



Capitalizing on the Digital Dividend to Secure Land Rights in Kenya

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Introduction



- * Kenya's land information system largely manual
fraught with human errors & providing opportunities
for corruption complicating land transactions
 - * Manual LIS can be unreliable & inaccessible
 - * Missing files, incomplete land information, difficulties in
accessing land records
 - * Multiple titling exacerbating land disputes
 - * Insecure land rights
- * Ministry responsible for land has an ongoing process of
digitizing land records



Introduction - 2



- * Need for greater automation of land information thro' increased use of & diversification technology
- * Kenya can capitalize on newer technologies in use in the country
- * Spectrum set free by digital migration in 2015 can be leveraged
- * We suggest the employment of GPS enabled UAVs such as drones technology in mapping land rights holding and land use
 - * Eliminate inaccuracies associated with the current processes & opportunities for tampering



The Case

- * Kenya is among the countries that are most developed in ICT use and application in Africa & referred to as Silicone Savannah
 - * Access to & use of mobile phones
 - * Use of mobile money platforms increasing banked people
 - * HUDUMA centres to facilitate public service delivery
 - * Technological incubation hubs & proliferation of innovators
 - * Ushahidi a geo-mapping software developed to locate areas of violence during the 2007/2008 post-election violence used to create over 60, 000 maps in 159 countries to relay information on HR abuses & map humanitarian crises
 - * Optic fibre cable laid out
 - * Use of electromagnetic waves to enhance security in collaboration with the major mobile telephone



The Case- 2

- * UAVs such as drones – unmanned and remotely controlled aircraft or which may fly on space through a software-embedded flight path with the help of GPS technology can greatly improve LIM
- * The Ministry for Lands can apply for spectrum to deploy GPS enabled UAVs to collect and collate land data
- * Drones have been previously employed in Kenya for security & recreational activities like photography
 - * There is demand for UAV use to fight poaching and map areas that need relief food



The Case- 3



- * While UAVs use poses challenges such as security & infringement on privacy, the government can put in place regulations to guide their usage as other countries have done
- * The regulations have already been developed & should be finalised



ICT Use in Land Sector



- * MOLPP already working on an updated, easily accessible and reliable NLIMS & various registries - Kisumu, Meru, Mombasa, Kwale, Kilifi, Eldoret, Bungoma, Kiambu, Thika and the Central Registry in Nairobi
- * Activities carried out include:
 - * Digitising land paper records in various registries across the country
 - * Establishing the Kenya National Spatial Data Infrastructure to guide physical development activities
 - * Reviewing and re-engineering of procedures & processes relating to land data
 - * Capturing land rent data
 - * Reviewing the Land Rent Information System & modernising the national Geodetic Framework



ICT Use in Land Sector -2



- * Operationalized the Electronic Records Management System (ERMS) & up-scaled the digital access systems
- * Made land registries to make them easily accessible to the public and to facilitate easy storage and retrieval of land records.
- * ICT is already being employed in land sector in Kenya for digitisation of land records, mapping and survey
- * We propose deepening of ICT use by deploying newer technologies
 - * Mapping & survey present a good opportunity where UAV technology may be employed in facilitating quicker and more reliable surveying and mapping of land rights.
 - * Creation of integrated survey plans & cadastre maps in a single and common referencing framework eliminating disputes & inconsistencies in the interpretation



ICT Use in Land Sector - 3



- * The Kenya National Spatial Data Infrastructure (KNSDI) which encompasses all standards, policies and institutional arrangements that are necessary for the delivery of spatial information from various sources to potential users can be greatly enhanced by using faster technologies
 - * UAVs can enhance spatial data discovery, download, evaluation & application by various users
- * There is also potential to use technology in land valuation and taxation, land use planning and management, and in the sustainable management of fragile lands



Legal & Policy Framework



- * CoK provides for the right to access information held by the State and other persons especially where it is required for the enforcement of one's fundamental rights and freedoms
 - * To implement this constitutional provision, Kenya enacted the Access to Information Act, No. 31 of 2016, further reinforces the provisions of the Constitution and provides for the mechanisms of implementation of this right
- * The guiding principles governing land in Article 60 of the Constitution include secure land rights & indirectly impose duty on state entities to ensure that they have proper and reliable records to avert fraud



Legal & Policy Framework -2



- * Perpetuation of fraud in land matters and failure to relay reliable land information in good time is a curtailment of the constitutional right to secure land tenure
- * The Land Registration Act 2012 also provides anchor
 - * S. 7(2) - registrar of each Land Registry around the country shall make information relating to land parcels accessible to any person, upon paying the prescribed fee
 - * S. 9 - the Land Registrar shall maintain the register and any document in a secure, reliable and accessible format including electronic files
 - * S. 10 -subject to the right to access information under the Constitution, the Registrar shall make information accessible to the public by electronic means or other means as prescribed by the Chief Land Registrar



Legal & Policy Framework -3



- * These statutory provisions mandate state agencies to put in place mechanisms such as electronic and computerised systems to facilitate the relaying of updated records and enhance accessibility to the public
- * On the ICT regulatory front Kenya has an ICT Authority implementing:
 - * The National Broadband Strategy
 - * The draft National Spectrum policy
 - * The National ICT Master plan for the years 2013-2017 and brought all these under the governance of the.
- * These are enablers for deployment of UAVs



Legal & Policy Framework -4



- * Notably the Broadband Strategy identifies the digitization of land registries and the development of the National Spatial Data Infrastructure, as focus areas for implementation
- * The Kenya Information and Communications Act 2013 provides for the establishment of the Communications Authority of Kenya (CA) as the regulatory agency concerned with licensing and regulation
- * For UAVs technology to be employed, the Ministry of Lands and Physical Planning should apply to the CA for spectrum allocation to capture data accurately



Legal & Policy Framework -5



- * Bearing in mind that digitization and computerization of records and land reforms generally can be thwarted by interested parties and cartels, measures should be taken to ensure integrity of data
 - * In this regard, we urge fast tracking & enactment of the Cybercrime Bill & the Data Protection Bill to ensure the maintenance of the integrity of data
- * Deepening use of technology in the land sector should be up-scaled to a flagship project under Vision 2030
 - * Secure land rights are quintessential to sustainable economic development



It Has Been Done Elsewhere



- * Tanzania has deployed GPS-enabled drone technology for geospatial mapping
 - * To gather information of a highly detailed form, on the floodplains enabling it to forecast and plan for how water will move in the event of floods
 - * Delineating the actual boundaries of land to eliminate insecurity of tenure
 - * To properly demarcate land boundaries -averting clashes among and between farmers
- * Drone technologies generate high-resolution images to identify & digitise the boundaries of any contested land
- * Drone technology facilitates quick mapping, reliability and is less costly



It Has Been Done Elsewhere - 2



- * The Philippines has also applied drone technology in mapping land for purposes of surveying and titling
- * Country has around 24 million parcels of land of which only about half are surveyed and titled
 - * High costs associated with surveying land
 - * This situation of untitled land means that there is no security of tenure presenting a handicap to economic growth and poverty eradication
- * Use of drones cost effective and faster; effective in densely populated and crowded areas
- * Other Countries: Peru; Rwanda



Conclusion



- * UAVs have potential to enhance spatial data acquisition, land mapping, surveying & supply of emergency medical services
 - * UAV mapping gives more accurate data, reduces time & costs
- * Use of UAVs way to shedding the antiquated manual LIS & resolving the problems of unclear land holding that is inimical to tenure security
 - * Provision of reliable land information facilitates proper planning, data integrity
- * Need to take stock of the societal context within which this drone technology will be undertaken and sensitize public to enhance their acceptability



Conclusion - 2



- * Digitization of existing land records is important should continue but there is need to diversify nature & type of technologies used
- * KCAA should finalise regulations and rules for the use of drones to enable their deployment in LIS
 - * Need for capacity building beyond traditional survey disciplines and use of multidisciplinary approaches
- * MOLPP should apply for allocation of spectrum to enable it deploy UAV technology effectively
- * Need for a regulatory framework to address concerns about UAVs



THE END

Thank you!