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Parallel Session 6.3: Agricultural and Rural Statistical Development – Capacity Building - What Works? What Does Not? What Challenges Will Integration Bring?

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Title: The Agricultural and Rural Information System Development in Sub-Saharan Africa and the Challenges of Capacity Building to Address Policy Design and Monitoring-Evaluation Needs

Abstract

There has been no sustained effort to develop National Agricultural Statistical Systems (SNSA) in Africa. Such systems have functioned better during periods of real demand from decision-makers to address a particular situation requiring objective economic policy decisions or with the existence of a source of financing and the availability of real production capacities. This situation is largely illustrated by that of Cote d'Ivoire, where the period of a favourable international context for its export produce (coffee and cocoa) was also the time when agricultural statistics functioned best. Another experience is that of the CILSS countries, where the 1983/84 food crisis made it necessary to forecast crises and streamline interventions. This led to collaboration between the governments and Technical and Financial Partners to set up a reliable and sustainable information system on food security that met the data requirements for operational decision-making.

The context today seems to be most favourable for the development of effective and sustainable SNSAs as it is characterised by a general consensus on democratisation, decentralisation and PRSPs as new forms of governance and economic policy management, and by global commitments such as the attainment of MDGs, regional integration and the globalisation process. Aid effectiveness, results-based management and accountability have become key guiding principles for interventions. This implies data needs and new tools for the formulation, monitoring and evaluation of economic and social policies, particularly in the area of agriculture and rural development. For more effective policy formulation, SNSAs must now provide decision-makers with information on the socio-economic situation of rural and farming households and on the situation of agricultural holdings and the sub-sector, particularly production conditions, constraints and economic performance. Similarly, the implementation of programme budgets and MTEF's as tools for budgetary planning by objectives requires special data and reiterates the need for SNSAs, for effective resource allocation. For adequate implementation of such measures, it is necessary to calculate the cost of strategies and policies, particularly the unit cost of policy outcomes, which must be

backed by specific information systems. Lastly, impact assessments must be mainstreamed with the aim of selecting the most effective policies.
To meet all these needs, a number of areas for the statistical capacity building of African countries has been identified and must be implemented for the preparation of SNSAs to sustainably cover this ever-increasing demand.

1. Purpose of Paper

The track record of African agricultural statistics is characterised by fine moments and successful examples of the development of national and regional agricultural statistical systems. National agricultural and rural statistical systems of sub-Saharan African countries have evolved in a chequered manner with the pace of the process dictated by international agricultural trends and the financial health of governments, as well as the direction/focus of both bilateral and multilateral policies on statistics.

This paper seeks, first, to review the trend of African agricultural statistics and to determine the key factors for success and good practices in this area. It then addresses the context of current agricultural policies, the scope of information needs engendered and the challenges involved in creating sustainable National Agricultural Statistical Systems (SNSAs) that are capable of meeting the ever increasing demand for data. Lastly, it makes some recommendations on key areas of capacity building.

2. Brief Background

Agricultural and rural statistics in sub-Saharan Africa have developed over two periods, depending on the country and the importance given to agricultural policies.

African nations were almost exclusively agricultural economies during the colonial era. After independence, agriculture became the core sector for the economic growth and development of the young nations. Efforts were therefore made to collect and disseminate the agricultural statistics necessary for monitoring production as well as economic and agricultural development programmes and plans.

During the colonial era, agricultural data was produced by agricultural extension services, based on the estimation methods of experts. The 1960-1970 decade was characterised by the setting up of agencies for the collection and dissemination of agricultural data. The methods used during that period differed from country to country. Sample-based agricultural surveys were introduced at the time by countries such as Côte d'Ivoire (regional agricultural surveys between 1962 and 1966), Cameroon, the Democratic Republic of Congo, the Central African Republic, and others. It is only in the early 1970's that attempts were made in some countries to put in place National Agricultural Statistical Systems (SNSAs), in view of the favourable international conditions for export produce (coffee, cocoa and cotton); and for other countries, information systems were developed in support of planning systems (advent of the African Household Survey Capability Programme, AHSCP), with the strong involvement of development partners such as UNDP.

Countries such as Côte d'Ivoire successfully set up and operated their SNSAs from 1970 to 1984 by conducting a General Census of Agriculture (RGA) in 1974 and regularly producing, through an annual national survey, data on coffee, cocoa and food production forecasts and

estimates for the entire country, to meet the demands of users. This system functioned with financing from the Government whose own stable resources were generated then from the stabilization of commodity prices, as well as from the importance the authorities attached to statistics, with the significant support of French technical assistance. The coffee/cocoa crisis in the wake of falling international market prices, declining Government resources and the suspension of French technical assistance led to the failure of Cote d'Ivoire's SNSA, which stopped functioning in 1984. In Cameroon, the SNSA became operational after the 1984/85 agricultural census and the setting up of a permanent survey system, until 1992 when the technical and financial support from USAID as well as financing from the Government, which was then experiencing an economic crisis, were stopped. Another interesting example is that of the Central African Republic, which established its SNSA from the 1972 RGA and set up a permanent agricultural statistical system, which functioned until 1985. As from 1987, the Central African SNSA was affected by the economic crisis, but continued to operate until 1996 when external funding was withdrawn.

It can be said from these experiences that African SNSAs existed and functioned better during periods when there was a real demand from decision-makers to address a situation or specific economic policies and also in times when there was a reliable source of financing and the availability of real production capacities.

Whenever agricultural data is needed for the survival of an economy, a population or a sector of the economy, the financial and human resources needed to produce such data has always been mobilised. This is the case even for countries where the agricultural statistical system has broken down; statistics for important products such as coffee, cocoa and cotton continue to be produced regularly from the relevant sources.

3. An example of good practice

An example of good practices in the area of statistical capacity building in Africa is that of the CILSS[1] countries with the establishment of an information system on food security as part of the project for Improving Ongoing Diagnostic Instruments for Regional Food Security (DIAPER). The Sahel countries gradually put in place information systems on food security to deal with the bouts of droughts experienced since the mid-1970s, with the most devastating one occurring in 1983/1984. These systems have provided the necessary information for the timely detection of looming food crises and to institute the needed measures. The information systems on food security in CILSS countries stemmed from a food crisis situation and demand from governments and the international community, for operational decision-making to address the food situation of the population. Against this backdrop, the governments of the CILSS countries collaborated with donors (European Union, bilateral partners) to set up reliable information systems, through the rehabilitation of the structures responsible for producing agricultural and food data, using technical assistance and external financial support. The rehabilitation involved the strengthening of such statistical production structures through support for training, the development of methodology and the financing of data collection operations. Thanks to this support, reliable and suitable methods were developed for the estimation and forecasting of production and the formulation of methods for obtaining estimates of the main items of commodity balance sheets (output, stock, consumption ratio, etc.) and the preparation and dissemination, on specified dates, of the projected grain balance to be followed by final grain balance. This grain balance became an important information

[1] CILSS: Permanent Inter-State Committee for Drought Control in Sahel

tool for governments and Technical and Financial Partners (TFP) to put in place famine prevention measures. This mechanism is complemented with the collection of data on markets (prices, trade flows, stocks, etc.) and early warning (identification of vulnerable areas and populations).

The project responsible for this success has focused mainly on capacity building in the following areas: (i) methodology development, (2) training, (3) financing of operations, and (4) institutional aspects.

Methodology development: Information material needed for decision-making is produced (collection, processing, storage, dissemination). The production of agricultural data requires the use of statistical methods and tools, but the application of such methods and tools, which are developed for countries of the north, poses a number of problems for developing countries as the African context and realities differ from those of other parts of the world. It became necessary for the project to adapt the international concepts and methods. For example, the definition of the agricultural holding had to be adapted to reflect farming practices in Africa, while the volume of farmers' storage required the design and application of a special survey method. The establishment of an agricultural information system within the African context therefore often requires substantial methodology work and constitutes an important area for statistical capacity building.

Training: Agricultural statistical services should either be fully established or overhauled, and the links of the data production chain entirely reconstituted. An efficient survey mechanism must have good personnel skills mix in the design and management of data collection mechanisms, field data collection and control, data input, processing and storage as well as data analysis and dissemination. Capacity building needs have often covered those of data collection, control and processing agents. For each link of the chain, it is necessary to train a critical mass of personnel to perform the different statistical tasks. The organisation and financing of targeted training (theoretical training, specialist technical support, seminars, retraining, etc.) has helped create capacities for the functioning of these mechanisms. Annual audits of the data collection mechanisms have somewhat ensured the quality of the data produced. Management of the project at the regional level has helped achieve economies of scale and a fair harmonisation of methods and practices.

Financing of Operations: The financing strategy for the setting up of the information system was designed with emphasis on cost-sharing between the member States and TFPs. The latter financed part of the national operations and some regional activities. Member States contributed by providing professional staff, premises and some logistics. Financing was in the long-term and involved several phases of the project with a view to ensuring ownership of the activities by member States. There were a total of three 5-year phases, with the last one incorporating a strategy of gradual withdrawal of external financing and gradual financing of project activities by the governments from their own budget resources. This process is expected to enable nationals of member States learn and take over the statistical activities and their financing from government budgets.

Institutional Aspects: The institutional aspects of this experience are also worth mentioning. Alongside the implementation of the technical activities, efforts were also made to organise all data producers and users to initiate dialogue among themselves on food security. This dialogue made it possible to identify and share production and dissemination tasks and form a community of users for more effective formulation of needs and advocacy for the system.

Two types of situations can be deduced from this account of the background to SNSAs in French-speaking African countries. There is, on the one hand, the countries that experienced situations of serious food crises and which therefore developed and still maintain functioning information systems for which the process of sustainability has been set in motion with substantial support from TFPs and the regular production of data that is actually used in decision-making by governments. On the other hand, there are those countries that have not experienced the same situation and which do not have such well developed SNSAs.

4. Challenges

The social, economic and political context of African countries is currently characterised by a new form of governance with the advent of democracy, development of the civil society, decentralisation and PRSPs. This trend is accompanied by a desire for economic integration and opening up to globalisation. In the face of development challenges, the international community and governments have made major commitments such as the fight against hunger, poverty reduction, MDGs, etc. The fixing of common development objectives to be attained within a determined timeframe calls for new forms of governance, management and decision-making. Aid effectiveness, results-based management and accountability have become key principles to guide interventions. This implies the need for data and new tools for the formulation, monitoring and evaluation of economic and social policies, in general, and in the area of agriculture and rural development, in particular.

The challenge today is to build SNSAs that can meet the pressing needs of multiple users, including governments, local authorities, regional and international organisations, private sector operators, civil society, etc.

There are several key areas where there is need for improved data:

1- Data to describe the socio-economic situation of rural households and the agricultural sector: This refers to statistics, indicators and detailed analyses of the socio-economic situation of agricultural and rural households (farming, livestock breeding, fishing) to establish a reference situation, describe the problems, formulate solutions and set objectives for the socio-economic development of the rural population. Such data underpin the formulation of social policies for rural dwellers and make it to possible to regularly measure the progress achieved. To this end, efforts are made, as part of the PRSPs, to conduct socio-economic surveys (income and expenditure surveys, priority surveys, CWIQ surveys, population and health surveys, etc.) in which farming households form a category that enables analysis of the specific problems of this section of the population even though the size and geographical distribution of the samples do not permit the targeting of specific measures for farmers.

2- Data to describe the situation of agricultural holdings as units of production: This refers to statistics, indicators and detailed analyses of production conditions and the performance of agricultural holdings to back the formulation of agricultural policies (product promotion, extension, modernisation, farm income policies, competitiveness policies, export promotion, etc.). The survey system proposed by FAO to cover data needs responds to this concern. It starts with a general agricultural census, with satellite modules, to address specific issues. The World Census on Agriculture 2010 proposes solutions to problems of optimisation and integration of data sources. Unfortunately, the number of sub-Saharan African countries that

can meet this demand is still low, and those that have been able to conduct one or two general agricultural censuses have still not established a permanent agricultural statistical system.

3- Data and information for more effective programming and management of development initiatives in the agricultural sector: The current context of results-based management calls for a certain level of efficiency in the allocation of resources to agricultural and rural development sector strategies, projects and programmes. The demand for results calls for the periodic assessment of strategies and programmes implemented, by comparing resources committed with results actually achieved. Programme Budgets and Medium-Term Expenditure Frameworks (MTEFs) are tools for budgetary planning by objectives, and are now being adopted and implemented by African countries. The implementation of programme budgets and MTEFs makes renewed demands on SNSAs. For adequate implementation of such measures, it is necessary to calculate the cost of strategies and policies, particularly the unit cost of policy outcomes (e.g. the cost of a 2-percent increase in the use of veterinary services by livestock breeders). Promoting the preparation and utilisation of agricultural sector satellite accounts could fill this gap. Providing such tools will require, among others, the setting up of Management Information Systems (MIS) for the agricultural sector. This information system should pool all data on agricultural sector projects and programmes and those relating to financing by component (staffing, operation, investment) and by source (budget, projects, NGOs, etc.), operational and intermediate outcomes. The MIS is still not in operation in several African countries. Data on numerous agricultural sector projects and programmes are not archived for comprehensive processing to obtain an overview of the operations, measures taken and the results achieved. Efforts should be made to put in place such a management information system.

4- Data for assessing the impact of agricultural policies: In Africa, the practice of assessing policy impact is generally poor. Studies are rarely conducted due to low demand from users, poor technical capacity to conduct such studies and the lack of statistical data. With the current situation where decision-makers have to account for economic policy decisions implemented, it is important that impact assessments are carried out to quantitatively and qualitatively measure the actual contribution of options taken to the attainment of results. Such assessments should help to consolidate or reorient policies and programmes and enable more effective allocation of scarce resources. The demand for this type of studies is expected to increase. African statistical services must make provision for data production and the technical capacities needed to conduct it. Existing data on farming households, agricultural production and holdings as well as agricultural sub-sectors is useful for the conduct of such studies. Other special ad-hoc mechanisms could be put in place to complement and enrich the existing data (panel data).

5. What are the Areas for Capacity Building?

The issue of the development of agricultural statistics in Africa cannot be stated in technical terms only, but also in terms of institutional, human, financial and organisational capacities for the production, analysis and dissemination of agricultural statistics.

At the technical level, field operations and work carried out in this regard by international and regional organisations (FAO, CILSS, AFRISTAT) for several decades have made it possible to obtain methodological tools that are adapted to the production, analysis and dissemination of agricultural statistics. The general agricultural census process and the setting up of integrated agricultural data systems approach have been mastered; survey methods are

documented; specific methodologies exist (nomadic and transhumant livestock census, fruit and vegetable production survey, herd monitoring survey, estimation of farm stocks survey, family slaughter survey, cereal consumption survey, etc.) and methods for the construction of synthesis tools are documented (agricultural and food products supply/utilisation account, food balance, grain balance, national accounts, etc.).

The difficulty with the issue of the development of SNSAs in Africa lies in the institutional aspect. The sustainability of statistical systems depends on the existence of demand, production to meet that demand and a system of financing to support production. In the current context, demand has become increasingly precise (policy monitoring and evaluation through the PRSPs, sector strategies, MDGs, regional integration and others) whereas there is no financing mechanism for production. The production of statistics, like any other economic output, is a process with the same stages (research and development, infrastructure and equipment, skilled manpower, latest technology, etc.) that requires planning and implementation to ensure a flow of ready-to-use products. Without rigorous planning of statistical production, policy needs emerge when SNSAs are ill-equipped to meet those needs. Planning of statistical development must be one of the key areas for statistical capacity building in African countries, and agricultural statistics must become a complete sector in its own right given its importance and its special nature. Current efforts to formulate and implement the National Strategies for the Development of Statistics (NSDS) must be supported. The necessary investment for setting up an efficient and sustainable African Statistics System (ASS) that produces reliable agricultural statistics to meet every demand must be well identified and integrated into the NSDS.

The key investments needed for the revival of production are:

The creation and maintenance of statistical infrastructure: Sampling frames constitute important infrastructure for agricultural surveys; their creation and maintenance facilitate the implementation of sample surveys. There are several types of sampling frames for agricultural statistics, including (1) list of agricultural holdings, (2) area sampling frames, (3) list of orchards, (4) inventory of market gardening sites, (5) list of herds, (6) inventory of watering points for livestock, (7) list of abattoirs and slaughtering areas (8) list of fishing units, (9) villages with fish landing sites, and (10) inventory of agribusinesses, etc.

Establishment of efficient agricultural statistical services: It is necessary that statistical services are equipped to regularly monitor the agricultural sub-sectors (farming, livestock breeding, fisheries, etc). The conduct of periodic surveys and exploitation of administrative sources for the production of the data and indicators needed for monitoring the sub-sectors require that the services are staffed with qualified personnel who have sound knowledge of all the different stages of the data production chain (sampling, collection, processing, reconciliation, tabulation). In view of past and current experiences, this could involve extensive work and will need the support of Technical and Financial Partners, and of regional and international statistical capacity building organisations (AFRISTAT, CILSS, SADC, COMESA, FAO, ADB). Providing support for training of agricultural statistical services is essential to the strengthening of African SNSAs.

Creation of data analysis (evaluation) expertise: The formulation of agricultural strategies and policies calls for clear diagnosis of the agricultural situation and proper analysis of trends. It would be important for all the countries to have an agricultural profile at regular intervals, and which incorporates aspects of the classification and description of the socio-economic

situation of farmers and rural dwellers, as well as the constraints, opportunities and performance of agricultural holdings and sub-sectors. This requires having the relevant expertise for proper exploitation of agricultural and socio-economic data from several sources.

Creation of skills in the monitoring and evaluation of agricultural programmes and policies: The current concern is that of calculating the cost agricultural development action plans and assessing the effectiveness of agricultural policies and programmes. Capacity building in this area also covers that of the organisation the sector's management information system, support to the development of statistical tools (agriculture sector satellite account) and the monitoring and evaluation of agricultural policies.

6. In conclusion

The current political and economic context characterised by democratisation, decentralisation, PRSPs, MDGs and major international commitments provides an opportunity for the development of statistical systems, in general, and national agricultural statistical systems, in particular. It is necessary to propose changes, and plan and base their implementation on obtaining measurable and verifiable data-based results. This contributes to streamlining agricultural data needs and increasing their utilisation for the formulation, monitoring and evaluation of policies as well as the justification of investments for the development of statistical systems. The capacities, infrastructure and statistical tools needed for the rehabilitation and upgrading of national agricultural statistical systems to meet this demand have been identified. The challenge continues to be the proper planning of the sustainable development of the statistical system. The NSDS represent hope and their implementation is very much awaited.

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