Best Practices of Cadastral Systems Using GIS

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SUMMARY

The use of GIS in the development and management of cadastral systems is a common practice. Globally, guiding principles (like IGIF and FELA), methods (like Fit for Purpose Land Administration) and standards (like LADM) are available for setting-up, maintaining, and developing land administration systems. This regards the systems of records, insight, and engagement using a geospatial database. National and local implementations should envisage to provide citizens access to tenure security and proper land management services, through formal or customary land registry and cadastral systems.

In this paper, insight is given how GIS can be used in cadastral system development and management. Based on evolving challenges and requirements, a range of solutions is given, allowing for scalable and sustainable cadastral support. The challenges are discussed (from security issues to capacity needs, form data quality assurance to IT capabilities) and examples are given. Also, standardization of processes versus customization of solutions is debated and experience with approaches to successful implementations are shown.

Given examples are taken from the different continents, focusing on the recording and mapping of cadastral data. This can range from systems for a first-time registration and data collection in the field to system modernization, including GeoAI and 3D requirements.

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