Questionnaire for the development of ISO 19152:2012 LADM Valuation Module

The ISO 19152:2012 Land Administration Domain Model (LADM) presents a conceptual schema for the specification of property units and their legal and geometric characteristics recorded at cadastre and land register, and relates these datasets with other property related datasets (e.g. addresses, utility networks, building (units), valuation, taxation, land use, land cover) recorded at external registrations.

A recently initiated collaborative research aims at developing a LADM based international information model for one of these external registrations, namely in terms of a Valuation Module for the ISO 19152:2012 LADM. The purpose of this research is to define the semantics of valuation information maintained by public authorities especially for recurrent taxes on immovable property[1], and to extend the scope of LADM from a fiscal perspective to provide an information model that could be used to construct information systems for immovable property valuation. The preliminary results of this research were documented at the 11th 3D Geoinfo Conference[2].

This questionnaire is prepared as a part of methodology applied for the above-mentioned research which is also supported by FIG Presidency and Chair of FIG Commission 9 Valuation and the Management of Real Estate. The purpose of the questionnaire is to create a world-wide inventory that reveals commonalities and differences among valuation systems used for recurrently levied immovable property taxes. The result of the questionnaire is expected to provide an understanding of the situation of valuation systems, and will be used as source data for the elaboration of the LADM Valuation Extension Module.

Please reply the following questions, and contact us if you have any comments and suggestions:

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[1] Recurrent taxes on immovable property covers taxes levied regularly in respect of the use or ownership of immovable property. These taxes are levied on land and buildings, in the form of a percentage of an assessed property value based on a national rental income, sales price, or capitalised yield; or in terms of other characteristics of real property (e.g., size or location) from which a presumed rent or capital value can be derived. They can be levied on proprietors, tenants, or both; they can also be paid by one level of government to another level of government in respect of property under the jurisdiction of the latter (The OECD classification and interpretative guide 2015, http://www.oecd.org/tax/tax-policy/oecd-classification-taxes-interpretative-guide.pdf)

[2] For more information, see: http://www.isprs-ann-photogramm-remote-sens-spatial-inf-sci.net/IV-2-W1/145/2016/

Section A. General questions for property valuation systems in Ecuador

Questions	Responses
1. Please indicate the organizations responsible for valuation of properties for property taxation purposes through name in national language and English translation.	Gobierno Autónomo Descentralizado Municipal Local Government
2. What are the types of objects of valuation for property taxation (e.g. unimproved parcel, building)? Name and date of the ordinance to be listed.	Land, building
3. Please mention value type (e.g. market value, tax value, capital value) used by the responsible organization for property taxation?	Market value
4. Please mention the public registry datasets (e.g. cadastre, land registry, building registry) which are used in valuation procedures, and their mutual functions?	Cadastre
5. Which methods are applied for collecting market data needed for valuation?	Since January of 2017, Notaries, property registrars, entities of the financial system and any other public or private entity that deals with the public information about the real estate will send, on a monthly basis, to the cadastre office of the local governments, the complete registration of the total or partial of real states transfers. (Organic Law to avoid speculation on the value of lands)
6. Is there any special valuation database for storing datasets *used in* (e.g. property characteristics) or *produced with* (e.g. sales statistics) valuation procedures? If yes, please give the name of database, indicate responsible authority, and describe its content.	
7. Is there a web-based dissemination of valuation information? If yes, please indicate which data (e.g. sales statistics) is open to the public.	No
8. How frequently are general revaluations made?	Every two years (according to COOTAD)
9. Is there a system of indexation affecting property value between regular revaluations?	No
10. Do taxpayers have a right to appeal against the appraised values? If yes, please indicate how disputes are resolved.	Yes, it's an administrative procedure

Please continue with Section B, if mass appraisal procedures are applied in your country for immovable property taxation. If single property appraisal methods are used -even if as complementary part of mass appraisal, please answer questions given in Section C.

Section B - Questions for mass appraisal procedures in Ecuador, focus in Loja Municipality

Questions	Responses
1. Do you have a (computer aided) mass appraisal system in your country? If yes, please indicate also responsible authorities.	No
2. Is there any other use of the mass appraisal system than property taxation?	No
3. Which CAD/GIS/CAMA (Computer-aided design / Geographic information system / Computer Assisted Mass Appraisal) software packages are used in mass appraisal?	--
4. Which geographical or spatial datasets are used in mass appraisal? Please describe the source of these datasets.	Cadastral data base
5. Which geographic or spatial analysis methods (e.g. visibility analysis, proximity analysis) are applied in mass appraisal?	No
6. Is three-dimensional (3D) data used in mass appraisal? Please describe source of 3D data (e.g. floor plans). Does Valuation objects include condominium, strata title, freehold flats or other 3D units.	No
7. Is there any relationship between the CAMA system and other public registers (e.g. cadastre, land registry, building registry, …)?	No
8. Please describe the statistical models (e.g. additive, multiplicative) applied in mass appraisal according to type or functions of properties?	Additive
9. Please indicate statistical analysis methods (e.g. multiple regression analysis, artificial neural network) applied in mass appraisal?	--
10. Which land use characteristics (e.g. land use zones) are used as variables in mass appraisal models? Please describe the source(s) of these characteristics.	Land attitude, city zoning
11. Which environmental and locational characteristics (e.g. location nuisance, distance to points of interest / POIs, environmental risks) are used as variables in mass appraisal models? Please describe the source(s) of these characteristics.	Proximity (distance) to economic center
12. Which building or improvement characteristics (e.g. number of unit, construction type and material) are used as variables in mass appraisal models? Please describe the source(s) of these characteristics.	Building types, functional characteristics, data of the building, age, state, covered areas, bathrooms, amenities.
13. Does valuation legislation prescribe an investigation into the general quality or performance analysis (e.g. 'ratio study') of the mass appraisal system? If yes, please describe the indicators used in the performance analysis.	no
14. Please indicate whether single property appraisal is applied for improving accuracy of mass appraisal estimations.	None

Section C. Questions for single property valuation procedures in Ecuador, focus in Loja Municipality

Questions	Responses
1. Which valuation methods are used for single property appraisal for property taxation? Please relate valuation methods with the type of valuation objects (e.g. sales comparison approach for unimproved parcels).	The comparative market value, the capitalization of income and the replacement cost depreciated are used.
2. Which geographical or spatial datasets are used for single property appraisal? Please describe the source(s) of these datasets.	Relative location, land use planning, services, infrastructure. The source is mainly the local government.
3. Which legal property characteristics (e.g. property rights) are taken into account for single property appraisal? Please describe also the source of these characteristics.	Ownership information
4. Which land use characteristics (e.g. land use zones) are taken into account for single property appraisal? Please describe also the source(s) of these characteristics.	Land use zones, source Local Government
5. Which environmental and locational characteristics (e.g. location nuisance, distance to POIs, environmental risks) are taken into account for single property appraisal? Please describe the source(s) of these characteristics.	
6. Which building or improvement characteristics (e.g. number of unit, construction type and material) are taken into account for single property appraisal? Please describe the source(s) of these characteristics.	Number of rooms, materials, bathrooms, age, covered and semi-covered areas, floors, amenities, etc. The sources are the cadastral database of local governments
7. If there is a special valuation database, please indicate which sales comparison method related data (e.g. comparable property identifiers, monetary adjustment for time, physical differences) are kept in this database.	There is not a single database.
8. If there is a special valuation database, please indicate which cost method related data (e.g. type and source of cost price, chronological age, depreciations) are kept in this database.	There is not a single database.
9. If there is a special valuation database, please indicate which income valuation method related (e.g. gross income, net income, capitalization rate, discount rate) are kept in this database.	There is not a single database.

Section D. Information concerning respondent(s)

Questions of section A to C have been answered by	Respondent
1. Name	Fabián Reyes Bueno
2. Affiliation / position	Universidad Técnica Particular de Loja
3. Country	Ecuador
4. E-mail	frreyes@utpl.edu.ec
5. Comments	

Questions Z..A have been answered by	Respondent
1. Name	
2. Affiliation / position	
3. Country	
4. E-mail	
5. Comments	