

## Country Report on Environmental Statistics- Lesotho

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### 1 SITUATION

*“Governments at the appropriate level, and with the support of the relevant international and regional organisations, should promote information exchange and cooperation with respect to national planning and programming among affected countries, inter alia through networking.”* Agenda 21 chapter 12 paragraph 12.38.

A number of reports on Lesotho have varying views regarding the availability of data in the country. Some claim that the country is over studied and as such a lot of data are available. Others argue that there are data gaps or where data exist, they are often outdated or not accessible. The State of Environment reports for 1997 and 2002 in particular had identified data gaps as one of the problems that made it impossible for one to determine trends in the state of environment, and more importantly, projecting future scenarios. All in all lack of data has a serious impact on policy-making processes in the country. This is contrary to the spirit of Agenda 21, multilateral agreements and indeed various government policies that are currently in place e.g., Environment Policy of 1998; Biodiversity Conservation Strategy of 2000; National Action Plan to Combat Desertification of 1998, etc.

As a response to the problems relating to data management (storage, exchange, standards etc.), the Committee on Environmental Data Management (CEDAMA) was established in February 1999. The main objective of this committee is to coordinate environmental data management activities in the country. Specific objectives include among others to: promote a culture of environmental data exchange; advise National Environment Secretariat (NES) on issues of environmental data management; establish data quality standards; advise NES in the formulation of relevant policies on management of data; advise NES on measurable environmental quality indicators for different sectors of the economy; and to assist with the analysis of trends in environmental quality indicators, and recommend mitigation measures.

Its membership has been drawn from diverse backgrounds e.g. government, parastatals, private sector and NGOs. The Committee is chaired by the Bureau of Statistics as the custodian of statistical data while Lands, Surveys and Physical Planning (LSPP) Department is the Deputy Chair as the custodian of national spatial data, and NES is the secretary.

## **2 CHALLENGES FOR ENVIRONMENTAL STATISTICS**

The main challenge in the country is exchange of data. At the moment there is no clear policy or legal framework on data exchange, therefore institutions do not feel mandated to disseminate their data sets. This poses a problem for updating of the metadata base hosted by NES. It also affects state of environment reporting processes and any other assessments that are carried out to try and improve people's livelihoods.

The Committee on Environmental Data Management produced draft data exchange guidelines in 2000 in a bid to address the issues of poor data exchange among producers and users of data and information. These guidelines will be incorporated in the envisaged national spatial data infrastructure (NSDI).

Another major challenge is data collection. A common method for the collection of environmental statistics is to identify and compile the existing environmental data, within and outside the statistical institution. This is done in an ad-hoc manner for most indicators, therefore will depend on the scope and timing of the specific project funding the collection. This applies also to data collected from administrative registers, which does not always merge with data from surveys. This means there are data gaps both in time and coverage, where some indicators might be updated while others are not.

Dissemination of the available data and information is not always in a timely manner and in the products that users can use.

## **3 FUTURE PLANS**

Lesotho being a developing country relies heavily on natural resources for the survival of its people, and those resources are found on the surface of the earth thus they are spatial in distribution. The management of different types of natural resources requires data relating to their quantities, distribution, ownership, etc. Spatial data infrastructure (SDI) would definitely facilitate various aspects of management including access to resources.

The Ministry of Finance and Development Planning (MoFDP) was mandated to facilitate establishment of NSDI in 2004. In a bid to implement this mandate, an assessment was carried out on the status of spatial data in the country. This assessment built on the AEIN assessment report. However, through lack of capacity in the ministry, it was transferred to the Ministry of Public Works and Transport (MoPWT), as they already had a project (Integrated Transport Program) focusing on spatial data and NSDI was one of its outputs.

Various products will be produced from the existing data for dissemination to users.

#### **4 COOPERATION BETWEEN INSTITUTIONS**

The National Strategy for Development of Statistics (NSDS) is already being developed in Lesotho. This will act as the main framework for developing statistical capacity among line ministries to enhance coordination of activities related to statistical methods of data collection, analysis and dissemination. This coordination will also reduce duplication of data collection activities.

Another mechanism for cooperation is through the Africa Environment Information Network (AEIN) initiative, which aims at ensuring availability of data in countries for environmental assessments. Through this network, the country has managed to compile data and produce Maseru City Environment Outlook report.

#### **5 DATA SOURCES AND METHODOLOGIES FOR DATA COLLECTION**

In many countries, systematic collection of environment data has a short history; sources are in most cases to be found outside the statistical bureau and are typically spread across a range of agencies and levels of government, and information is often collected for other purposes.

An important source is normally the governmental body responsible for the environment, which in Lesotho is the National Environmental Secretariat (NES). As the overall coordinating body on environmental activities, the NES has a mandate to monitor compliance of activities that could have an impact on the environment. The data gathered by NES could be used for statistical purposes. Therefore a close collaboration is essential.

Bureau of Statistics (BoS) has a lot of data that is important for environmental statistics. This information is particularly useful regarding background variables but some variables contain pure environmental data. In BoS there are for example the 2006 Population Census, the 2001 Demographic Survey, the 1999/2000 Agricultural Census and the annual Agricultural Survey, which can provide data for environmental statistics. The Pop-census collected information on:

- main toilet facility
- source of water
- energy use (main fuel for cooking, heating and lighting)

This information is directly applicable in the environmental statistics. Information on these variables can also be collected in the 2001 Demographic Survey.

The Agricultural Census gathered information on:

- loss of land (because of soil erosion, donga formation)
- the use of pesticides
- the use of fertilizers

All of the above variables are interesting for environmental statistics. Data on the two latter variables is also gathered in the Agricultural Survey. In addition, crop production and information on livestock are important in this context.

Normally it is necessary to complete the existing data collected through surveys, censuses and administrative registers. Often it is quite complicated and above all it is usually expensive, especially if one is considering new surveys. The most cost effective method is to add questions to already existing surveys and censuses. As the BoS on a regular basis carries out a couple of well operating surveys/censuses and has a considerable asset in the field operations division there is a big potential in using these resources for the collection of environmental data.

## **6 DISSEMINATION**

BoS should be a hub in a network of environment statistics. Data on the environment stored in databases around the country would be copied and transferred to BoS, on a regular basis. The data transferred would be organized in a central environmental database at BoS. This would make the process of gathering information for statistics easier as external users could find all information in one place.

Environmental indicators	Units	Data source	Periodicity of collection	Method	Limitations
Carbon dioxide emissions per capita	Metric tons	LSO_LESMET Clicom routine data	After every five years	Studies	
Consumption of ozone-depleting CFCs	Metric tons	LSO_LESMET Clicom routine data	After every five years	Studies	
Electricity consumption per capita	KWH	Lesotho Electricity Corporation _Imports and consumption of electricity, 1979/80-1995/96_1979/80-1995/96	Annually	Administrative records	
Long-term mean max temp	Degrees Celcius	LSO_LESMET Clicom routine data		Observations	
Long-term mean min temp	Degrees Celcius	LSO_LESMET Clicom routine data		Observations	
Long-term mean monthly rainfall	Millimeter	LSO_LESMET Clicom routine data		Observations	
Population with access to improved sanitation	Number	LSO_BOS Lesotho demographic survey, 2001	After every five years	Household interviews	Sample not Census
Population with sustainable access to improved water source	Number	LSO_BOS Lesotho demographic survey, 2001	After every five years	Household interviews	Sample not Census
Proportion of households with access to secure tenure	Percent	LSO_BOS Lesotho demographic survey, 2001	After every five years	Household interviews	Sample not Census
Proportion of population using solid fuels	Percent	LSO_BOS Lesotho demographic survey, 2001	After every five years	Household interviews	Sample not Census
Children access to secure tenure from inheritance	Percent	LSO_BOS Lesotho demographic survey, 2001	After every five years	Household interviews	Sample not Census
Area under croplands	Percent	Bureau of Statistics_Lesotho agricultural situation report_2005	Annually	Area Measurement	Sample not Census (Census after every 10 yrs)
Share of agriculture on GDP	Percent	Bureau of Statistics_Lesotho agricultural situation report_2005	Annually	Area Measurement	Sample not Census (Census after every 10 yrs)
Per capita arable land	Hectares/person	Bureau of Statistics_Lesotho agricultural census report_1999/ 2000	After every ten years	Area Measurement	
Per capita freshwater availability	Cubic meters/person	Water Commission	Annually	Observations, administrative records	
Number and area of wetlands with current implemented management plans (wetlands of importance)	Number, hectares	Department of Water Affairs	Annually	Area Measurement	
Number of people affected by droughts	Number	Disaster Management Authority	Annually	Observations	
Number of people affected by floods	Number	Disaster Management Authority	Annually	Observations	
Proportion of forest to total area	Percent	Department of Forestry	Annually	Area Measurement	
Proportion of protected area to total land	Percent	National Environment Secretariat	Annually	Area Measurement	
Number of threatened species	Number	National Environment Secretariat	Annually	Surveys	
Number of alien species	Number	National Environment Secretariat	Annually	Surveys	

## 7 CONCLUSIONS

The existing data has to be compared with the data needed for the environmental statistical system to identify the information gaps. To fill the gaps could be a long process where co-operation with other institutions are necessary. New big surveys are seldom possible to carry out. One practicable method to gather new information is to add variables into already established and running surveys or censuses, like the agricultural census, the household budget survey and population census.

The Bureau of Statistics has to train more personnel in the Agriculture and Environment Division in order to address the problem of staff turn-over. This will assist in more coordination of environmental statistics activities among the various line ministries.