Data Migration Process to LADM-COL Model

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SUMMARY

The implementation of the multipurpose cadastre public policy has been adopted by Colombia to better characterize the physical and legal reality of the territory. In this sense, the Medellín cadastre has managed the cadastral information of the municipality for more than 30 years, it has been in charge of executing the cadastral processes in the properties that are in the area of the municipality, both urban and rural.

With the approval of law 1955 of 2019, the Medellín Cadastre now becomes a Cadastral Manager, which implies a series of new challenges for the institution, being able to respond to the regulatory and technical changes that come from the formulation and implementation of the multipurpose cadastre policy. According to the above, one of the main pillars defined by the cadastral authority is decentralization accompanied by the standardization of cadastral products, using the LADM-COL model as the main mechanism, which is a national profile of the ISO 19152:2012 standard.

The Cadastre office of the municipality of Medellín has been working since 2019 to adapt to the new definitions and technical requirements in conjunction with the SwissTierras Colombia project on different work fronts, one of them in the transformation of municipal data towards the LADM-COL model.

In this article, we will present how the migration of the Medellin cadastre information to the LADM-COL model was carried out. In this process, it was identified in which institution resides the official information of the territorial objects to be migrated, and the validation rules to be executed on the information to ensure its quality from a thematic and technical point of view, whether it is alphanumeric or geographic. Following this, the information was homologated to comply with the domains, relationships, and territorial objects defined in the LADM-COL

model.

Once the initial information has been validated and complemented, an ETL was implemented to allow the massive transformation of the information. Once the information has been migrated to the LADM-COL model, different validation processes are executed to ensure the correct migration of the information, its completeness, and thematic accuracy.

With the migration of the Medellín cadastre database, which has more than one million parcels, it is possible to demonstrate that it is possible to migrate the information from a consolidated cadastre to the LADM-COL model.