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The Institute of Finance Management

Proceedings of ICT4D Workshops 2010

The Role of ICT on Land Management: Issues and Experiences in Tanzania

19th August, 2011

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1. Introduction

Land management is one of crucial social-economic development issues. Effective land management helps communities and government organs to plan and enjoy the benefits of this land. However, land management, especially in developing countries, is not an easy task. This is because of the complexity involved in land issues in developing countries. However, ICT has the potential to facilitate land management processes and activities. Accordingly, the Center for ICT Research and Innovations, at The Institute of Finance Management, organized a workshop to discuss and advise on the role of ICT in land Management. The workshop was facilitated by Ms. Odetha Nyarubani. Ms. Odetha is the Deputy Director in the ICT unit of the Ministry of Land, Housing and Human Settlement Development. Ms. Odetha, provided progress, experience, and issues related to ICT and land management from her the Ministry of Land, Housing and Human Settlement Development (MoLHHSD). MoLHHSD is the key ministry responsible for land management in Tanzania. The Workshop was hosted by the Tanzania Global Development Learning Center (TGDLC).

2. Drivers of the utilization of ICT on Land Management

Several issues prompted MoLHHSD to utilize ICT in its business activities. The issues include:

- The increase of the population in Tanzania, accentuated the number of people in need of services from the ministry.
- Increased complaints on land related information due to:-
  o Loss/misplacement of important documents
  o Document forgery
  o Inefficiency in service delivery such as issuance of Title deeds, handling of different transactions in land etc
  o Double allocation of plots

- Inefficient storage of Land Records
- Poor collection of Land Rent due to inefficient records management
- The advent of the Public Sector Reform Program 2000-2011),

Accordingly, the ministry had taken various initiatives to include ICT as one of the key facilitators towards enhances land management in Tanzania. Some of the initiatives include:

1. Establishment of the Land Information System (LIS) section in 1992. The section was aimed at identifying user requirements and propose was of utilizing ICT solutions in meeting the requirements. One of the first outcomes of the unit was the installation of Local Area Network (LAN) in the Ministry for establishing internal communication and data sharing.

2. Establishment of Management Information Systems (MIS) unit in 2001. The unit was established by the Government as an implementation of one of the components in the PSRP (2000-2011). Among the mandates of the unit was to continue with the activities that were started by LIS section.

3. Currently the ministry has implemented the following:
    a. Structured Local Area Network with about 550 ports connecting all offices.
    b. Dedicated Internet bandwidth 1024/1024 kbps uplink and downlink and a dedicated Data Bandwidth of 128/128 kbps for Dar Es Salaam Municipal land offices and Dodoma offices.
    c. Developed the Ministry's ICT operational policy and guidelines (2008).
    d. ICT strategy is in the final stages
    e. Ministry of Lands Information System(MOLIS)
    f. Facility Management Tool using GIS(GiFMT)
    g. Survey Registration System(SRS)
    h. File Tracking (in Lands Administration Dept.)
    i. Cadastral Surveys Program (CADPRO)
    j. Certificate of Customary Right of Occupancy (CCRO).
    k. Land Rent Management System(LRMS)
    l. Complaints Management System(CMT)

The ministry observes that there are several issues that challenge the utilization of ICT for land management in Tanzania. The issues can be divided into 1) technical, 2) economical, and institutional.

2.1. Technical issues:

Technical issues relate to issues such as lack of policies and legal frameworks. For instance, currently there is no policy or legal instruments that directly address Spatial Data Infrastructure development needs.

2.2. Economical issues

Investment in ICT is a necessity condition towards proper management of land. However, initial capital outlay for ICT investment is high. For instance, Local Authorities in Tanzania is where most of the land information originates. However the authorities lack sufficient funds to deploy adequate ICT infrastructure to manage their land data in an efficient way.

2.3. Institutional Issues

The readiness to accepting the technological changes from users into the governing laws is still problematic. For instance, the digital signature is yet to be accepted in authorizing land documents such as certificate of title, maps. It is also the case for issuance of digitally produced payment receipts for different transactions in the land sector. This is the case regardless of the Amendment of the evidence Act, Part IX (written laws – Miscellaneous Amendments, 2007) where digital information can be submitted as evidence

2.4. Other issues

Other issues that challenge ICT utilization for land management are:
1. Administrative set up between Central Government and Local Government makes it difficult to implement a task which is under two different administrative authorities
2. Corruption altitudes contribute to resistance to using ICT
3. Lack of training in Geo- ICT skills in most in higher learning institutions in Tanzania
4. limited number of local government authorities keep their data using computer systems

3. Participants observations

1. The government could learn from the experiences of other countries. For instance, in Finland the government implemented a policy and involved various stakeholders in the creation of standards. Additionally, utilization of resources such as Global Spatial Data Infrastructure (GSDI) could help the Government of Tanzania to increase the pace of implementing ICT for land management. A typical example is the utilization of the cook book from GSDI.

2. The Ministry could start by setting up a department or a unit which will dedicate is efforts toward creating policy, standards and strategies.

3. It is important to champion the development of policies and standards. This will help the ministry and Tanzania in general to avoid mistakes as it is difficult to backtrack during computerisation.

4. The ministry should commercialize its services and products. Currently, there are a good number of products that the ministry could sell to the public. However, since the Ministry is not a commercial organisation, a third party company can work with the Ministry to bring the much needed services closer to people and at the same time create some revenues. The Public-Private Partnership mode could be useful for this purpose.

5. It was also warned that computerising alone will not solve the major problems. New systems should be designed to serve the public, and address issues that customers want. Starting with the small services and application solving issues like payments whilst adopting and evolving into a bigger system could be a useful approach. Simple solutions such as text-based mobile file tracking system and mobile payment system (m-pesa/z-pesa) were proposed.

6. GIS system should be introduced to colleges in order to produce graduates with the understanding of Land Management systems.

7. The Ministry was also advised to set up a R&D unit to deal with research and innovations which focus on ICT solutions and related issues. Such a unit can serve as ministries eye on solutions and products that can benefit Tanzanians.

8. Participants pointed out the importance of having time tabled plan to achieve targets in order to have a chance of reaching the 2014 targets.

4. Participants

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