

Usage of Geospatial Technologies in Census for producing statistics

Eng. Mohamed Ali bin Futais Al Marri

Director, Information Technology

Statistics Centre Abu Dhabi (SCAD), Abu Dhabi, United Arab Emirates maalmerri@scad.ae

Population censuses rely on geospatial technology . This is particularly true in the case of the Abu Dhabi emirate where census projects are conducted every five years., In the 2005 Census the role of geospatial technology in Census 2005 was limited to collecting geo-coordinates using GPS for buildings and other establishments. In keeping with the its aim to continuously strive for accuracy and consistency in collecting, processing, storing and disseminating official statistics, Statistics Centre Abu Dhabi (SCAD) has made significant investment in geospatial technology in the Census 2011 project. This presentation_ will demonstrate the use of advanced IT and Geographical Information Systems (GIS) technologies in the Abu Dhabi Census 2011 across multiple business processes. Decision making processes during the design and planning of the field work including Enumeration Area (EA) design, EA selection, determining and creation of working areas etc. required efficient use of GIS. Field data collection processed was improvised using GIS and also covered spatial data maintenance/updation system. Spatial and Non-spatial data were collected from “custodian” owners using web services through active involvement of Abu Dhabi Systems and Information Centre (ADSIC) instead of reproducing and duplicating the data within SCAD. More non-spatial data were made spatially enabled through effective use of GIS technologies. As part of Census 2011, SCAD has generated polygon based spatially enabled statistics along with developing a comprehensive geo-coded building register. Using this register, SCAD is now in a position to develop and produce different types of spatial statistics like road sector/grid/polygon based statistics. Such spatial statistics can provide more insight and detailed information for the end user. GIS is also being expanded to assist SCAD in geostatistical analysis processes.

Key Words: Statistics Centre Abu Dhabi, geostatistical analysis, GIS, spatially enabled