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REPORT ON STATISTICAL ACTIVITIES

KENYA

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ECONOMIC COMMISSION FOR AFRICA COUNTRY REPORT

1. INTRODUCTION

The Central Bureau of Statistics (CBS) carries out its functions through seven divisions namely:

- Macroeconomic Division;
- Population and Other Social Statistics Division;
- Labour and Industry Division;
- Agriculture, Food and Nutrition Division;
- National Sample Survey and Evaluation Programme (NASSEP) and Field Administration Division;
- Data Processing and Publications Division; and
- Administration and Director's Office.

The Bureau is also represented in line Ministries, where they run Ministerial Statistical Units in as far as statistical activities of the Ministry are concerned. According to the Statistical Act (Cap.112), the Bureau is empowered to collect, compile, process, analyse and disseminate statistical information and offer technical services.

The data used for the evaluation and monitoring of the performance of the economy are mostly collected from:

- Administrative records;
- Establishment based surveys;
- Population censuses; and
- Household based surveys.

Administrative records have been used to compile a wide range of national statistics, key among them the following:

- Customs declaration records for external trade statistics.
- Complete birth and death registration forms for vital statistics.
- Arrival and departure forms for migration and tourism statistics.
- Transport and communication statistics.
- Banking and insurance statistics
- Education statistics

Establishment based sources of data, usually by mail questionnaire, are used to compile labour enumeration; manufacturing; building and construction and mining and quarrying statistics among others.

The household based surveys has the main advantage of facilitating the Bureau to secure much more statistical information on the household. For the purpose of carrying out the survey, the Bureau developed a master sampling frame known as National Sample Survey and Evaluation Programme III (NASSEP III). The programme was designed to:

- Generate integrated data covering a large number of variables.
- Provide disaggregated data at the District level in line with District Focus for Rural Development.

The frame has urban and rural component to ensure broader and comprehensive coverage. Through this frame CBS has undertaken a series of surveys related to different economic sectors, namely:

- Kenya Demographic Health Survey (1993, 1998)
- Welfare Monitoring Surveys (WMS I, II, III) 1992, 1994 and 1997
- Multiple Indicators Cluster Surveys (MICS) in 1996 and 2000
- Labour Force Survey in 1998
- Survey of Agricultural Production
- Energy Survey in 2001, among others

Currently Central Bureau of Statistics publishes the Leading Economic Indicators on a monthly basis. Other activities involve the preparation of Consumer Price Indices, the Monthly Survey of Industrial Production, and Hotel Statistics. Business Expectation Enquiry (BEE) survey is conducted on quarterly basis. In the category of annual publications, the Economic Survey; Statistical Abstract; and the Kenya Facts and Figures are produced. In 1999 Kenya conducted the Population and Housing Census, followed by Post Enumeration Survey in February 2000 and subsequently, data analysis in the year 2000. The 10-year Population Censuses have been conducted on schedule, analysed and results released in two stages. The first two volumes of 1999 Census basic report was released in January 2001. Further analysis is on-going and the subsequent analytical reports will be released later once the process is over. In the year 2000 Multiple Indicators Cluster Survey (MICS) was conducted and the analysis is on-going. Another ad hoc survey on energy supply and demand was also conducted in February 2001. To a large extent Central Bureau of Statistics uses or applies international standards and practices as these are time tested to be convenient and practicable and of course make readily possible international comparison.

Data produced by the Bureau are made available to users by means of conventionally printed and published reports. The task of printing, in line with usual government procedure, is entrusted to the Government Printer. Conventional printing, involving manual type setting, is a time consuming undertaking, prone to errors. In recent times it has become feasible, thanks to computer aided desktop publishing software for CBS to produce "camera-ready" copies in-house, a possibility that both eliminated errors of type-setting and greatly speeds up the printing process.

Following changes in the economic environment in the country resulting from liberalization and structural adjustment, CBS intends to modify or change data gathering tools in some enquiries. For instance, the cessation of monopoly in agricultural marketing of statutory bodies has meant that information on affected commodities is to be obtained from a larger number of sources. CBS also intends to draw up a plan to make available data in network or inter-networked computer media, readily accessible to the public and its intimately connected institutions. This will enable more timely economic and selective dissemination/access to CBS data. However, this should take into account the existing requirement for confidentiality.

The implementation of 1993 SNA is underway and the six milestones formulated by a United Nations working group are a useful guideline for the implementation process. However, the CBS also acknowledges that these general guidelines have to be adapted to specific Kenyan demands and circumstances and that lack of necessary data may make it difficult for full implementation. Kenya intends to adopt an alternative approach of dividing the implementation process into an initial phase and other phases following afterwards.

- In the initial phase, the national accounts in their present scope will be adapted to the concepts and definitions of SNA 93, possibly with a few additions.

- In the following phases, extensions of the scope of the national accounts will be implemented.

This approach is not very different from the milestone.

As a strategy for statistical development, CBS intends to update its activities so as to conform to the needs as expressed by users. A satisfactory performance on the part of CBS would be demonstrated by: relevant and timely publications satisfactorily meeting user needs, publications of high quality in terms of format, accuracy of analysis, as well as the reliability of the reported statistics; publications with adequate coverage, and satisfactory level of disaggregation in terms of geographic location, sector and gender; wide dissemination of the publications to the various government departments as well as the entire economy as dictated by needs.

This means that, in addition to some of the activities currently carried out by the CBS, there is need for additional activities hitherto not undertaken by the Bureau. It also means that, prioritization must be given greater significance due to budgetary constraint. As a necessity, the Bureau intends to reorganize its management, administration and operations so as to realize a higher level of efficiency, accountability and transparency. To achieve these results, CBS plans to be consumer oriented, in order to generate part of its revenue through marketing its services. However, care needs to be taken not to forget its public nature and the externalities with which it is endowed. As a result of this public nature of the services of the Bureau, government allocations and donor assistance will continue to be important sources of funding.

2. GEOGRAPHIC INFORMATION DATABASE DEVELOPMENT

One of the immediate objectives then of the census was to institutionalize the computerized cartography at Central Bureau of Statistics. Focused to create a data bank that will form the basis for sound planning at national and district levels and enhance the capacity of the department to carry out data collection, analysis and dissemination activities.

To develop a national geographic information system, the government with the support of the UNFPA and other development partners undertook the mapping of the whole country and created 61,921 enumeration areas and the accompanying documentation that was to assist in the production of the EA maps, which unlike in the 1989 census had to be prepared using computer assisted cartography. The UNFPA provided field vehicles, computers and accessories, and the required technical backup. However, through the project is in its third phase there are some activities that were not fully completed in the preparatory stage due to one problem or the other.

Among the problems encountered were:

1. Lack of funds to carryout cartographic mapping in good time mapping and related activities like the delay in the preparation of the GIS Lab.

2. The late installation of the GIS Lab equipment and hiring of the relevant consultant.

3. Lack of ideal map production software. The availed PC Arc-info 3.5 came with only one key (License), which meant that only one workstation can be operated at a time.

4. Slow and low memory computers procured for the graphic work. The computers had storage capacity of 2GB, 32MB Ram and speed of 166MHZ.

5. The software did not have all the modules required. The software does not have Arc-scan, and Arc-view extensions. This means that the OCE scanner has never been put into use and as at now it is not possible to prepare the spatial indicator maps unless the machines and the software are upgraded.

6. Insufficient staff training in GIS. GIS is a new technology and it is the first time it was put into use in the department. Though a consultant was put on board to assist the staff to do the work, the time was rather short to cover all aspects and applications of GIS. As there were deadlines to be met, most of the time was spent on digitizing and map production.

7. Lack of time to carry out map field verification.

8. Frequent changes of administrative units and boundary disputes.

3. SHORT-TERM SOLUTIONS

Due to the above problems and shortfalls a number of strategies had to be put into place to ensure the census enumeration took place as planned and other outputs required to release the census results were availed in time, they included:

1. Borrowing of staff and equipment from other sections and Ministries.

2. Hiring of manual drafting clerks to draft the enumeration area maps.

3. Digitizing the sub-location boundaries to generate the areas measurements that were used to calculate the area densities.

4. LONG-TERM SOLUTIONS

To fully set up the GIS database, the following needs to be done:

- Digitize all the Urban EAs in the already digitized (26) districts.
- Verify and digitize EAs for 43 districts whose maps were manually drawn.
- Link the two databases (GIS and scanned database).

4.1 Benefits of a Fully Developed Database

When the database is fully developed it would be easy to generate the spatial indicator maps for the census data and any other thematic maps from other sources in a Geographic Information System (GIS) setting. This makes it an important powerful tool for carrying out analytical study, planning, evaluation and monitoring. GIS technology will therefore be an integral part of problem solving in a wide range of global challenges in the 21st century.

4.2 Uses of a GIS

Traditionally, national statistical offices compile tabular data that are used by various stakeholders. However, many statistical organizations are now beginning to provide the same information in a spatial referenced format, thereby increasing the range of possible applications besides the development of new products like digital maps. However, this transition is required to be handled carefully as: The initial costs are extremely high, the formative stages are painstakingly slow and acceptability almost uncertain. Besides the fact that staff involved in the implementation will require to be

trained in the new technology for them to be able to fully utilize the potential of the new technology.

The following are some of the uses of GIS for population related statistics:

4.3 Inventory and Data Base Management

To plan a census, maps of the Enumeration Areas are prepared, the enumeration is undertaken, data is captured, and processed and archived. The resulting digital information is used to generate spatial indicator maps.

4.4 Health Issues

In GIS environment an epidemiologist may identify villages or houses that are located at a given water mass and determine the buffer zone. It is also easy to plan and monitor diseases like malaria.

4.5 Educational Facilities

The location of educational facilities can effectively be determined by taking into account the population distribution and structure. On the other hand school-feeding system in the semi-arid zones can be designed and evaluated.

4.6 Service Provision and Monitoring

Demand for health facilities at current center sites/locations is estimated by defining of the hospital catchment area in GIS using information about the road network, natural barriers, and the population distribution. Determination of service levels can also be evaluated in areas such as telecommunication, water provision and sewerage disposal, management of refuse and garbage, location of fire and police stations.

4.7 Family Planning

Results from National demographic and Health surveys on the adoption of family planning practices can be related to information about infrastructure, population distribution and structure, and distance from the nearest market center.

4.8 Demographic and Environmental Relationships

Population growth rates can be related to deforestation rates (satellite imagery derived). Monitoring and Evaluation of environmental degradation can also be assessed by integrating the population distribution and the topography.

4.9 Disaster Mitigation and Relief Planning

GIS can be used in identifying and planning of the escape routes by analyzing the population distribution, the hydrological data of the river network, elevation, historical flood patterns, and the transportation network. Setting up of relief distribution points and in relation to the target population can also be done.

4.10 Planning, Monitoring and Evaluation

Various stakeholders can plan, monitor and evaluate their activities.

4.11 Institutional Issues

A developed GIS system in the Central Bureau of Statistics would provide services to other agencies in the country and be competent of a wider national spatial data infrastructure.

4.12 Issues of Integration Management

National statistical offices utilize cartographic, statistical and geographical systems to execute their national population censuses and surveys. It is essential to integrate the three systems in terms of definition of the appropriate methods, concepts, classifications and coverage. This is important as will ensure consistency, comparability and associability with other related official databases. Equally, compliance with current national legislation, observation of international standards, norms and conventions or concepts, symbols and scale as well as the methods for updating must be adopted to guarantee comparability on both national and sub-regional levels.

The concurrent management of demographic, statistical and geographic databases requires continuous and consistent planning with clearly defined activities, adequate sequence and timetables. The necessary institutional arrangements have to be clearly established to avoid bottlenecks.

The dissemination of stored information must certify the various stakeholders needs in terms of coverage and levels of aggregation. At the same time the distribution policy must respect the constraints imposed by the statistical confidentiality (Statistical Act Cap.112). Data will have to be published and it should be several types of media. The cost to be charged to users must be explicitly defined and implemented. And for any organization to reap the benefits of information technology, there is need at both national and sub-regional levels to develop collaboration policies, that specifies the roles and or duties of the collaborators, ownership/intellectual rights of the authors and dissemination levels and platforms. Free sharing and exchange of experiences, through workshops and seminars and share training and systems development costs.

5. INFORMATION AND COMMUNICATION TECHNOLOGIES

5.1 Introduction

Information systems and their associated technologies have become a major resource available in shaping and integrating operations within organizations of the modern world.

Over the years, Information and Communication Technologies have taken a central role in the global social, economic and political matters. Indeed, never ever has human activities depended on technology to these proportions and never again in human history has trends in all aspects of human interaction been made. As for the modern world, it has witnessed the emergence and strengthening of the global economy and the transformation of industrial economies into knowledge and information – based service economies.

As third world economies continue to experience slackened economic growth, the industrialized countries, having put in place the appropriate Information Technology policy framework and technological development environment, have experienced a vast growth in the economy.

Through application of information and communication technology in all their socio-economic endeavors the developed countries have managed to stay on the crest of

Information and Communication Technology development success. By so doing, these countries have managed to continuously cut down on their cost as well as turn-around time and thereby improving the overall performance and efficiency.

5.2 Broad-bases Information and Communication Policy issues in Kenya

Kenya as a country, embraced the use information technology for operational improvement and efficiency since the advent of personal computers. However, the application of IT in office operations has largely been haphazard and uncoordinated with each organization and national function employing its own initiative of development and application of information with no purposed convergence of the individual efforts towards the overall national objective.

In the recent past, the country liberalized the telecommunication industry after it recognized the importance of info-communications as a prerequisite for socio-economic development, particularly in spurring the growth of the nation's agricultural, commercial and industrial sectors. This was in line with a visionary approach that would assist in harnessing and focusing IT development efforts towards the national economic growth.

For Kenya to realize the full benefit of Information and Communication Technology towards accelerated economic growth through reduced production cost, improved communication and information dissemination processes and building a knowledge based economy, sound Information and Communication Technology policies and regulatory procedures in all areas of the sector must be put in place. These policies will both facilitate in bringing harmony and in the industry as well as create an environment that will foster rapid expansion and extension of utilization of the Information and Communication Technology to the farthest reaches of the country.

With an open ICT sector in the country, more organizations are making use of electronically driven activities. Such opportunities are realizing more for the organizations in terms of:

- **Speed** of information which is delivered in shortest time possible
- **Penetration** with information reaching everyone, anytime, anywhere
- **Accessibility** where everyone can be a corporate communicator, from sending company-wide-e-mail to publishing

E-activities therefore has been founded on the basis of wanting to catch up with the global trends both in the public and private sector management reforms. These reforms intend to enhance efficiency, effectiveness and productivity, add value to established modes of business practice by the government and interactive communication between government departments and their clients.

It is all about having immediate access to any kind of information sitting in computer systems, Census data, tax, property records, patient records among others.

The country's intend of improving telecommunications service penetration in the rural areas from 0.16 lines to 1 line per every 100, and from the current 4 lines to 20 per every 100 people in the urban areas by the year 2015, gives a clear indication of the strategic approach towards establishment of Info-Structure.

In summary the information and Communication technology revolution is presently gaining an impact around the globe. The issues of who has access to these technologies is of great importance since the connection to these networks and services influences a people's access to jobs, education, health care and participation in decision making.