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Part 5: Spatial plan information

Information géographique — Modèle du domaine de l'administration des terres (LADM) —

Partie 5: Informations sur le plan d'aménagement du territoire

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 211, *Geographic information/Geomatics*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 287, *Geographic Information*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This edition of ISO 19152-5, together with all other parts of the ISO 19152 series, cancels and replaces the first edition (ISO 19152:2012), which has been technically revised. This document is a new part to the ISO 19152 series.

A list of all parts in the ISO 19152 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Spatial planning plays an essential role in land management. Integration of physical and sectoral planning at the local level usually produces some degree of permissions, authorizations, restrictions, responsibilities, obligations and sanctions. Essentially, jurisdictions reserve the power to control activities over certain areas of land. They exert this power by providing agencies with powers that either restrict or sanction the rights of landowners or create positive obligations (responsibilities or obligations) on landowners. The same agencies can potentially have the power to empower landowners with rights that would otherwise be restricted or waive positive obligations. Where this occurs, a time-limited permit or authorization is commonly used. However, it is typical in many countries to establish land administration and spatial plan processes through different regulations, authorities and processes. Cities establish and maintain land administration systems (LAS) to manage information about the land and urban space. Information about land rights recorded in a land administration system (under its applicable legislation) can be required to inform spatial planning decisions. Legally binding planning conditions that create rights, responsibilities and restrictions under local or national planning legislation, which are not recorded in a land registration system, can be required for a full understanding of the permitted uses of a specific land parcel. Outputs of the planning system can anticipate changes in land rights that will be recorded in the land registration system in the future. The land administration domain model (LADM) offers guidelines to support interoperability in the representation of rights, restrictions and responsibilities (RRRs). The LADM is also capable of standardizing multi-dimensional representation, including the temporal aspects in documenting and visualizing all legal aspects of land use or space.

The purpose of this document is to provide the general reference model as an extension of core LADM (i.e. ISO 19152-1 and ISO 19152-2) for all objects of spatial planning covering land/water and below/on/above surfaces. This document supports a 4D (3D + time) representation of the spatial plans, including marine spatial plans.

The first goal of this document is to enable involved parties, both within one country and between different countries, to communicate based on the shared vocabulary implied by the model. It is not intended to replace existing systems but rather to provide a formal language for describing them so that their similarities and differences can be better understood.

The second goal is to provide an extensible basis for the development and refinement of efficient and effective LAS based on a model-driven architecture (MDA). This document is relevant for creating standardized information services in a national or international context, where land administration domain semantics have to be shared between organizations, regions, or countries in order to enable necessary translations. Three considerations during the design of the model were:

— that it will cover the common aspects shared by objects created by spatial plans;

— that it will be based on the conceptual framework of "Cadastre 2014" of the International Federation of Surveyors (FIG)[13], Plan4all[4][15] and Land Use/Cover data themes of INSPIRE[11];

— it will be as simple as possible in order to be useful in practice.

Conformance in relation to this document is given in Clause 4, and a conformance test is specified in Annex A. Clause 5 provides the notation. Clause 6 introduces the classes, attributes and associations of this document in detail. Clause 7 presents the relationships between the core LADM and this document. Annex B presents studies related to spatial plan interoperability. A set of country profiles is presented in Annex C. Annex D presents code lists as a basis to describe a flexible enumeration. The relationships between this document and INSPIRE are presented in Annex E. Examples of 3D spatial planning information and regulation are given in Annex F.