

# **Multi-Purpose Cadastre Based on FIG Cadastre 2014 and ARCGIS**

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## **SUMMARY**

A Geographic information system (GIS) based Multi-Purpose National Cadastre plays an important role in planning for sustainable development. Planning and implementation of complex development goals require spatial analysis and map creation capabilities; and data for these efforts is often in a variety of formats (maps, databases, spreadsheets, images, and so forth) from multiple agencies and multiple sources

Geographic information system (GIS) software uses geography and computer-generated maps as an interface for integrating and accessing geographic data. GIS allows the integration of this data for planning and implementation purposes. Analysis of geographic features with a GIS allows the user to view new patterns, trends, and relationships that were not clearly evident without visualization of the data. The ability of GIS to access and process information quickly while displaying it in a spatial and visual medium allows organizations to improve decision-making and promote better organizational integration and knowledge management. Geographic Information Systems are currently being utilized to analyze information, track trends and plan sustainable development in a coordinated and efficient manner. An accurate National Cadastre is one of the key components that allows for such planning activities.

Environmental Systems Research Institute (ESRI) in conjunction with International Federation of Surveyors (FIG) have developed a National Cadastre Data Model based on the FIG 2014 initiative to support management of Cadastral Systems for the future. This GIS data model is based on the ideas of the Cadastre 2014 project from FIG and leverages best practices, cadastral data models and standards from around the world. The goal of this model is to provide a solid template for cadastral agencies to utilize both now and into the future.

In early 2003, ESRI developed and posted a draft of this data model on the WEB, asking cadastral agencies to share their professional input. This project will continue to evolve and professional input will be funneled into future versions of the model. ESRI expects to have an updated version of this data model ready for distribution in late 2003 or early 2004.

ESRI's continued work with FIG in the development of a National Cadastre Data Model will help to insure that accurate cadastral data and tools are available to analyze current development trends and plan sustainable development in the future.

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