USING GEOSPATIAL TECHNOLOGIES TO SUPPORT COMPULSORY LAND ACQUISITION IN KENYA

A CASE STUDY OF KANUNGA – NYAGA ROAD IN KIAMBU COUNTY

MARY NJERI KAMUNYU

MASTER OF SCIENCE
(GEOSPATIAL INFORMATION SCIENCE AND REMOTE SENSING)

DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY

2015

DECLARATION

This Research Project is my original work and has not been presented for a degree in any other university.

Signature: _____ Date: 21/01/2015

Mary Njeri Kamunyu

This Research Project has been submitted for examination with our approval as the university supervisors.

Signature:..... Date: 21/1/2015

Dr David Kuria

DeKUT, Kenya

Signature:..... Date: 28/1/2015

Dr Kenneth Mubea

DeKUT, Kenya

ABSTRACT

Governments have power to compulsorily acquire land or other interest in land for a public purpose subject to prompt payment of the compensation to the affected persons. The process of land acquisition involves several government departments which have different mandates depending with the purpose of the acquisition. In several instances departments involved have been seen to be disjointed hence causing gaps and unfinished work in the whole process.

In a number of occasions the government has acquired land yet delayed occupation of the same, the case study in this research being an example. This has resulted to encroachment of the already acquired land either knowingly or unknowingly by the same people who were compensated or new entrants who have purchased land after the compensation has been done, sometimes unaware of the state of the land.

There have been failures in updating of documents and maps with the acquired data hence causing great losses where developments have been demolished especially where land has already been acquired for road construction. Ownership documents, the title deeds, have failed to have the acquired acreage deducted and the maps/plans with the National Mapping Agency fail to be updated.

The objective of this research is to identify with the use of GIS how much land is yet to be surrendered to the Government by the compensated land owners in the study area and recommend measures to stem this failure to take possession.

This research explores the use of GIS in the process of land acquisition, bringing together all the information in all the departments involved for a one-stop-shop. To achieve this, the Registry Index Maps (RIMs) from the Ministry of Lands, Survey Department, and the road layout from the Roads Department were overlaid, after being converted to the same coordinate system (Universal Transverse Mercator, UTM). The parcels were then identified which are yet to surrender the acquired acreage. Additionally, copies of the Kenya Gazette for the Notices of intention to acquire and the Notices of inquiry were obtained from the National Archives and they helped confirm parcels affected by the acquisition.

In this research the parcel number and the acreage were the attributes used where by the acquired acreage was extracted after the overlay of the parcels layer and the layer for the

acquired road. A total of 1921 parcels were digitized which were identified to lie along and close to the acquired road. After the overlay 643 parcels were identified as being affected by the acquired road and only fifty parcels out of the 643 were appearing on the RIMs as having been excised.

Subsequent sub-divisions have been done on most parcels that were affected by the acquired road which makes it difficult to compare the list of parcels in the Kenya Gazette and the list obtained from the overlay as the RIMs used include the sub-divisions. The Kenya Gazette listed 338 parcels.

In Ting'ang'a, only twenty one parcels out of eighty four listed in the Kenya Gazette were identified as still intact in the list generated from the overlay. This was seen to be as a result of subsequent sub-divisions.

In conclusion The National Land Commission should undertake its mandate as empowered by the Land Act 2012 and ensure that the Land Acquisition process once started should end successfully by ensuring the intended purpose is accomplished.

With GIS a list of all affected parcels together with the relevant attributes can be extracted and forwarded to the relevant departments as seen necessary. This will enhance transparency in operations where there are overlapping mandates and highlight gaps in the whole acquisition process.

Keywords: *Land acquisition, GIS, Land compensation, Registry Index Maps*