

# Challenges in the Establishment of a National Cadastral Data Model for Kenya – Towards the Creation of a National Spatial Data Infrastructure (NSDI)

James OSUNDWA, Eric NYADIMO and David SIRIBA, Kenya

**Key words:** Cadastre 2014, Land Information System, Data Model, and NSDI

## SUMMARY

As the population in Kenya continues to rise above the 30 million mark, the demand for land and consequently information on land continues to rise immensely. The Geospatial community thus faces the phenomenal challenge of providing accurate and up-to-date Geo-Information, which is key to achieving good governance, and realising sustainable development in the country. The government in its current National Development Plan (2002-2008), is implementing an initiative for the establishment of a National Spatial Data Infrastructure (NSDI) for efficient management of geospatial data in the country. The NSDI initiative, which is mainly spearheaded by the Survey of Kenya, in collaboration with the Japan International Cooperation Agency (JICA). Three NSDI Workshops have since been held, drawing experts from UNECA (CODI), USGS, FGDC, GSDI and ESRI. Various working-groups have been created to handle, data standards, legal issues, education, and dissemination. Further, an inventorying of all geospatial data in the country is being carried out.

Efforts for the establishment of a NSDI for Kenya have mainly centred on the creation of data standards, and the collection of data. Little attention has been given to the development of a data model to support the management of the cadastral system. At the Brighton Congress in 1998, FIG – Commission 7 presented the “*Cadastre 2014 – A Vision for a Future Cadastral System*”. This document has been embraced as a benchmark against which to measure the development and reform of cadastral systems. Environmental Systems Research Institute (ESRI) in conjunction with FIG have since developed a National Cadastre Data Model based on Cadastre 2014. This GIS data model leverages best practices, cadastral data models and standards from around the world, and provides a solid template for cadastral agencies to utilize both now and into the future.

The argument in this paper is that the creation of the NSDI must go hand-in-hand with much-needed ICT-driven cadastral reforms. This paper seeks to address the possibility of developing a National Cadastral Data Model, based on the Cadastre 2014 model, as the country's data management needs push towards data modelling, as opposed to data creation.