

The Role of Spatial Data and Infrastructure in an Information Society: Conflicts and Implications for Zanzibar

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Key words: Spatial Information Management (SIM), SMOLE

SUMMARY

The case is made that Spatial Information Management (SIM) is highly relevant to developed as well as developing countries in terms of the working and living environment. However, information technology (IT) development and spatial management in least developed regions such as Africa and in particular Zanzibar¹, has thus far been mainly connected to donor support initiatives. While local planners and administrators fully realise the value that SIM can bring to planning, they have remained committed to the existing traditional methods due to limitations such as manpower, lack of funds to buy and maintain new technology, and existing levels of local expertise. The question arises to what extent Zanzibar can adopt modern SIM systems considering its current realities and needs, and the current paper discusses obstacles that need to be overcome for this to happen.

The paper shows that in Zanzibar spatial data management has been deployed in a few institutions such as those dealing with lands, environmental management, communication and surveying, however only at minimal scale. For example, the Department of Surveys and Urban Planning is struggling to establish a land information system and computer aided cadastre, the Department of Land and Registration wants to develop a digital land registration system and the Stone Town Conservation and Development Authority has made a start to the Housing database for historical sites and houses. The local communities and higher economic levels in the private sector are less concerned with such matters due to the social and economical situation of the country.

Fortunately there is growing impetus throughout Africa to employ SIM for planning purposes and development in general. The Second Meeting of the Sub-committee on Geo-Information was held in Addis Ababa, Ethiopia, from 3rd to 7th September 2001, and one of the topics discussed was the development of Spatial Infrastructure Networking System for the entire sub-Saharan Africa. The meeting addressed the future orientation of spatial data systems in Africa, practical aspects of their application and future implications they may have. The major challenges identified were:

¹ Zanzibar is an island state that is part of the United Republic of Tanzania. It is an archipelago consisting of the two major islands, Unguja and Pemba and several smaller ones.

- Lack of policy and awareness
- Lack of updated standardised data sets
- Poor telecommunication and utility infrastructure
- Lack of qualified human and financial resources
- Lack of capital investment for running cost for soft ware and hardware maintenance

Against the background of the 2001 meeting, this paper discusses the evolution of spatial management practices in Zanzibar from different land related and environmental institutions. It shows that, in spite of numerous attempts to create spatial information systems, many of them praiseworthy in terms of the dedication that went into them, there still does not exist one that is fully operational or fulfilling the needs for which it was created, or is being created. The picture that emerges is one of fragmentation and lack of coordination, if not a waste of effort and ultimately funding. The reasons for the achievements and problems thus far encountered are discussed and the need for policy driving IT development is highlighted. Practical examples of the Zanzibar experience are examined with the aim of making specific recommendations for Zanzibar in context of the prevailing local environment. Finally, a practical solution is proposed that can have far reaching implications for IT development in general and SIM in particular.

The paper is divided into five parts. Part one introduces and provides background to the islands that make up Zanzibar. Part two discusses the on-going practice of spatial information management in Zanzibar. Part three discusses IT Policy which is under development and possible implications of such a policy. The author's main observations are discussed in part four, while part five will provide the conclusions and recommendations for this paper.