# Extended Models from the Colombian LADM Profile as Support of Land Use Planning - Land Administration SDI

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Cadastre Colombia; LADM based on INTERLIS; LADM and SDI integration; Land

Use Planning Data Model

### **SUMMARY**

#### Introduction

Colombia faces transcendental changes to define public policies related to land governance because of the Peace Process between the FARC and the Colombian Government that resulted in a General Agreement to End the Armed Conflict and Build a Stable and Lasting Peace. Among other initiatives, the Government of Colombia decided to create the Modern Multipurpose Cadastre and the formulation of the Land Use Planning at municipality level. The first one integrates the planning systems and the territorial information systems through the public policy document CONPES 3859 (2016) called "Policy for the Adoption and Implementation of a Rural-Urban Multipurpose Cadaster". The second one is defined in the CONPES 3870 (2016) "National Program for the Formulation and Updating of Land Use Planning"

The Project "Modernization of Land Administration in Colombia", funded by the Swiss Economic Cooperation (SECO), has supported the governmental entities in developing a Colombian profile of the norm, called LADM-COL and the building of the extended models for land administration, including the Land Use Planning one (LADM-COL-OT.

## Objective

This presentation-paper aims to demonstrate the utility of the construction of the Land Use Planning extended model based in the ISO 19152:2012 – LADM and its contribution to the standardization of methodologies that will help the entities to face the urban-rural challenges related to population growth, sustainable development, climate change mitigation, infrastructure and transport systems development, disaster risk management, effective management of natural resources, conservation

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FIG Working Week 2019 Geospatial information for a smarter life and environmental resilience Hanoi, Vietnam, April 22–26, 2019 of protected areas.

## Importance

Currently, each institution uses their own model to store and manage the data needed to meet their own scope and needs, but without a shared standard between them that permits the data interoperability. For this reason, the building of the Spatial Data Infrastructure for Land Administration (IDE-AT) is one of the priorities. This infrastructure must have tools and functionalities that enable an environment of interoperability of data and services between the entities involved in territorial planning and based on the definition of several extended models on key issues that should be articulated around LADM-COL, considering the principle of legal independence, and based on the Model-Driven Approach (MDA)

#### Result

Because of the building of the LADM-COL-OT extended model, led by Planning National Department (DNP), Colombia has an accepted conceptual model that clearly describes the land use planning formulation, using an unambiguous semantic. Currently, the project is working on the validation of this extended model with the governmental entities involved in this domain.

#### Conclusions

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The DNP is supported by the Project "Modernization of Land Administration in Colombia" in the building of the extended model for Land Use Planning (LADM-COL-OT). During its building, the complexity has grown, since it has a strong relationship with other issues related with affectations in the territory. It has been stated that its building will permit to have an environment of interoperability among the different public entities.

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