sector, individually or in a group, which are involved in land administration. Additionally, it could be a property linked to another property in terms of servitude or easement for example.

In a more specialized context, land administration can be defined as the set of instruments, rules, and institutions that make it possible to manage land in a given legal, social, political, economic and environmental context. It refers more specifically to processes aimed at regulating the development, use and conservation of land, the collection of income from its sale, concession and taxation, as well as the resolution of conflicts over its appropriation. It can be provided by state services, but also by various public, territorial, customary, and associative institutions (C.T., 2009).

## **INTRODUCTION**

The Moroccan land administration system, as a process of determining, recording and disseminating information about the relationship between people and land, provides a foundation for land governance and land policy, and is a prerequisite to these functions. This information is at the heart of any process of land administration and therefore it is vital to identify and understand the concepts of “lands”, “individuals” and “land-individual relationship”.

It must be noted that without a unique land data model that takes these concepts into consideration, drawbacks arise in manipulating this information, such as data redundancy and difficulties in sharing data between all the major users and stakeholders involved in these domains. To agree on a unified model is a necessary objective, which in turn requires the identification and description of the entities and concepts of these domains.

The Moroccan land administration domain has widened as its typology has diversified and the area administered has increased. This diversity is perceived in the context of this study as richness and as the achievement of historical efforts made in describing land and recognizing its peculiarities, not in the sense that a multiplicity of land statuses makes the holding and manipulation of land ownership problematic. This perception speaks to the informative function of land administration and requires an exhaustive approach to address our topic. No aspect of land governance should be overlooked or underestimated.

First, we will give an overview of land policy and land governance. The volume and typology of Moroccan land will then be highlighted, and a description of the individual-land relationship will be proposed. The domain of Moroccan land administration will be detailed after. We will end with a discussion, some Cadastre-2014 aspects', international perceptions, proposal and conclusion.

18 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:  
[www.igi-global.com/chapter/comprehensive-ontology-model-of-moroccan-land-administration-domain-applied-to-the-national-land-governance/214478](http://www.igi-global.com/chapter/comprehensive-ontology-model-of-moroccan-land-administration-domain-applied-to-the-national-land-governance/214478)

## Related Content

---

### Geospatial Resource Integration in Support of Homeland Defense and Security

David Foster and Christopher Mayfield (2016). *International Journal of Applied Geospatial Research* (pp. 53-63).

[www.irma-international.org/article/geospatial-resource-integration-in-support-of-homeland-defense-and-security/160759](http://www.irma-international.org/article/geospatial-resource-integration-in-support-of-homeland-defense-and-security/160759)

### Methodological Framework for Defining the Sustainability Management Process for Urban Mobility Systems Based on System Engineering

Justin Moskolai Ngossaha, Raymond Houé Ngouna, Bernard Archimède, Radu Gabriel Patrascu, Alexandru-Ionut Petrisor and Marcel Fouda Ndjodo (2020). *International Journal of Digital Innovation in the Built Environment* (pp. 1-21).

[www.irma-international.org/article/methodological-framework-for-defining-the-sustainability-management-process-for-urban-mobility-systems-based-on-system-engineering/255176](http://www.irma-international.org/article/methodological-framework-for-defining-the-sustainability-management-process-for-urban-mobility-systems-based-on-system-engineering/255176)

### Land Classification Research: A Retrospective and Agenda

Michael N. DeMers (2014). *International Journal of Applied Geospatial Research* (pp. 82-92).

[www.irma-international.org/article/land-classification-research/118261](http://www.irma-international.org/article/land-classification-research/118261)

### Industrial Heritage as an Operative Territorial Resource: Cultural Landscape of Alentejo Pyrite

Marta Duarte Oliveira and Jorge Tavares Ribeiro (2019). *Geospatial Intelligence: Concepts, Methodologies, Tools, and Applications* (pp. 31-60).

[www.irma-international.org/chapter/industrial-heritage-as-an-operative-territorial-resource/222892](http://www.irma-international.org/chapter/industrial-heritage-as-an-operative-territorial-resource/222892)

### Control of Full-Size Frame Structures via Optimum Tuned Mass Dampers

Apaer Mubuli, Sinan Melih Nigdeli and Gebrail Bekda (2021). *International Journal of Digital Innovation in the Built Environment* (pp. 47-61).

[www.irma-international.org/article/control-of-full-size-frame-structures-via-optimum-tuned-mass-dampers/277121](http://www.irma-international.org/article/control-of-full-size-frame-structures-via-optimum-tuned-mass-dampers/277121)