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Capacity Building and Training

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Transformative Agenda for Official Statistics in Support of the Post-2015 Development Agenda

Theme: **Capacity Building and Training**

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SUMMARY

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INTRODUCTION

In less than three months, the United Nations Millennium Development Goals (MDGs) will be a thing of the past, replaced by Sustainable Development Goals (SDGs). SDGs mark the beginning of a new approach, which involves the generalization of development planning at all levels of governance, from worldwide (with the UN) to national (with local authorities), including continents (with international organizations such as the African Union (AU) and the European Union (EU)), regions (with groups such as Africa's Economic Community of West African States (ECOWAS)) and countries and federations (such as the United States and Nigeria).

Development planning inevitably involves the "3PBSE chain" (*prospective, planification, programme, budgétisation, suivi-évaluation* [anticipating, planning, budgeting, and monitoring and evaluation]), which is the approach that ensures the necessary success. It is based primarily on statistics, hence their paramount importance with the coming of SDGs, whose 17 objectives and 169 targets were adopted by the UN in September 2015.

As a result, there is ultimately a need to produce the statistics required at each level of governance listed above.

This paper looks at the continent of Africa, the ancient continent that initially did not have a culture of statistics, to say nothing about a culture of looking into the future.

Issues associated with the following will be addressed, before the conclusion is presented:

- Recent developments in Africa's culture of statistics and its institutional framework;
- Recent developments in the production of statistics on the continent (official statistics);
- Africa and SDGs;
- The need for capacity building and training; and
- The draft capacity building and training plan.

I. RECENT DEVELOPMENTS IN AFRICA'S INSTITUTIONAL FRAMEWORK AND CULTURE OF STATISTICS

In the last 15 years (since 2000), the African continent has made significant advances in its institutional framework and culture of statistics. For example, most countries have a statistics act and an organized national statistical system (NSS) with specific governance bodies assisted by an official national organization in charge of coordinating and producing statistics. Africa has a signed, ratified charter of statistics that took effect in 2014, and it established African Statistics Day, which is held each year except for years in which a World Statistics Day occurs.

As for culture, the obvious desire of all African countries to be emerging countries, and especially their involvement in the continent's Vision 2063, which requires all African countries to act in ways that promote the development of statistical production.

As can be seen, the current institutional and cultural environment—and even political will—are conducive to the production of African statistics in Africa.

II. RECENT DEVELOPMENTS IN THE PRODUCTION OF STATISTICS

With respect to the production of statistics, everyone knows that there are wide-ranging disparities between countries. It must be recognized that efforts have been made to close the gaps by implementing helpful, unifying tools such as the following:

- The Strategy for the Harmonization of Statistics in Africa (SHaSA), which works on harmonizing the production of statistics;

- The Africa Symposium on Statistical Development (SDSA), which fosters the areas of statistical production;

- AFRISTAT, which provides its member countries with statistical and methodological support;

- The creation of the Centre panafricain de formation en statistique in Yamoussoukro, Côte d'Ivoire, and the Institut de Statistique de l'Afrique in Tunis, Tunisia;

- Statistical and demographic training centres of excellence, which train high-quality human resources, of which there are still too few; and

- Continental (AU Commission), regional (ECOWAS) and sub-regional (West African Economic and Monetary Union (UEMOA)) organizations.

It is in this generally conducive environment that the world is moving forward with SDGs. Let us return to the purpose of this paper, a few perspectives on the African continent.

III. Africa and SDGs

Unlike with the MDGs, it is worth noting that Africa is proud to have participated in the deliberations on SDGs through the continent's Vision 2063 and the Common African Position (CAP), largely considered without the SDGs.

For the first time, Africa participated meaningfully in the deliberations, and it must continue to play its role and do its share of the mission, including producing the statistics required to document the indicators that will be adopted in March 2016. To that end, discussions have been initiated to do the following:

- Compile a tentative list of indicators;

- Identify the resources needed to produce the indicators (human, technological, technical and financial resources); and

- Reflect on a strategy to mobilize both national and international resources.

These ongoing discussions must lead each country to manage, in its future national strategy for the development of statistics (NSDS), the production of the various indicators using a priority approach.

As well, like Côte d'Ivoire, which invented the predecessor of NSDSs, the Schéma Directeur de la Statistique [statistics master plan],[1] each country will include its NSDS in its national development plan, which is now the only reference framework document for all stakeholders, (for example, decision makers, financial technical partners (FTPs), civil society and local governments).

Almost all African countries currently have an NSDS, with SHaSA working on the harmonization of statistics.

When the national statistical institute (NSI) became a Crown corporation in 1996, it was required to create a development plan for the production of statistics to support the agreement with the Government of Côte d'Ivoire.

Despite the conducive environment, a great deal remains to be done in Africa to take on the production of statistics required to inform the SDG indicators. With that in mind, we should examine themes below, which will enable Africa to complete its data revolution:

- NSSs: Structure and management;

- Traditional and emerging areas of production;

- Methodology (data collection, processing, analysis, release, dissemination and archiving);

- Use of statistics; and

- Resources for the production of statistics.

3.1 NSSs: Structure and management

The current worldwide architecture for the production of statistics is as follows:

WORLDWIDE ARCHITECTURE

GEOGRAPHICAL LEVEL	ORGANIZATIONS OR AGENCIES
World	- United Nations Statistics Division (UNSD) - International Statistical Institute (ISI)
Continent	- EUROSTAT, AfDB, UN system - African Centre for Statistics (ACS) - African Training Center, etc.
Region	- Directorate of Statistics (ECOWAS, ECCAS) - Statistical Committee (UEMOA) - AFRISTAT, AFRITAC, etc.
Country	- national statistical system, NSO or NSI, Training schools, universities
Administrative region	- regional offices (e.g., regional directorates, satellites and units)

Note: This list is not exhaustive.

As can be seen, this architecture, which shows both the upward chain of statistics and the downward harmonization of methodology, requires rigorous organization and management of the NSS.

NSSs need to be transformed, since information and data communities have developed alongside them over time (see schema below). NSSs mainly consisted of the national statistical organization (NSO):

- Users;

- Ministerial statistical production services; they have evolved to include organizations other than the traditional ones, such as the following:

- Supervisory or coordinating bodies, such as the national council;

- Departments of statistics in central and/or delocalized governments; and

- National or international private-sector services or research firms.

To take into account the presence of information and data communities, an arbitration authority has been set up to address any "rigging" of official statistics. At the moment, no African country has such an organization.

As for management, the roles and missions are well distributed. For example, while NSSs and their regional and sub-regional and their detachments produce the underlying statistics, the levels immediately above through to the continental or even worldwide level will handle the missions of centralization, co-ordination and harmonization of development methodologies for new production methods to take into account emerging areas in the production of statistics, such as the environment and governance, peace and security (GPS).

For the continent, note that the Institut africain de la statistique and of course the Centre de formation en statistique, with all the initial training organizations on the continent, will work to operationalize the missions above.

However, it must be remembered that the management we are talking about today goes beyond the mere administrative management of organizations at each geographic level; it involves true managerial management that requires adequate, up-to-date knowledge of management science. This is because the production of statistics has now become an "economic" activity the outputs of which are relevant, reliable, regular statistics. Needless to say, in this context two major activities must be done by NSSs or upstream organizations, namely the management of resources required for production and the production itself, a matter for professionals.

Schema 1: The various communities
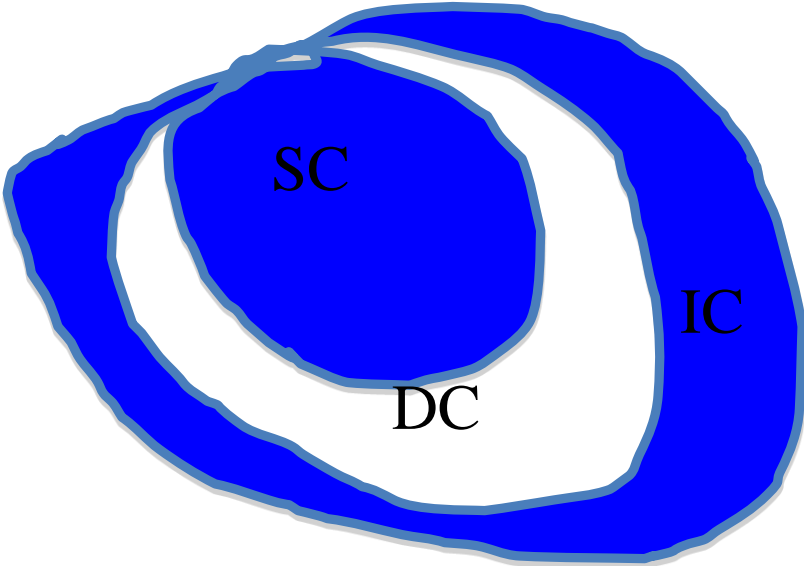
- SC: Statistical community: Statistics resulting from the application of statistical and demographic science

- DC: Data community: In addition to actual statistics, all databases containing big data that could be used for statistical purposes

- IC: Information community: In addition to numeric data, includes qualitative or alphanumeric variables.

Note: The statistics must resist the temptation to generate statistics that are often confused with everything except statistics.

Although the production of statistics is a traditional mission of the organizations above, according to their geographical area, note that that is not true for the management of resources required for the production of statistics.

3.2 Traditional and emerging areas of production

It is no secret that the production of statistics has matured in Africa, especially in traditional areas of production, such as

- demography and population;
- social statistics and living conditions of households;
- economic statistics (national accounts);
- agricultural statistics; and
- non–farm business statistics.

Today, areas related to the environment and GPS fall under the category of emerging statistics that are under development.

Traditional statistics nowadays involve routine practices; however, that is not true for emerging statistics: everything remains to be done, that is, carrying out the 10-step statistical approach:

- Design (defining the statistics and their metadata);
- Pilot;
- Awareness raising;
- Data collection;
- Processing;
- Analysis and production of indicators;
- Release and dissemination; and
- Archiving.

For the new areas, even though the same holds for the classic or traditional areas as a result of technical and technological developments, it is more than necessary to build the capacity of Africa's statistical systems and to initiate new and innovating training. In fact, beyond the technical and technological progress that has always positively influenced advances in the production of statistics, new functions, methodologies and approaches are needed for the production of statistics, with its multiple, multifaceted changes in relation to things such as the following:

- Tools;
- Players;
- Methods;
- Approaches; and
- Results and modes of release, dissemination and archiving.

3.3 Methodology

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Statistics are the end result of carrying out the statistical methodology or approach. This approach consists of collecting data and using them to produce relevant, useful statistics.

As for data sources, there are traditional sources (surveys and censuses) that are created for statistical purposes and there are secondary sources (administrative files) used to produce statistics. Big data has been a part of this since the start of this decade.

For traditional sources, which involve collecting data for statistical or demographic purposes only, note that, as a result of significant advances in information and communications technologies (ICT), computer-assisted collection (CAC), once considered a luxury, now seems to be the most effective method for producers and has therefore become a new technological standard.

CAC provides numerous benefits, including time savings and increased quality of the data collected, since they are subject to consistent, accurate texts directly and systematically as they are being collected in the field. CAC eliminates data entry by data entry staff (coding clerks, input clerks, supervisors and controllers). However, it has created positions for ICT officers (ICT supervisors and maintenance technicians). In Africa, a number of countries have successfully experimented with CAC, including West Africa, Cap Verde, Senegal and Côte d'Ivoire. In less than a year, Côte d'Ivoire released the final results of its fourth general population and housing census (RGPH), the enumeration of which took place from April 15 to June 14, 2014. You will agree that this direction will require ongoing training and there capacity building.

For the other steps of the methodology, note that the computer processing of the data and their analysis are nowadays made easier through advances in ICT, especially the computers and all the statistical analysis applications that have been developed and that are now available. The same is true for the release of data, which may be done using a wide range of media (for example paper or electronic).

Dissemination and archiving have not been left out in the major advances made in Africa with the plethora of portals and websites, and print publications.

3.4 Use of statistics

Statistics are required to implement the 3PBSE chain. They inform decision making and, as such, have become goods just like consumer goods. They are also "inputs" for formulating and making decisions, thereby creating a new function, namely decision formulation or preparation. This challenges the statistical community in terms of the traditional boundaries of statistics.

3.5 Resources

From the perspective of statistics (a consumer good), the main resources for the main resources are the following:

- Human resources;
- Physical resources; and
- Financial resources.

3.5.1 Human resources

In Africa, the human resources assigned to the production of statistics come from two training systems:

- Specialized vocational schools (technicians, supervisors and engineers) in French-speaking countries; and
- Universities in Anglo-Saxon countries.

In the first category, a highly selective admissions process creates esprit de corps among students, with a great awareness of the statistical code of ethics.

The second category tends toward analysis and research, things specific to the university setting. It is clear that the numbers of statisticians and demographers remains highly insufficient in NSSs for two fundamental reasons:

- There is a lack of trained people, that is, graduates; and
- There is a lack of financial resources to recruit them and insufficient revenue to retain them.

To address the lack of professionals, various initiatives have been made by various countries, some in existing training institutions or in parallel tracks led by instructors from these specialized institutions.

Africa's challenge in terms of trained personnel is threefold:

- The NSO in charge of official statistics and the coordination of the NSS and its entities;
- Statistical services in the various national government departments or agencies; and
- Key local communities, such as centres of development or autonomous regions or districts.

For a country like Côte d'Ivoire, in response to the Plan d'Urgence de Production de Statistiques de Base (PU-PSB), which was implemented from 2011 to 2015 to complete the activities of the 2011-2015 NSDS, a workforce of close to 800 staff members is needed, distributed as follows:

- NSI and 14 regional directorates (RDs) = 520 (380 at the NSI and 140 in the RDs), of which 217 are available;

- 55 departments: 7 × 30 = 210, of which 54 are available;

- Local communities: 31 + 2 districts = 60 people

Relating this workforce to the 23.5 million residents as of December 31, 2015, we have 29,371 residents per statistician, or nearly 5,000 households per statistician; compared with South Africa, which shows the very best of the continent, much remains to be done. This workforce has technical and scientific skills for the production of statistics.

3.5.2 Physical resources

In this category, we consider the general means required for the production of statistics:

- Computer resources (for example, hardware and software);

- Means of communication and travel;

- Consumables; and

- Required maintenance services.

All these essential means for the production of statistics, according to their specific characteristics, result in the involvement of other players and professionals whom organizations for the production of statistics must now manage.

The organizations must have trained staff to manage them, resulting in a change to the traditional administrative structure of national organizations for the production of official statistics with regard to "logistics."

3.5.3 Financial resources

Here too, financial resources remain the crux of the issue, since it is financial resources that make possible the timely completion of any activity to produce goods; the production of statistics is not immune to that.

For example, staff wages, costs of daily or ad hoc activities, various operating, information and awareness-raising expenses during data collection and dissemination, and various related services must be managed.

Unfortunately, aside from a few countries, including those in the Maghreb, Côte d'Ivoire, Senegal, Cameroon and South Africa, all the other African countries allocate very little money to the production of statistics.
Given the high number of high-priority areas in the countries until them, the production of statistics was ranked as merely "essential." In response to Post-2015, it is now ranked "essential with very high priority."

Consequently, African experts, having compiled the list of relevant indicators for the 17 SDGs and their 169 targets, with their metadata of course, proceeded to estimate the cost of production for the continent for the upcoming years: close to 22 million USD for the 54 countries, with a population of over 1.1 billion residents.

On the issue of funding for the production of statistics, the African charter of statistics requires that a national fund for the production of statistics be created for each AU country.

As well, it is clear that in former French colonies, in taxes and customs duties, there is a provision for a "statistics levy" representing 2% of the total taxes and duties. This levy could be used to sustain the statistics fund. For a country like Côte d'Ivoire, which collects close to 1 trillion FCFA in customs taxes annually, this levy is estimated at $20 billion FCFA (nearly €81 million), while the NSS does not require more than $6 billion FCFA (€10 million) in a typical year.

When the funding requirements for the production of statistics are considered in terms of the national budget, they represent for Côte d'Ivoire 0.1% of the national budget national, which is estimated at 6 trillion FCFA (€10 million).

IV. THE NEED FOR CAPACTIY BUILDING AND TRAINING

Given the above, we can see that the "data revolution" is a situation in Africa that is increasingly undoing its ancestral culture, which left no room for the "future" and for "measurement."

Only, the needs are significant in light of the resources available, whether trained human resources for statistics and demography, or physical and financial resources, the gaps are so large (ranging from single to triple) that real policies are needed to bridge them. These policies must focus on the following:

- Initial training (high quality)

- Job training (ongoing)

- Compensation (attractive)

- Career profile (appealing)

4.1 Training

Statistics and demography professionals in Africa come from two types of training depending on the official language of the country: specialized schools for francophones and universities for anglophones.

The scarcity of scholarships provided by FTPs and the difficult financial situation in most countries have slowed down training in recent years, the immediate consequences being a lack of staff and the aging of that staff.

To address these insufficiencies, it would seem appropriate to resort to national non-institutional training with the streamlined programs used in some countries.
This solution affects only the specialized schools, which have highly selective admissions processes. For those who come from universities, job training seems to be necessary and essential for the occupation.

4.2 Job training

It is no secret that the general and theoretical characteristics of university training cannot be compared with those of an engineering school which, in addition to theoretical training, puts science into practice.

At École Nationale Supérieure de Statistique et d'Économie Appliquée (ENSEA), in Abidjan, training is interspersed with internships in organizations for the production of statistics, thereby ensuring that students will be employable.

By contrast, university students require job training that is more practical than theoretical, hence the need for internal training centres (CFIs) to do the following:

- Teach the ethics of the statistics profession;

- Pass on practical knowledge about the profession to the university students;

- Provide ongoing staff training; and

- Document success stories.

Once properly trained, these people must be recruited and employed in the production of statistics, while ensuring their physical presence in dedicated positions.

4.3 Compensation

History teaches us that statistics and demography professionals have great job mobility, leaving low-paying jobs for jobs that provide more attractive compensation; the greatest flow is from the public sector to the private financial sector (for example banks, insurance or credit companies, and financial boards) even though, in these organizations, they cannot use even 20% of their professional potential (a finding made by us, who have completed various internships in all these organizations).

Therefore, to curb these flows, it is important to offer consistent wages to retain staff trained at great cost. In countries such as Senegal, Côte d'Ivoire or South Africa, consistent wage policies have been implemented; wages rival those of the private sector and are very different from those of the public service.

4.4 Career profile

Although attractive wages attract statistics professionals as much as other workers, it has also been found that what keeps them in their job or in the organization is the career profile. This gives all employees equal opportunities for advancement in the business from a given entry point to the highest level of the hierarchy through quality of work, behaviour and dedication, among other things.

This other tool, the design of which is outside the field of statistics and demography, requires the use of other specialists and human resources (HR) managers now essential to the production of statistics. Naturally, they will also have career profiles.

This leads to one career profile for statistics and demography professionals and another for support staff (HR, logistics, communications and finance managers).

V. DRAFT CAPACITY BUILDING PLAN FOR THE NATIONAL STATISTICS SYSTEM

In this section, we share our experience with other countries and provide an outline of a capacity building plan for an NSS. This plan must be included in the country's NSDS; it is based on a general "state of the nation" that brings together all players in the national statistics community:

- Government;

- Private sector;

- Civil society;

- NSS bodies;

- FTPs; and

- Continental, regional, sub-regional, national and local organizations.

The state of the nation must review the following:

- Offices to house NSS departments and bodies;

- Staff inventory by area of production, grouped in the form of commissions; and

- The status of the production of statistics in relation to SDGs.

As indicated, the capacity building plan outside the offices required to house the bodies of the NSS must add the following to the NSDS schema:

- Institutional framework;

- Production of current statistics;

- Staff;

- Production of routine socio-demographic and economic statistics, and emerging statistics;

- Archiving statistical data; and

- Use of statistical data.

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5.1 Institutional framework

"Institutional framework" refers to the legal and administrative environment in which the work of producing statistics is performed. It requires lawyers trained on the job and training modules on statistical production rights and management.
All players must be informed that texts are available and applicable.

5.2 Production of statistics

It cannot be overstated: The production of reliable, current, relevant, less expensive statistics is possible only if administrative or secondary data sources are given preference; this assumes that the administrative record keeping in question has been organized beforehand with a view to using the records for statistical purposes. Hence the need for a behavioural change to be fostered in staff traditionally assigned to such administrative record keeping, which is possible only through the capacity building to be scheduled.

Alongside this requirement, advances in incorporating ICT innovations into the production of statistics are resulting in other categories of personnel and other methodological approaches.

Here, education on new methods in emerging areas (for example the environment and GPS) is necessary for everyone, providing numerous areas for capacity building. This concern is well understood by the AU Commission, which has created a statistical training centre that will make it possible to capitalize on success stories and that will share new methods as part of SHaSA.

The other resource, the Centre africain de la statistique, will develop new methodological approaches, in co-operation with organizations such as AFRISTAT or universities, to be shared with member countries.

Once produced, the statistics are released and disseminated for use. These different steps require staff with different qualifications (for example communications or research) that need specific capacity building that focuses on a proper understanding of statistics and their interpretation.

To go from statistics to decision-making, another type of staff is needed that has been trained to make decisions on the basis of statistics.

5.3 Resource mobilization and management

The organizations in charge of producing statistics must now, in addition to handling the technical aspects of producing statistics, manage human, physical and financial resources that must first be budgeted and mobilized. Everything that requires technical knowledge that can be included as part of capacity building. The numerous round tables and resource mobilization meetings organized here and there are evidence of this.

Conclusion

In conclusion, it should be remembered that Africa began its data revolution in the last decade with the SDSA and the SHaSA. Africa has shown a true desire to have the next generation produce its statistics. Only, to realize this legitimate dream, the continent must accept the need for capacity building in human resources, the production of reliable, relevant and current statistics, and the effective management of available resources. Today, the saying that we must not give people fish, but rather teach them to fish is fitting for the continent.

An example is the work undertaken by Africa in recent months to address SDGs. In a show of continental solidarity regarding the AU Commission and support for South Africa, the continent is ready for Post-2015.

As well, most African countries have created a five-year plan for 2016-2026 that should lead them to emergence, in perfect harmony with the Africa's Vision 2063 and the CAP on SDGs. As in areas of development, including the production of statistics, capacity building has become an ongoing action that contributes to sustainable development.
Do people not remain at the heart of development as a player, beneficiary and purpose?

For Africa, the statisticians of the future must be able to communicate at least in French and English. They must be capable of going beyond production to prepare decisions on the basis of relevant, reliable, true statistics. In that way, the continent will be able to continue its data revolution.

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