

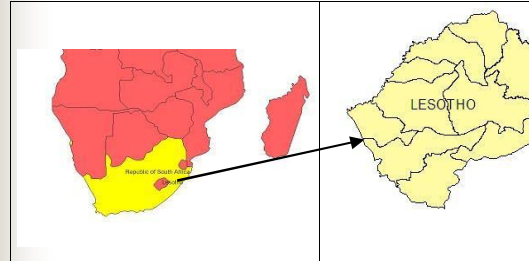
Spatial Data Infrastructure Development in Lesotho: Overcoming Obstacles

Paper to be presented to the International Federation of Surveyors and the 8th Global Spatial Data Infrastructure Conference – Cairo, Egypt 16 – 21 April 2005

By

Lehlohonolo Moeti (Ph.D.)

National Orientation



Objectives

- Document historical development of SDI in Lesotho
- Impress upon policy makers the need for establishment of NSDI

Introduction

■ Defining NSDI

- the technology, policies, criteria, standards and people necessary to promote geo-spatial data sharing throughout all levels of government, the private and non-profit sectors, and academia. It provides a base or structure of practices and relationships among data producers and users that facilitate data sharing and use. It is a set of actions and new ways of accessing, sharing and using geographic data that enables far more comprehensive analysis of data to help decision-makers choose the best course(s) of action (Kunda and Musonda, 2002:13).

Introduction Cont.

- The need for geo/spatial information
 - Development planning
- Geographically referenced information pertinent:
- natural resources
 - social and economic conditions
 - policies and institutions
- Manipulation through a GIS → solutions to complex problems

Introduction Cont.

■ Why NSDI?

Accessibility of data about the following:

- environment and natural resource base
- existing and planned local infrastructure and relevant social conditions
- avoidance of data duplication
- maintenance of data standards

Building Spatial Data Infrastructure



Building Spatial Data Infrastructure



Spatial Information Problems in Lesotho

- Inaccessibility of for example resource inventories:
 - Land Resources of Lesotho by Carroll and Bawden 1968
 - Reports on water, geology and soil resources by Binnie and Partners 1971
 - Ground water resources by Bonney 1974 and 1975
 - Lesotho soils by Carroll et al. 1979

Spatial Data Policy Initiative in Lesotho

- Began in late 80's and resulted in NRSCC in early 90's
- Involved Ministry of Agriculture, NUL and LHDA
- Primary objective:
 - Remote sensing data sharing (aerial photographs and satellite imagery)
- Lesotho Society for Geographic Information Systems (LSGIS) 1992
- LSGIS became moribund in 1995

Spatial Data Policy Initiative in Lesotho Cont.

- Committee on Environmental Data Management (CEDAMA) formed in late 90's under coordination of NES
- Membership from various environmental units, government, private and parastatals
- Pursued and broadened LESGIS objectives:
 - To promote a culture of environmental data exchange
 - To advise NES on issues of environmental database management
 - To advise NES on issues related to data quality standards
 - To advise NES on the formulation of relevant policies

Proposed National Data Access & Exchange Guidelines

- Major challenge for development is access to information (environmental/spatial)
- Largely government departments and other institutions have no data exchange policies or guidelines
- Particularly serious with government departments whose mandate is to produce information for civilian consumption
- NES in conjunction with CEDAMA facilitated the production of National Data Access & Exchange Guidelines
- Guidelines are yet to be adopted

Proposed National Data Access & Exchange Guidelines

- Guidelines emphasize the need for metadata
- Cost recovery approach – Free data access
- Exercise on establishment of metadata has not been successful
- Despite efforts by CEDAMA there has been no progress in SDI development until recently
- Lack of involvement of decision-makers (Ministerial and Principal Secretary level)
- Although a member of CEDAMA, LSPP has not taken initiative to champion NSDI in Lesotho

Capacity Building in EIS/GIS

- Capacity Building through SADC-SETES and EIS Program- institutional capacity building
- Dept of Geography benefited from the training in other SADC countries (Zimbabwe and Namibia)
- National training hosted in 2002



Capacity Building in SDI

- Capacity building in Metadata and Clearinghouse development was significant in NSDI development in Lesotho in 2004 - EIS Africa and SADC- RRSU



Breakthrough for development of NSDI

- Interaction of CEDAMA with World Bank mission on ITP in 2003
- 2004 Decision made to present a motivation paper for SDI before Parliament
- Report of mission in 2004 addressed the ignorance of Government ministers and PS's concerning the value of SDI in facilitating development
- Development of SDI embraced by Government – PS Ministry of Finance and Development Planning mandated to coordinate the establishment of NSDI
- A call for tender to carry baseline study for NSDI

Conclusion

- Environmental and Spatial data exchange currently informal – major constraint to data access (e.g. SER 2002)
- Need to inculcate culture of data sharing
- Need to draw on board management of departments and institutions to endorse proposed guidelines
- A need for Government Department to give direction to SDI development
- Involvement of qualified professionals
- NSDI should be viewed in national context
- Need to formulate Spatial Data Policy and eventually an Act or incorporate into Information Bill