

Overview of ISO 19152 Land Administration Domain Model Edition II

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SUMMARY

In LADM Edition I, the term “land administration” is used in the broad sense, including geographical spaces covering water and land, and elements above and below the surface of the earth. Through its broad use via the various country profiles and implementations, there is the need to further elaborate and define the elements to which the Rights, Restrictions and Responsibilities are attached. In the 48th Plenary Meeting Week of ISO/TC 211 in 2019, LADM Edition II was proposed to be developed as multi-part standard, with experts being involved from academia, industry, standardization bodies and professional organizations across the world. Therefore, six standards are currently under development, following the ISO standardization process. In this context, a new term “georegulation”, with a wider meaning is introduced, which can be defined as an activity to delimit and assert control over 2D, 3D or 4D represented geographical (and temporal) spaces through regulations, which refers to marine space.

This abstract focuses on the structure of the second edition of the ISO 19152 Land Administration Domain Model (LADM) and its operational capabilities through its Parts that are currently under development. During the revision process, close collaboration with various FIG Commissions can be achieved, for instance, FIG Commissions 3 (Spatial Information Management) and 7 (Cadastre and Land Management) for Part 2, Commission 8 (Spatial Planning and Development) for Part 5 and Commission 9 (Valuation and the Management of Real Estate) for Part 4.

It is noted that in its final version the contents of the standard may be different compared to this paper. The parts of LADM Edition II are the following:

- Part 1 – Generic Conceptual Model
- Part 2 – Land

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- Part 3 – Marine Georegulation
- Part 4 – Valuation Information
- Part 5 – Spatial Plan Information
- Part 6 – Implementation Aspects (its development has not started yet)

The packages structure of LADM Edition II, is designed in a way that meet the requirements that have been developed during the revision process. ISO standards should include a set of requirements which form the basis for the scope of the standard, and which are further used to specify an abstract test suite. Those requirements are presented in relevant publications.

The Part 1 will be a high-level umbrella standard that supports all the other parts of the LADM Edition II and provides an overview of all parts. The “Party”, “Administrative” and “SpatialUnit” packages are common packages in Part 1, as well as, in Part 2. For the common packages, in Part 1 the fundamental notions are included, while the terms defined in these packages are only introduced and the detailed description of these packages is included in Part 2. It is noted that the Part 1 will not only be backward compatible with the previous version of the LADM but also with the IHO S-121 Maritime Limits and Boundaries standard, that will be used as basis when developing the Part 3 of LADM Edition II. Moreover, the newly added Packages in Part 3 are “Party Group” and “Source Group”. Parts 4 and 5 have been designed as a single package, both based on the definitions in Part 1 and 2, where in Part 4 the “Valuation Information” Package is introduced, while in Part 5 the “Spatial Plan Information” Package.

Finally, Part 6 is planned to cover a methodology for developing an LADM country profile, an abstract framework for representing LA workflows (processes), a metamodel for structuring and managing semantically enriched code list values, and support for different encodings. In addition, Part 6 is expected to include the OGC API family of standards-compliant recommendations for the development of interoperable LADM schema-based information systems. Furthermore, the relationships between the LADM and the instruction guidelines for property measurement, such as the International Property Measurement Standards (IPMS) and the International Land Measurement Standard (ILMS), is planned to be included in Part 6.