Assessing Technological Possibility Against Societal Need: Smart Sketch Maps for Fit-For-Purpose Land Administration

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SUMMARY

This research seeks to explore the potential of smart sketch maps (SSMs) for delivering fit-for-purpose land administration in Eastern Africa, especially by assessing if SSMs include the fit-for-purpose land administration elements according to different stakeholder perceptions. Whilst the use of sketch mapping itself is not new in land administration, SSMs technologies and processes allow for conversion of hand drawn sketch maps into topologically and spatially corrected maps. SSMs can provide qualitative spatial information in areas where conventional cartographic and geospatial knowledge is often limited. Including these maps in the land administration system not only adds to existing data about visible boundaries, but importantly introduces records of those less obvious socially or temporally constructed de facto boundaries that are significant in customary tenures.

SSMs can be seen as the next generation of hand drawn mapping that fully embraces the age of digital interoperability, automated processing, and fit-for-purpose land administration. Since recording certain land tenures is extremely difficult, if not impossible, using conventional technical requirements imposed by traditional GIS, SSMs may be the fundamental key in removing these barriers. This will be particularly beneficial for public-, private-, or grassroots mappers who cannot always adhere to those technical requirements. SSMs in land administration are proposed in the Horizon 2020 ‘its4land’ project. its4land commenced in 2016 and aims to develop innovative land tenure recording tools in Eastern Africa, being SSMs, UAVs, automated feature extraction, and geocloud services. All in order to deliver fit-for-purpose land recording services.

The focus of this research is on developing countries, specifically in Eastern Africa, that have the urgent need for innovative tools that support the continuum of land rights. The continuum of land rights is key in acknowledging different types of land tenure: it can support the road to ownership

and control over land by all people and sustain their livelihood and survival. In fit-for-purpose land administration, land administration systems are flexible and focus on citizens' needs, consequently informal tenure types have to be taken into account as well. Assessing fit-for-purpose land administration elements can be difficult, especially for a tool that is yet to be proven in pilot studies, let alone adopted. Therefore, perceptive input from different stakeholders from different backgrounds will be sought by applying the Q methodology.