



Distr.: General

E/ECA/STATCOM/2/5

January 2010

Original: English

**UNITED NATIONS
ECONOMIC AND SOCIAL COUNCIL**

ECONOMIC COMMISSION FOR AFRICA

Second Meeting of the Statistical Commission for Africa
(StatCom Africa - II)

17 – 22 January 2010
Addis Ababa, Ethiopia

**Report on ECA's Activities in the Area of Data Management since the First
Session of the Statistical Commission for Africa**

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Introduction

The ECA Secretariat is pleased to submit its report on activities carried out by ECA in the area of Data Management since the first session of the Statistical Commission for Africa (StatCom-Africa). The report includes actions taken as a follow up to recommendations of the first session of StatCom-Africa and other activities considered as being of interest to member States.

Data Management Activities at ECA

Enhancing ECA's Statistical Database Platform

ECA has continued to enhance and improve the Statistical Database platform (StatBase) to incorporate feedback received during StatCom I and other fora. A Google like search mechanism has been added to the database to enable a user to quickly find data on African countries. The data compilation features have also been enhanced to allow faster compilation of data.

An enhanced data dissemination component has also been added, enabling users to browse, search and retrieve data both online and offline. It also includes a system to generate charts and maps from the resultant data; and to export data into most common formats such as XLS, PDF and XML.

A web interface has been developed so that users can access data on African countries wherever they are as long as there is internet connection. This web interface will be hosted at <http://ecastats.uneca.org/>.

Joint African Statistical Yearbook

Following the recommendation of the African Statistical Coordination Committee, UNECA, AfDB, and the AUC produced the first joint African Statistical Yearbook (ASYB). The second issue of the publication is under progress and expected to be published by end of March 2010. The joint publication resulted in consistency of African statistics among the three institutions and reduced burden of country responses to data requests.

Implementing the African Statistical Knowledge Network

Reference has been made to the recommendation of the data management workshop to implement a portal to facilitate the exchange of experience and best practice in Africa. In response to this recommendation, ECA has developed the "African Statistical Knowledge Network" (ASKN).

ASKN has the following sections:

- **News and Events:** This section news and analysis of current and upcoming events submitted by members to the webmaster for posting. The section shall be RSS enabled so that it can both receive news from other websites and send news to other interested clients.

- **Statistics Encyclopaedia:** Comprehensive information on international statistical methods and standards. This section will be developed using the WIKI technology, so that all registered members can participate in content creation and maintenance.
- **Country Profiles:** Profiles of national statistical systems in African countries. The section contains image of the country, vital statistics (e.g. area, population, capital etc.) and links to web address of member organization with contact details.
- **Materials Warehouse:** An e-Library section contains reference materials such as laws, sample questionnaires, case studies, training manuals, and posters. Materials can be submitted by members and the public. A Review Board shall review the proposed materials before they are posted on the e-Library.
- **Online Forum:** This provides normal bulletin/discussion board facilities allowing members to post questions, answer questions posted by others, and conduct discussions and share knowledge on statistical topics, resources, experiences and expertise.

Capacity Building Activities

Regional Workshop on Data Management

A Regional Workshop on Data Management was conducted in Kampala, Uganda from October 26 to 28. The workshop was jointly organized by ECA, the African Development Bank (AfDB), and the United Nations Statistics Division (UNSD), in close collaboration with the African Union Commission (AUC) and the Uganda Bureau of Statistics (UBOS). The main objective of workshop was to promote and strengthen the statistical data management practices in Africa. The workshop also provided a forum for the exchange of information, views and ideas on statistical data compilation, archiving and dissemination in Africa.

The workshop was attended by 72 participants from 34 African countries, sub-regional organizations, regional organizations and international organizations.

The workshop deliberated on emerging issues, ranging from data collection, analysis, and dissemination to archiving. Issues covered by the workshop included:

- i. Census and survey data capture using scanning technologies and personal data assistants (PDAs);
- ii. The use of geoinformation technologies in census taking, notably geographic information systems (GIS) and global positioning systems (GPS);
- iii. Statistical data analyses, with particular emphasis on software packages and the need to choose appropriate packages with care and use them with caution to avoid misleading interpretations by inexperienced users;
- iv. Dissemination of statistical data, highlighting dissemination channels, engaging users in the process, data pricing and data release calendars;

- v. Archiving of census and survey micro data, noting that Africa is lagging behind the rest of the world, with data being sometimes archived outside Africa.

The workshop also reviewed the efforts of UNECA and UNSD to create an interactive portal for the exchange of knowledge and best practices in statistical development in Africa, and recommended the establishment of the African Statistical Knowledge Network (ASKN).

Other key recommendations of the workshop are as follows:

- i. Noting the value of sharing experiences by countries on the various technologies being explored or used by NSOs for data capture , including successes and failures, and accepting such experience sharing as a key to improving the successful implementation of new technologies by NSOs, international agencies and development partners are urged to consider facilitating such sharing in a variety of ways, including by providing platforms for the exchange of good practices, organizing training workshops and study tours, for those areas identified by countries as priority.
- ii. Countries should consider adopting the ECE principles for micro data access to guide their efforts in providing access to micro data.
- iii. Consistent with the micro data access principles, countries should develop a variety of ways of providing access to micro data so that user needs are met in ways that ensure confidentiality of the data.
- iv. Countries should seize the opportunity offered by the 2nd phase of the AfDB statistical capacity building programme to strengthen their capacity in the areas of documentation, archiving and dissemination of survey data.
- v. Acknowledging the importance of communities of practice in the field of data management, partners should support the work of African Association of Statistical Data Archivists (AASDA).
- vi. For future surveys countries should ensure that the processes of documenting and archiving are planned and budgeted along with other operational processes and not undertaken as afterthoughts at some future time.
- vii. Greater coordination should occur amongst international agencies in order to standardise and ensure interoperability and compatibility of dissemination tools promoted by them.
- viii. Given the similarity of operations of NSOs in Africa, regional organizations should build on the excellent work done by UBOS in evaluating available software in order to help those NSOs purchasing statistical analysis packages. They should also encourage African countries to get together when buying software so that they increase their buying power.
- ix. Regional organizations should identify opportunities for sharing information and consider funding or facilitating study tours by NSO staff of member countries to other countries to learn from each other to help enhance capability and reduce costs in procurement of tools and knowledge and development of processes. In particular, but not solely, training and

exchange of information on data management and the production and maintenance of databases were identified as helping advance the capability of countries to improve their dissemination.

- x. Countries should make use of all channels of dissemination available to reach a wider audience than just those serviced by the use of electronic dissemination, and to do so in ways that help understanding of the statistics.
- xi. The dissemination of statistical information from the various agencies producing official statistics at the country level should be coordinated to ensure coherence and avoid inconsistency in statistical products that would undermine the level of confidence in official statistics and the credibility of the NSO.
- xii. NSOs should publish predefined schedules of statistical products.
- xiii. Dissemination policies and plans should be included by NSOs in their National Strategies for Development of Statistics (NSDS).
- xiv. Noting the crucial importance of Information and Communication Technologies (ICT) statistics to measure ICT for development (ICT4D) in Africa and support policy making processes, NSOs should actively participate in the collection, analysis and dissemination of ICT statistics.
- xv. Appreciating the concerns of countries on the discrepancies that exist in data published by various international sources, the initiative taken by the African Statistical Coordination Committee (ASCC – comprising ECA, AfDB and AUC) to produce a joint African Statistical Yearbook (ASYB) should be endorsed. Similarly for the work in progress towards a joint socio-economic database on Africa that will harmonize and reduce discrepancies in data production by regional organizations.

Enhancing ECA Capacity in Data Management and Dissemination

ECA also undertakes activities to continually improve its in-house capacity to serve member States. In this regard, ECA has received funding from Google.org to enhance its data management and dissemination system. The objective of the project is to improve the capacity of the UNECA in the collection, management, archiving, documentation and delivery of regional statistical information. The project is aimed at developing innovative methods of data collection and dissemination, including platforms for management, archiving, documentation and delivery of information.

The outcome will be an African centre of excellence at UNECA, networked into the countries and the international community. The resulting database will contain authoritative statistical information and associated documents on the statistical systems of the 53 countries in Africa. The database will lead to a reduction in ad hoc data requests from countries and make it easier for countries to comply with data requests from UNECA and other regional and international partners that need the data for comparative purposes and policy analyses.

Specific outputs of the project are:

- Trained experts on statistical data management, archiving, and dissemination at UNECA;
- Reference manuals and guidelines;
- High quality database in place at UNECA that includes import/export features, SDMX, analytical components etc. and that is recognised to be the authoritative source of data on Africa;

In this regard ECA has conducted two study tours aiming at identifying best practices. The first study visit was to the United Nations Statistics Division in New York. The main objective of the study visit was to learn from United Nations Statistics Division (UNSD) experiences in statistical data management and particularly on the following key areas of database development and management:

- Emerging tools and technologies used to develop statistical databases;
- Automated ways of data capturing (data collection from Countries, Sub regional organizations, other UN agencies);
- Data presentation techniques using Extensible Markup Language (XML) and Extensible Stylesheet Language and Transformations (XSLT);
- Data validation techniques and implementation in statistical databases ;
- Statistical Data and Metadata Exchange (SDMX) implementations ;
- Data aggregation and analysis for presenting derived indicators ;
- Generating publications from databases;

The second study visit was to the Organisation for Economic Cooperation and Development (OECD) and Partnership in Statistics for Development in the 21st Century (PARIS21), focussing on statistical data management, specifically current trends in statistical information systems development; tools and technologies for developing statistical applications; automated methods of data capture (from countries and other UN agencies); data production mechanisms (validation, estimation, rebasing, etc.); data dissemination mechanisms; and archiving survey micro data, among others.

The United Nations Data Managers' Meeting

Still as part of ECA's in-house capacity building, ACS was represented at the second United Nations Data Managers which was held in New York from 22 to 24, June 2009. The meeting was organized and hosted by the United Nations Statistics Division (UNSD). The main purpose of the meeting was to present the UNData portal developed by the UNSD to streamline and facilitate dissemination of data created and compiled by all UN offices. The meeting specifically discussed: current initiatives in data dissemination practices in UNSD and partner agencies; recent and future developments in the UNData portal and formalization of collaboration among UN offices.

The meeting learnt that data dissemination takes place in the UN system through both traditional and contemporary ways using a variety of software packages. UN offices use paper publications, CD, online databases as well as websites to disseminate their data. It was also learnt that UN offices sometimes charge for datasets over certain volumes and especially when disseminated to profit making organizations.

With regard to dissemination strategies in the UN offices, the meeting recognized that the represented offices faced similar challenges, namely:

- Keeping up with the latest technologies and quickly adapting to new ways of disseminating data and metadata. The meeting recommended that SDMX should be used to provide data to UNData portal.
- The meeting recognized that most of the UN offices may still have problems in disseminating statistics free of charge. Participants of the meeting agreed to disseminate through UNData those data/metadata that are already available for free in their respective offices.
- The meeting recognized the importance of disseminating statistics in multiple languages to ensure data reaches a broader public.
- The meeting stressed the importance of monitoring users' visits and feedbacks. Several offices pointed out that they use ad-hoc forms/questionnaires online to get information from their users.
- It was agreed that a password protected "Data Mangers Meetings" website will be set up within the UNData portal to ensure institutional memory and allow agencies to access online all relevant meetings documents.

Support to Member States: Implementation of National Databases

In collaboration with the Economic Community of West African States (ECOWAS), ECA assisted six countries to implement a database for compiling and dissemination of statistic. This is in line with ECOWAS plan to streamline statistical data exchange and dissemination among the 15 member countries. The six countries where the database installed are Ghana, Liberia, Gambia, Togo, Guinea and Burkina Faso.

Data Management Function Established at ACS

As ECA continues to work with partners and stakeholders to strengthen African statistical systems to provide reliable statistics for sound policy formulation and informed decision-making, it recognises that statistical products are only beneficial when they are used in policy-making and

decision-making, as well as monitoring and evaluation of projects and programmes. This requires that the data resources should be managed in standard ways that ensure their ready availability and accessibility to the wider user community in forms that can be easily used in their work. To provide a focus on these aspects dealing with the management of data products as corporate resources, ECA has established a data management function in ACS.

Activities covered under the data management functions of ACS include:

- i. **Standard Data Management Practices.** This involves providing policy advice to member States, sub-regional and regional institutions, to adopt sound data governance, including the development, implementation and dissemination and archiving of data and information products and services based on current and standard data management practices. It entails developing methods, formulating policies, adopting standards and utilizing appropriate technologies for packaging and disseminating data products effectively and efficiently to various user communities. The function also involves providing technical backstopping to national, sub-regional and regional projects and programmes, which would include the design and formulation of data management and dissemination systems. Where the need is expressed, ECA will assist member States and sub-regional bodies and organizations (including the RECs) to disseminate their data through StatBase, and/or develop data dissemination systems and strategies.
- ii. **Micro Data Management.** An area of particular concern is the archiving and management of micro data resulting from censuses and surveys. The current situation in Africa is that the surveys and censuses are often archived outside the continent. This is mainly due to the lack of in-country capacity and infrastructure to establish data archiving facilities. As part of the data management function, ECA will seek collaboration with partners to build capacity in member States, and also implement a facility for a managed independent repository to archive micro data on behalf of countries that may not be able to maintain such resources.
- iii. **Geography and Statistics.** Statistics and geography have always been closely linked because many statistical data collection units (households, establishments, etc.) are geographic entities in that they exist at fixed locations. The use of statistical data in policy analyses and decision making invariably includes the geographic distribution of such socio-economic variables as education, disability, labour force participation, health conditions, nutritional status, criminal victimization, fertility, mortality, migration, etc. The need for integrating geography and associated geospatial technologies, especially geographic information systems (GIS) and satellite positioning technology (notably GPS) into statistical processes, from data collection through data management to data dissemination, is heightened by the 2010 World Population and Housing Census Programme. The data management function will therefore include creating awareness on the use of geospatial technologies in statistical processes, and giving appropriate support to member States on methodologies and strategies. Under this activity, ACS will also serve as the African focal point for UNSD in providing services in these areas, including issues relating to geographical names.
- iv. **Regional Databases.** ACS has already implemented regional database – StatBase – for use by ECA, sub-regional and regional organizations. This database is continuously being

enhanced and new features have been identified that need to be added to better serve Regional Economic Communities (RECs) and ECA's sub-regional offices. Another key feature that has been identified as necessary is the provision of analytical tools, including spatial analysis and presentation – already referred to above. It may also be necessary to develop custom database systems and products for special initiatives of ECA or its partners, notably, the African Union Commission (AUC), the African Development Bank (AfDB) and the RECs.

- v. **Support to ECA Sub Programmes.** As part of the data management functions, ACS will propose an ECA data policy that will provide for consistent data collection and management methodologies across the sub programmes. In this regard, ACS will provide expert advice to other divisions of ECA on the use of statistics and on sound data management practices. This will include advising on preferences where there are alternative sources with conflicting content. To optimize ECA's investment in data resources, ACS will also arrange for software tools necessary to exploit StatBase and other statistical resources that would be needed by many divisions to be provided and managed as a system-wide resource.