

# Land Administration Data to Support Development and Research

Miodrag Roić (Croatia)

**Key words:** Cadastre; e-Governance; Geoinformation/GI; land administration cyberinfrastructure, open data, open science

## SUMMARY

The Land Administration Infrastructure (LAI) is of strategic importance for society and economy. Due to historical development, LAI contains many diverse and heterogeneous sources of registers information. Society and economy requires collection, storage, sharing and analysis of large quantities of spatially and non-spatially referenced reliable data. LAI data currently presents a hurdle to commitment of user needs as the multitude of data models, formats, interfaces and reference systems in use results in incompatibilities. Planning and making of economically and environmentally sound decisions as a combination and management of official register data is needed.

The Development of Multipurpose Land Administration System (DEMLAS) project aims to discover what needs to be done to transform land administration systems from traditional to modern Multipurpose Land Administration Systems (MLAS) that support all land development activities. Exploitation of existing spatial information resources and services from various registers is needed for the realization of the goal.

The important point of the DEMLAS project was to create a platform on the cloud where Land Administration data is accessible for researchers. The platform offers the infrastructure needed for research on the integration of existing datasets related to lands and tenure. The platform allows data publication and data search which enables development of specific applications and services for the support of planning and policymaking. The project is addressed to researchers and students from Land Administration sector. Researchers have the possibility to experiment on real data, for the development of new applications and services.

The DEMLAS platform includes Land Administration data (cadastral maps etc.), public open data

such as land satellite images, historical data, nature data, development data, meteorological data, soil data, etc. Some of this data is obtained from official sources and has the character of private data. Contained within are also links to commercial data, mainly satellite images and orthophotos, but also market related data and voluntary data like OpenStreetMap. Integration of external land administration data is realized using principles of Open Linked Data.

The paper presents the development and functionalities of the platform DEMLAS. The open science principles were realized with the concept of user cases that were implemented as one component of the DEMLAS platform. The platform is offering a marketplace where data can be discovered and exchanged with the additional contribution of researchers who can publish their own data or applications based on the data, services and applications already provided by DEMLAS.