

Joint ISO/TC211 and OGC Revision of the LADM: Valuation Information, Spatial Planning Information, SDG Land Indicators, Refined Survey Model, Links to BIM, Support of LA Processes, Technical Encodings, and Much More on Their Way!

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SUMMARY

Within ISO standards, which are actually being applied, are continued and subject to periodic revision, typically in a 6 to 10 year cycle. The UN-GGIM Meeting of the Expert Group on Land Administration and Management was organized on 14-15 March 2017, Delft and the main conclusion was that indeed a LADM revision was needed in order to provide better tools to improve tenure security and better land and property rights for all. It was also noticed that it is a rather complex domain, with many stakeholders (ISO, FIG, OGC, UN-Habitat, UN-GGIM, World bank, GLTN (Global Land Tool Network), IHO, RICS,...). Further goals include: providing reliable LA Indicators for the Sustainable Development Goals (SDG), standard(s) supporting a Fit-for-Purpose approach, attention for implementations and tools (not just conceptual model), and inclusion of valuation information (which could help to define/support Fit-for-Purpose approach). In order to prepare the LADM revision, two workshops were organized: 16-17 March 2017 (Delft) and 11-13 April 2018 (Zagreb), with experts involved in the development of the initial version of LADM and representatives of all mentioned stakeholders. It is important to analyse and compare currently operational and proposed country profiles and their implementations of first version of LADM, ISO 19152:2012. The main, preliminary outcomes of the LADM 2017 and LADM 2018 workshops can be summarized as:

1. FIG prepares New Work Item Proposal (NWIP) and send this to ISO TC211 (done by end of April 2018)
2. It is possible to start with an ISO Stage 0-project, given the potential broad scope, including:
 - Fiscal/valuation extension module
 - More explicit

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semantics of code list values

- Further modelling LADM's rights, restrictions, responsibilities (RRRs)
- Further modelling of LADM's survey and spatial representation
- SDG Indicators (aggregated values at different levels)
- 3D/4D Cadastre
- Spatial planning/zoning with legal implications
- LADM in support of Marine Cadastre (esp. coastal zones)
- More explicit relations with Building Information Modelling (BIM)
- Other legal spaces: mining, archaeology, utilities,...

3. Multi-part standard (either separate or in new annexes), 2-4 years development. Some initial thoughts:

- Part 0: Core (update current version LADM)
- Part 1: Potential conceptual model extensions
- Part 2: LADM Profiles (Methodology to define profiles, STDM, Sample country profiles)
- Part 3: Application schema, technical models & encodings (considering existing markup languages (xxxML): CityGML, IndoorGML, InfraLand (InfraGML), LandXML, Own/new land administration markup languages □ LAML, (Geo)BIM/IFC, INTERLIS, Linked data (RDF), GeoJSON,...)
- Part 4: Process & workflow standardization
- Sample implementation

4. OGC Innovation Program (with the option that National Mapping and Cadastral Agencies (NMCA) support developed countries)

5. GLTN support for developing

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countries

6. In collaboration with many partners

The list above shows that the revision could have rather a wide scope and result in a complex process. By the end of September 2018 an initial Working Draft (WD0) of the revised LADM has been send to ISO TC211 (see <http://isoladm.org>). This paper will further report in the initial stage of the revision process where ISO/TC211 and OGC cooperate.

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