

Application of Unmanned Aerial Vehicles in Improving Land Registration in Kenya

Robert Wayumba^{1*}, Patricia Mwangi², Patrick Chege³

^{1*}School of Surveying and Geospatial Sciences/ Technical University of Kenya,² (Department of Spatial Planning and Urban Management/Kenyatta University, Kenya)

³(ESRI Eastern Africa, Kenya)

ABSTRACT:

This paper explains why and how Unmanned Aerial vehicles (UAVs), also known as drones, can be used to improve land registration in Kenya. According to a World Bank report that was released in 2003, only about ten percent of land in Sub-Sahara Africa has been formally registered. A more optimistic figure for developing countries in the whole World was released in 2013, which shows that only about thirty percent of land is registered. Thus, a majority of the people are unable to gain from the benefits of registration. An effective land registration system can contribute towards improving: tenure security, real estate markets, access to credit, taxation, dispute resolutions and urban planning among others. A key requirement for improving the extent of registration is to map property boundaries. A means of rapidly mapping the boundaries is to use UAVs. However, it is not clear how UAVs can be used in a county like Kenya.

This paper employs case study methodology to explain why and how the UAVs can be used in Kenya. The results section explains different types of UAVs that may be used, legal regulations for using the UAVs and techniques that are required for land registration.

The hope of this paper is that it might contribute towards the use of UAVs for improving land registration not only in Kenya but also in other developing countries.

Keywords: Unmanned Aerial Vehicles, Land Registration, Kenya

International Journal of Research in Engineering and Science (IJRES) Vol. 5 pp 5-11 (2017).

See more at: <http://www.ijres.org/papers/Volume%205/Vol5-Iss5/Version-2/B5520511.pdf>