Towards Enhanced Evaluation and Comparison of Mature Cadastral Systems

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SUMMARY

A functional cadastral system is widely recognized as a key element of a land administration system capable of supporting economic, social, and ecological sustainability and welfare. Cadastral systems are unique and country-specific, but at the same time share many similar qualities and serve the same purpose of delivering trusted information of land related interests. Learning from the qualities and development stages and trajectories of other countries' cadastral systems is vital from the perspective of developing the current systems. However, to meaningfully describe and compare cadastral systems of different countries and their strengths and weaknesses, we need a shared conceptual language to support the analysis and discussion. So far, the literature has largely focused on defining the basic requirements a cadastral system has to fill to be considered a modern, developed cadastral system, or what can be called a mature cadastral system. Beyond these conditions, there is relatively little research on how mature cadastral systems should be evaluated and compared to find meaningful differences between different systems. Themes such as 3D land administration, advanced administration of rights, restrictions and responsibilities (RRRs), and the role of cadastral system in wider society, for example, are currently popular topics of discussion that should be reflected in how cadastral systems are evaluated. This paper aims to fill this gap and advance understanding of the key elements of mature cadastral systems, to allow a more meaningful comparison of different systems. To that end, we review the extant literature and propose a set of themes that should be considered when comparing mature cadastral systems. Nine relevant themes were identified that can be used to structure and assess the information contents and operational environments of mature cadastral systems. Themes range from the data contents of the systems and their interoperability with adjacent systems to business ecosystems and the data distribution mechanisms. The results indicate a wide variety of topics being relevant for the evaluation of mature cadastral systems and provide a good starting point for further development of a standardized method to describe and compare mature cadastral systems.