

GENERAL DATA DISSEMINATION SYSTEM, (GDDS PHASE 2)

MISSION 3 – GHANA - REPORT

TECHNICAL ASSISTANCE

**To the Agriculture Statistics Section (ASS)
of the GHANA STATISTICAL SERVICE (GSS) and
to the Statistics Research and Information Directorate (SRID)
of the Ministry of Food and Agriculture (MoFA)
Accra**

February- March 2009

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March 23, 2009**

Table of Contents

	Page
Preface: Preparations	3
1. Summary and main findings	4
2. Observations about the situation in Ghana	7
3. Priorities	8
4. Activities during this mission <i>(see Annex XIII)</i>	9
5. Deliverables	9
6. Design and content of the Module	11
7. Wider statistics issues in Ghana	12
8. Intended deliverables of Ghana's GSS	12
9. Agreed timeframe of the actions	13
10. Working relations	13
11. Recommendations	13
12. Other donors involved	16
ANNEX I: TOR's For Technical Assistance	18
ANNEX II: GDDS2 Third Mission Workplan prepared with the clients <i>(please see a separate digital file named 'Proposed program Mission 3 Ghana ver2.doc')</i>	21
ANNEX III: Analysis of Agricultural Surveys in Ghana Framework <i>(please see a separate digital file named 'Analysis of Agricultural Surveys in Ghana Framework.doc')</i>	22
ANNEX IV: Analysis of Publications Ghana <i>(please see a separate digital file named 'Analysis of Publications Ghana.doc')</i>	23
ANNEX V: Invitation to agriculture statistics producers meeting <i>(see a separate digital file named 'INVITATION_TO_AGRIC_STATS_PROD_MEETING rev AT')</i>	24
ANNEX VI: Powerpoint Presentation by Nii Quaye-Kumah <i>(see a separate digital file named 'Agricultural Statistics Collection in Ghana')</i>	25
ANNEX VII: Powerpoint Presentation by Mr. Banini <i>(see a separate digital file named 'COLLECTION OF AGRIC STATS BY SRID Banini')</i>	26
ANNEX VIII: Powerpoint Presentation by George Nipah <i>(see a separate digital file named 'Veterinary services Directorate')</i>	27
ANNEX IX : Powerpoint Presentation by Magnus Ebo Duncan <i>(see a separate digital file named 'National Accounts Agric')</i>	28
ANNEX X : Powerpoint Presentation to agriculture statistics producers <i>(see a separate digital file "Workshop Presentation by Terjanian Part 1")</i>	29
ANNEX XI : Powerpoint Presentation to agriculture statistics producers <i>(see a separate digital file "Workshop Presentation by Terjanian Part 2")</i>	30
ANNEX XII: Powerpoint Presentation by Francis Dzah <i>(see a separate digital file "PROD & DISS OF AGRIC STATS BY GSS")</i>	31
ANNEX XIII : Activities during this mission	32

Preface: Preparations for the mission

The contract for this mission was issued in January 2009 and the final Terms of Reference for it were agreed upon in early February 2009. This mission was scheduled back-to-back with another GDDS mission undertaken by this consultant in Swaziland to enable savings in travel costs.

Upon signing the contract the consultant gathered documentation necessary for the mission based on the Terms of Reference drafted by the GDDS Module Manager. The research undertaken by the consultant covered documentation in offices of international organizations and on websites of these organization as well as correspondence with other experts in the field.

Contact was established with the Ghanaian counterpart and logistical issues were hammered-out. An understanding of the needs of the counterpart was confirmed.

In the meanwhile preparations for health requirements were undertaken including vaccinations and related certificates required for entry to Ghana.

Travel plans were confirmed with the AMEX travel office and finalized around the end of January 2009.

I am grateful and personally indebted to Mr. E.S. Boyko, Agriculture Module Manager, for his support throughout the missions, for his excellent suggestions and source material and for editing this report. (A.T.)

1. Summary and main findings

This Mission builds on the observations made during GDDS Agriculture Mission 1 and Mission 2 to Ghana.

Following the elections in December 2008, a change of government has occurred in Ghana, and a climate of austerity has swept the public service. The austerity intentions voiced by the new Government have led to a degree of uncertainty which is now facing the original plans for taking a Census of Agriculture in 2011, immediately following the 2010 Census of Population and Housing. Some doubts are also being expressed on whether the Government of Ghana without or even with the help of the donors will be able to fork-out the funds necessary for the Census of Agriculture field operations a year after they pay for the Census of Population. More doubts have been expressed on whether the Ghana Statistical Service (GSS) is able to obtain, absorb and manage efficiently the funds needed for Census of Agriculture collection operations, one year after collecting the Census of Population and Housing.

While agriculture in Ghana has gone through important structural changes during these last decades about which no reliable information is available, the “basic framework” information on agriculture normally collected through a Census of Agriculture is still lacking and will not be available anytime soon. If the few agriculture-related questions planned for the 2010 Census of Population and Housing are successfully collected, then some basic framework data and benchmarks on Ghana’s agriculture will reduce this stress.

As stated in the Mission 2 report, the staff in charge of Agriculture Statistics does not yet have the budgets necessary to start “preparatory work” for the Census of Agriculture. GSS has still not collected any agricultural statistics and relies on data collected by other Ghanaian Government Ministries (and international organizations) to produce National Accounts tables and service user requests.

During this mission, I conducted an in-depth study of the existing sources of agriculture statistics in and about Ghana. I analyzed these sources and the vehicles and software used, the publications produced and their effect on the compilation of Ghana’s National Accounts and on other Government programs to alleviate poverty and promote economic and social progress in Ghana. The results of this analysis are summarized in matrix form in Annexes III and IV.

A workshop was held with Ghana’s Agricultural data producers during which the data producers described their activities and data needs. This consultant provided recommendations for implementing up to date techniques for conducting Annual Agricultural Surveys and for the improvement of existing surveys. The workshop made the data gaps obvious and also helped some of the data producers know better what is available from other producers. This exercise was particularly useful for the System of National Accounts.

This Mission's main conclusion is that: While there is room for improvement (constantly and at all stages of the data/statistics/information processes) Ghana does possess good know-how on agriculture statistics collection and compilation. The problem faced by Ghana is in the execution. What is missing is the adequate detailed planning, programming and budgeting for the surveys designed to fill the existing data gaps in a sustainable fashion, as well as long-term commitments for funding from the government and to a certain extent from the donor community, in a coordinated fashion.

Efforts to collect agricultural data in Ghana are scattered, and although they are adequately financed at the time they are initiated, after a few years, the surveys end-up not being taken at all or taken incompletely for lack of resources. The Problems of "lack of resources" expressed by the client are well founded, but the GSS and SRID are also suffering from poor organisation and planning for the optimal and sustainable utilisation of available resources: If computers are decentralised and distributed in Region/ District offices, they must be protected against virus attacks and have regular data maintenance procedures. Updating virus/worm protection cannot be done unless the unit is connected to the internet. In the absence of the internet, the isolation of the unit from infection is an essential security concern. Proper antivirus protection is required and proper data management and preservation procedures are essential to preserve and manage the collected data. Many cost-cutting measures need to be implemented such as: GIS, GPS, eliminate duplication / share resources with other departments, photocopying and offset printing as well as electronic and internet publishing.

The needs for timely and valid agricultural statistics are pressing. For example, indicators are required for Veterinary animal health, immunizations etc. About 85% of the country's 1.8 million farms are smaller than 2 hectares but yet agriculture employs about 70% of the rural labor force and contributes 45% of the country's GDP beside the enormous responsibility for meeting over 90% of the food needs of the country.

Questions such as: How much Agriculture land is being lost to "surface sand mining for construction" (Sand winning)? What effect will this have on Ghana's long term capacity to feed its people? Are often asked and no answer is readily available.

Important programs such as the Ghana Economic Recovery Program (ERP) and the Ghana Poverty Reduction Strategy require vast amounts of data

Information is needed to develop programs that directly help the villagers to produce more, sell more, and earn more. And most important, these programs must be designed to engage the village communities so that the program becomes sustainable over time... Many important government and donor programs require more complex data: Medium Term Agricultural Development Program (MTADP) of the Ministry of Food and Agriculture (MOFA) (part of MDG). This has necessitated the formulation of the Accelerated Agricultural Growth and Development Strategy (AAGDS) with five key elements, which are:

- Promotion of selected products through improved access to markets.

- Development of, and improved access to technology for sustainable natural resource management.
- Improved access to agricultural financial services.
- Improved rural infrastructure.
- Enhanced human resource and institutional capacity.

Ghana is known to have recently achieved (comparatively to neighboring countries) impressive gains in growth performance and poverty reduction in rural areas, although a benign external environment in terms of agricultural export prices has helped. But the validity of these observations is shadowed by poor data sources. Furthermore, productivity is known to have remained low in agriculture (in general except for some promising cash crops). Irrigation is almost nonexistent, and Ghana's agriculture still depends largely on weather. Considerable long term achievements are still needed before MDG's are reached.

2. Observations about Agricultural Statistics in Ghana.

Several institutions in Ghana collect and disseminate agricultural data. The Ghana Statistical Service (GSS) has been able to collect a Census of population successfully in 2000 and is advanced in plans to collect the next decennial census of population and housing in 2010. This is a good indication that there are capable people and the institution itself is running well enough to put together an operation of this magnitude. While a constant need exists for re-training, there is no reason why the GSS cannot organize to collect also a proper Census of Agriculture and coordinate the collection, validation and dissemination of agricultural sample and annual surveys and statistics in Ghana.

The Ministry of Agriculture and Food (MoFA) is also well equipped with trained staff and related software and hardware. Among these, the Directorate of Statistics, Research and Information (SRID), created in 1999, has received training and software from the FAO at several points in time. They use the Multi-Round Annual Crops and Livestock Survey (MRACLS) to collect raw data on Basic Agricultural Statistics (age and sex distribution of farmers, farming intensity), Area Cultivated and Yield per ha etc (see Annex VII). MoFA's Veterinary Services Directorate also compiles and disseminates valuable statistics on agriculture (see Annex VIII). The former Fisheries Department is now merged with MoFA. It also still has excellent trained professionals with experience in fisheries data collection and related software for which the FAO provided training and support.

Ghanaian government policy on decentralization (to the district level) has had positive effects in many areas; for instance the use of Agricultural Extension Officers' regular visits to the farmers in their district to collect statistical data for SRID surveys has led to cost efficiencies. This does not mean that giving responsibility for data collection to MoFA district offices will also give them reliable statistical data at the same district level, unless the sample size and/or the sampling scheme are modified. In other words, a sampling scheme designed to give reliable data at the national level cannot be used, without adjustments, to give reliable data at the district level too. As an example in case, this consultant was shown the formula used by SRID to blow-up the sample taken at the district level. The formula was correct. The data obtained was however way off. It was obvious that the district level people wanted to avoid missing on some specialty-crop operations in the district and made sure to include them in the sample, thus biasing it.

Other agencies, such as the Cocobod and the Cotton Board are also collecting agriculture information on an exhaustive basis in their area of specialty and are publishing related agricultural statistics.

At present the System of National Accounts maintained by GSS attempts to integrate the data made available by these different producers. But considerable gaps exist in the system due to the fact that some of these data series and annual surveys are not being carried-out because of lack of adequate funding for equipment, for maintenance and for staff.

It is clear that the ‘economic crisis’ that is grabbing headlines everywhere has had its effect. In Ghana, a change of government has occurred at a critical time for the decision to take a Census of Agriculture and to commit funds for it at this conjuncture. The new Government is bent on cutting government expenditures. This makes it very difficult to obtain budgetary commitment for the cornerstone of the agriculture statistics system at this time.

Not unlike other statistical operations in other countries, agriculture statistics in Ghana suffer from operating with modest resources in an environment of scarce and sometimes reduced government funding. Funding for the Agricultural statistics activities will have to be secured from the Finance department and or donors. Problems are often experienced in the payment of salaries – some fieldworkers have not yet been paid and this is causing unhappiness, especially since they have to use their own money for transport. Care must be taken to streamline the financial processes to ensure that they are paid on time and according to schedule. One main problem often cited is : Lack of transport – the field teams do not have any official transport and must therefore make use of public transport which causes delays and of course, with salaries not being received on time, it becomes a very costly affair.

Several statistics producers in Ghana have indicated that the piece-meal approach adopted by the donor community is making it difficult for the investments made by individual donors to remain sustainable in the long run. The economic roller-coaster to which many less developed countries (LDC), including Ghana, have been subjected to has made it difficult to budget on a long-term sustainable basis. Improved donor coordination can help alleviate this situation.

3. Priorities

There is now more reason to worry than what this consultant expressed in the Mission2 report last December about the realistic possibility of holding a 2011 Census of Agriculture in Ghana immediately following the 2010 Census of Population and Housing. Time is running even shorter now, and it is very important to prepare and present ‘convincing’ detailed plans, scheduling of tasks and related budget requests to GSS management and hence to the people holding the financial strings in the Ghanaian Government.

While the Agriculture Statistics Producers’ Workshop held at the end of this Mission was useful in bridging the information gap between statistics producers, a number of statistical gaps (white spots) are still evident. Some of the data gaps identified in the “Analysis of Agricultural Surveys in Ghana Framework” and in the “Analysis of Publications Ghana” (see Annexes III and IV of this report) are planned to be filled by the planned 2011 Census of Agriculture (e.g. Vegetables). Some priority data items, however, will not be collected on the census of agriculture questionnaire and hence must be considered for sample surveys to be collected in the inter-censal period. The PowerPoint presentation made by Dr. Magnus Ebo Duncan of the System of National Accounts (see Annex IX) indicates the type of data that will need to be collected on inter-censal surveys to allow the compilation of Gross Domestic Product figures. Should the Census of Agriculture questionnaire developed during GDDS Mission2 be adopted, there will be supplementary sample surveys required to obtain more detailed and specialized agriculture, Fishery and Forestry data. These supplementary surveys can use the 2011 Census of Agriculture as a sample frame if the census of agriculture budget is increased and it becomes a full enumeration census. Otherwise, the exhaustive Census of Population and Housing with its ‘hook’ questions to identify farm households will have to be used as a sample frame. In addition, when a question (such as, for example, the one that identifies farms with a certain type of irrigation system on the Census of Agriculture) helps produce a list of farmers with that characteristic, a supplementary (sample) survey can be based on the list extracted from the Census of Agriculture.

Another important priority identified during this mission has to do with problems encountered in the sampling procedure for Agricultural surveys. It is important to provide the Agriculture statistics community in Ghana with some refresher courses on sampling and even send an expert to help review the sampling designs and field procedures for the major agricultural surveys.

4. Activities during this mission

(see Annexe XIII)

5. Deliverables

A complete review of the current and planned Agriculture survey activities in Ghana was conducted during this Mission with the help of colleagues from SRID and staff from the Agriculture Statistics Section (ASS) of GSS.

It was made clear to the client's representatives in Ghana that Agriculture statistical systems are based on an integrated arrangement of statistical information from sample surveys, censuses and administrative sources.

Considerations for the use of data derived from administrative processes were explained: Administrative data have numerous uses in the survey process. Administrative data can be used for: (1) frame creation and list maintenance, (2) stratification and sample selection, (3) assisting with editing, imputation and estimation, and (4) comparative analysis which is useful in validating survey information

Recommendations were made at every stage of the process for conducting agriculture statistics surveys. This involved the scope of the survey(s) (including how to establish priorities for content). It also involved the questionnaire design process and the different types of software that can be used. It is to be noted that The Bill and Melinda Gates Fund has provided a US\$ 5.6 million grant over two years to allow 17 African countries identified, through the FAO country statistics information system (CountrySTAT), to substantially improve the quality, accessibility, relevance and reliability of their national statistics on food and agriculture. In so doing, it will facilitate planning and decision-making by policy makers and analysts, particularly in the push to reduce hunger and poverty." CountrySTAT offers a web-base software suitable for the dissemination of aggregate data. Ghana has been participating in this initiative and had been selected from the start.

This consultant also explained the ways the various agricultural surveys will be integrated with the forthcoming Census of Agriculture for Ghana to form an "integrated statistics system". How to cover and link the various sub-populations in the "intercensal period" was also explained. In Ghana an important distinction is necessary between commercial farm operations and subsistence / part-time farming activities and special care needs to be taken to identify and maintain a register of commercial agriculture operations and develop a special sampling procedure to cover them adequately.

The data collection procedures are still traditional in Ghana. However, with the increased penetration of telephones in all strata of the Ghanaian population some advanced data collection systems can be envisaged in the foreseeable future. The large decrease in price of GPS equipment and their versatility and ease of use led this consultant to recommend replacing the traditional and complicated tape and compass method for area measurement by the use of GPS equipment and related systems.

In most cases for Agriculture, Fisheries and Forestry statistics in Ghana the software used has been provided by foreign donors (see Annexes VI, VII and VIII) . We have already mentioned CountryStat, this consultant had recommended the use of the CSPro system made available by the US Census Bureau freely. For data on fisheries, the systems used have evolved from the use of Lotus 123 worksheets in the beginning to the use of systems provided by the FAO such as ARTFish. In forestry the major forests are managed by the Ministry of land and Forests. They have developed/adapted a sophisticated centralized database and tracking system for wood harvesting, transportation and export called: FROGI. They collaborate with the International Tropical Timber Organization (ITTO). While training has been made available, in some cases (particularly in the case of MoFA's field offices, adequate protection from viruses is lacking and in some cases data has been lost. Adequate protection and back-up measures were recommended.

Metadata is in most cases non-existent in Ghana's agricultural statistics or under-developed. Recommendations were made for Sampling error calculations for important estimates; for documenting the methods used so users are properly informed; producing a Dictionary for concepts and definitions; use of Data classifications and production and dissemination of Geographic maps to allow the user to know the areas for which data are published.

Harmonization recommendations were made for all agricultural surveys as well as harmonization with data on the agriculture population collected on the Census of Population and Housing.

The Agriculture Data Producers workshop was held successfully at the end of this Mission and brought together the major players in this field in Ghana. Ghana's Government Statistician, Dr. Grace Bediako honoured us by her presence and active participation during the workshop. The PowerPoint presentations made by all those who participated have been gathered in Annexes VI to XII.

During this Agriculture Data Producers workshop exchanges of information were facilitated and the requirements of the National Accounts and their importance were made clear to participants.

6. Design and content of the Module

The Agricultural Statistics module requires flexibility in adapting missions to the varied situations and problems faced by African statistical offices.

While the GDDS had negotiated this Mission through the GDDS Co-ordinator (a Senior staff member of the GSS), this consultant was made welcome and made himself available to work at length with staff from the Ministry of Food and Agriculture, particularly SRID. I take this opportunity to express my appreciation for the excellent cooperation and hospitality offered by SRID staff

This consultant was responsive to the expressed needs of the client and worked very closely with the experts from SRID in the MoFA.

The three missions offered by GDDS2 to Ghana were well conceived and do reflect the priority areas for Ghana. The timing of the present mission to cover the subject of intercensal surveys while the Census of Agriculture has not yet been taken required some adjustment at all stages of the Mission to ensure that the optimum benefits accrued to the Agriculture Statistics Community of Ghana.

The consultant was allowed the required flexibility to maximize his time use during the mission. It is clear, however (and as was mentioned in the Mission II report for Ghana), that if Ghana is to collect a Census of Agriculture successfully in 2011, it requires more help than they are receiving through the three planned missions. It is to be noted here, that 3 short term missions were allocated to each country participating in the GDDS2 program. While the highest priority needs of these countries are covered, this does not necessarily mean that all their statistical needs are indeed covered by these 3 missions.

7. Wider statistics issues in Ghana

The GSS is a well managed institution with reasonable control over its own resources and equipment. Because of past failures, annual agricultural surveys are now collected by Ministry of Agriculture officials. Using government staff that administer government programs that affect farmers is known to cause respondent bias, if not reluctance at giving correct answers to Ministry officials. The Government Statistician in Ghana is working to rectify the situation and is encouraging the development of an Agriculture Statistics Section in the GSS.

Although the newly elected government in Ghana has adopted a policy of austerity and aims to cut government spending because of reduced revenues related to the economic crisis, this consultant has suggested that the point be made to those holding the financial strings that Statistical data collection in general and the Census in particular are suited for deficit financing in times of economic crisis. This is because most input is local labour and the actual expenditures are evenly spread across the country. The census expenditures use local resources and are a uniform distributor of income and the multiplier effect is spread across Ghana, and Ghana's oil production will soon come on board to cover the deficit.

As in other countries, foreign aid organizations require considerable information to evaluate the effectiveness of their projects and continue to exercise pressure on GSS to provide the data. There is however a real need for more effective foreign donor coordination.

8. Intended use of the deliverables by Ghana's GSS

The situation concerning agricultural statistics is in a state of flux at this time (March 2009). There are a number of unknowns, particularly concerning the financing of the Census of Agriculture in 2011.

The information gathered and presented during this mission will help GSS and the other agriculture data producers have a better feel for the more effective methods and approaches to collecting, processing and disseminating data on agriculture in Ghana.

It is particularly expected that more advanced Project Management and planning techniques will be used and better plans will be produced to prepare for the Census of Agriculture.

9. Agreed timeframe of the actions

The objective of this third mission is to accrue benefits on a long-term basis to the agricultural survey taking capacity in Ghana. GSS Management has taken note of the recommendations made during the data-producers' workshop and I am confident that they will be acted upon within short delays.

10. Working relations

The working relations with the Ghanaian Counterpart were excellent and this consultant is very grateful for the help, kindness and the hospitality he received in Ghana

While the GDDS had negotiated this Mission through the local GDDS2 Co-ordinator (Mr. Anthony Amuzu, a Senior staff member of the GSS), this consultant was made welcome and made himself available to work at length with staff from the Ministry of Food and Agriculture, particularly SRID. This consultant is indebted for the excellent cooperation and hospitality offered by SRID staff during the entire mission

11. Recommendations

- a) **Donors and coordination:** while it is a blessing for a country, such as Ghana, to have many donor programs interested to provide help, this help can be used more efficiently when donors develop an efficient mechanism to coordinate their inputs. It is clear, however, that if Ghana is to collect a Census of Agriculture successfully in 2011, it requires more help than what they are receiving through the three planned GDDS missions. As has already been noted above, 3 short term missions were allocated to each country participating in the GDDS2 program. While the highest priority needs of these countries are covered, this does not necessarily mean that all their statistical needs are indeed covered by these 3 missions.

- b) **Project Management, scheduling plans and Gantt Charts:** This consultant had expressed the need for more effective project planning and management in his two previous Mission Reports for Ghana. What Ghana and GSS need is ‘doers’, ‘people who get things done (on time, within budget and in good quality)! Project Managers who take charge of an objective and make it a reality. There is an important need for “Results Based Management” and Project planning and management skills, to get things done on time and within budget. Brief explanations had been provided to the client during the previous missions on how to prepare operational plans for the census of agriculture. These instructions were clearly not sufficient and formal training on “Project Management”, operational planning, scheduling and “Gantt-charting” is necessary for ASS staff, and perhaps also to other staff in GSS and MoFA. The census is a lengthy project. It is also a “chain” operation which is as strong as its weakest link. It is important to have the operations well-planned and scheduled to avoid emergency situations. It is also important to show GSS Management the timing of the planned operations in a clear way. When plans and schedules are shown clearly to “Management”, Management can see the urgency to provide necessary budgets, on time. To a lesser extent, but still important, is the operational planning of intercensal surveys.
- c) **Changing the mindset:** An important need exists for introducing in the public sector a new value-for-money and a productivity-enhancing mindset that will lead to a more efficient use of resources. Increasing the productivity of GSS and MoFA personnel and using resources more efficiently is important, hence, the important emphasis should be to improve efficiency and value-for-money at all levels of public sector activities.
- d) **Collect only essential data suited for the collection vehicle used:** No data should be collected unless it is essential for the management of government programs and the economy. It has been made clear in Mission 1 and 2 reports that different data collection vehicles have different characteristics suitable for different types of data collection. We have recommended that only the essential data needed for small geographic areas and for use a sampling frame and benchmarks be collected on the census of agriculture. Some of these variables will be carried on the “core” census and some on specialized “Census Supplementary Modules” so cost effectiveness is achieved and respondent burden reduced. The remaining high data priority items (white spots) will be collected on specialized “thematic agricultural surveys” or general annual agricultural surveys in the intercensal periods.
- e) The main thrust of the third GDDS2 mission to Ghana is to recommend the use of “**Modern Methods / Techniques**” in local agricultural surveys. This means that “best practices” need to be implemented at every stage of the survey process. This is a continuous process: continuous improvements have to be introduced whenever better technologies become available and when resources permit. The advice and recommendations provided to the client for every stage of the agricultural survey process are:

- (1) **Identify and fill important data gaps:** by developing and maintaining networks and contacts with major users using all tools of modern

communications; efficient use of the internet and bibliographic research; and by improving coordination between all local data producers to avoid duplication.

- (2) **Survey Design & Detailed Planning:** Given the different sub-populations, the most appropriate sampling ratios and procedures need to be used. See also the recommended improvements in project planning and management (described under recommendation b).
- (3) **Questionnaire design:** Clear and simple questions; Adjust format and design to make it easy to fill by respondents (in the case of self-enumerated questionnaires with large farm operators; or, in general, the questionnaire must be easy to fill by the enumerator); Select a questionnaire format that is easy to key or process automatically; Use commercial (offset) printing for large volumes;
- (4) **Survey Frame:** Statisticians should make it clear from the start as to which are the units to be covered by the survey: Is it Agricultural households or Agricultural Holdings? Do you intend to cover Ghana Completely, Ghana except large cities, or only Rural areas? Do you intend to include: fishing, fish farming, hunting and gathering, collection of wood, cane, wild fruits, etc? Do you intend to include: All activities of Agricultural households?
- (5) **Sample Design and Selection:** Clearly define the observation units on the basis of user requirements and on the geographic level for which the data has to be reliably published; Use GIS for the delineation of EA Maps; Select coverage keeping in mind diminishing returns on capturing marginal agriculture; Redesign the sample after the Population and Housing Census in such a way that areas with concentrations of specialty farms and livestock are over-sampled for purposes of getting more reliable livestock and specialty-farm data; Use special supplementary surveys instead of overloading one survey to the 'breaking point'; Create, maintain and use a "Producer Register". Use of Geomatics technologies (GIS, Remote Sensing) in survey taking as a cost cutting and quality improvement measure: acreage and production estimation of different crops and forests using satellite imagery; Use of GIS for sampling designs for agricultural surveys; Multistage sampling design for crop surveys using satellite data. (The basic purpose of this stratified sampling design is to get precise estimates of important crop statistics like crop acreage and crop yield and crop yield forecast models from an integrated survey at a relatively much cheaper cost). Since training on digital mapping and GPS use for EA mapping has been acquired by GSS in Ghana, GSS must be capable of generalizing this training for agriculture area measurement (using GPS) and collection and interpretation of crop and land use data through Remote Sensing.
- (6) **Use of Pilot/Pre-test of a new survey:** Allocate funds and schedule a variety of tests, pilots (to test questionnaire wording, field procedures, field training, processing, etc.) prior to collecting the actual survey; Analyse and

evaluate the test results and incorporate all the lessons learned in the final survey.

- (7) **Interviewer training:** (*when, as is the case in Ghana, an interviewer/enumerator is used for survey taking*) Ensure More intensive Training of Trainers; Incorporate audio-visual and practical training; Include end-of-training skill tests to evaluate trainees and only recruit those with good marks.
- (8) **Public Relations:** Develop a strategy to maintain contact with respondents and tell them what to expect and give them ‘back’ some interesting data about their communities in this process; Use public media and adjust the message(s) to the types of media used; Include slogans, themes and testimonies of users to be more convincing; Develop posters /street signs (especially in the case of a census); Create a program for schools and school children; Use professionals to organise an integrated campaign with “public-service” messages in the media;
- (9) **Data Collection and Entry:** Ensure adequate supervision and control throughout the process, specially when the specified sampling units are selected to avoid creating a bias; adequate budgets and related payments to staff so they are paid fairly and on time; with the increased penetration of telephones in all strata of the Ghanaian population some advanced data collection systems can be envisaged in the foreseeable future, e.g. telephone interviewing and/or follow-up; In addition, the important decrease in price of GPS equipment and their versatility and ease of use makes it imperative to use GPS equipment and related systems instead of the traditional and complicated tape and compass method for area measurement; Consider automated data entry for large operations such as the census (Keying or ICR) when cost savings justify the technology.
- (10) **Data processing:** Rely on professionals for the selection of the processing platform and related systems (especially for large operations such as the census). It is also as important to have the data processing staff well trained; Proper professional maintenance and protection of the systems used is essential for the hardware and the data (back-ups).
- (11) **Data quality control and Validation:** The statistical system should be internally consistent, credible and make sense. Integrating the data, irrespective of the source, is an essential function of the Agriculture Statistical System. The System of National Accounts presents a good opportunity to integrate the various data and improve their quality. Strict quality control at all stages of the process is necessary; for a start, preliminary results are to be compared with other sources for consistency (previous years’ surveys, explanations for changes, supply-disposition); Use thematic maps to visualize spatial distribution and variation in the data and be able to detect anomalies.
- (12) **Metadata and quality evaluation:** Make sure users have the tools to understand all aspects of the data being disseminated. Include quantitative information on sampling error for important estimates; Document the

methods used so users are properly informed; Prepare a Dictionary on Concepts and definitions used and on data classifications; Produce geographic maps that delineate at least the geographic units for which data is being disseminated.

- (13) **Data Dissemination and Analysis :** Aim to create a user-friendly consistent database; Create a website on the internet to disseminate efficiently the data around the world, but spend adequate effort to maintain it; Strengthen staff capacity to analyse and publish basic trends on the data so users are better informed of what is available and are interested to explore the data further; Use GIS/thematic maps to depict spatial trends and show spatial correlations in the publications.
- (14) **Feedback and Consultation:** Institute a formal, efficient and regular mechanism to consult with users and stake-holders and make sure to listen carefully to what they say and document the feed-back and act and report on it

12. Other donors involved

Ghana is blessed to have a number of donor institutions interested to help it develop and reach its MDG's. For instance, Ghana was recently selected to participate in the pilot study for CountrySTAT. A US\$ 5.6 million grant over two years will allow 17 African countries to substantially improve the quality, accessibility, relevance and reliability of their national statistics on food and agriculture.

The consultant has recommended that other donors be involved to help the GSS collect and disseminate a successful census. The consultant has learned that other donors are considering providing help for the Census of Agriculture, but not necessarily through GSS. Recommendations for applying to the US Bureau of Census for help in training and acquiring the data processing system were made again, to receive the required free training on CSPro.

ANNEX I

TOR's FOR TECHNICAL ASSISTANCE

General Data Dissemination System, (GDDS phase 2)

Statistics Projects for Anglophone Africa : Provision of technical assistance as the expert for:

Topic: Agriculture Statistics

For: Ghana , Ghana Statistical Service (GSS)

Background

With financial support from the Department for International Development (DFID) of the United Kingdom , the World Bank is implementing a project to assist 21 Anglophone Africa countries to participate in the General Data Dissemination System (GDDS). Participating countries are being assisted to participate in the GDDS through two separate, but linked projects both financed by DFID. The IMF is providing project management and technical support in the area of economic and financial statistics. The World Bank is providing technical support in the area of socio-demographic statistics. Both projects run concurrently until March 2009.

Technical Assistance

Technical assistance is being provided through the World Bank to help countries implement plans for improvement in population, health, agriculture, labor market, justice and security, management of statistical systems, GIS and small area statistics. The GDDS framework developed by the IMF provides the framework for the detailed elaboration of long-term statistical development strategies. Participating countries have already expressed their requests for technical assistance and both the IMF and the World Bank have developed their assistance strategies.

Ghana was one of the countries which asked for technical assistance in the field of Agriculture Statistics.

Terms of Reference

Introduction

The main objective of the GSS with respect to agriculture statistics to receive assistance is preparing for a census of agriculture and to review their agriculture

survey program. The census was the focus of the first mission carried out in November 2007 and will also be the priority for this mission (mission 2). Mission 2 will continue the work that was started last year and was added to in September 2008 by the preparation of a background document on agriculture census questionnaires.

Detailed Terms of Reference for GDDS Mission 2 for Agriculture Statistics in Ghana

The consultant is asked to provide assistance to the Ghana Statistical Service using the following outline as a guide. Steps 1 to 4 have already been carried out. However, being able to proceed with mission 2 depends on the GSS having completed certain work.

Mission 1

1. Identify the role of the census of agriculture in Ghana in terms of the agriculture statistics system either as a benchmark for annual and other agriculture surveys and as a stand-alone data source.
2. Identify the major stakeholders and users of the census of agriculture.
3. Identify the planned scope of the census. Since this is based on needs and available funds, there will be some choices to be made in terms of the scope of the census. The following schematic from FAO outlines a broad range of choices ranging from a core census to an extended one including the relationships with surveys.¹
4. Review each of the chosen modules to identify possible classifications drawing the experience of previous Ghanaian censuses, other countries in the region and the recommendations of FAO.

Mission 2

5. Review the questionnaire/content drafting work carried out by GSS after mission 1 in order to prepare for user consultations.
6. Based on an outline of the planned census, meet with the Ministry of Agriculture to get their feedback.
7. Identify and hold discussions with other stakeholders to get feedback.
8. Draft the final questionnaire based on user feedback and the resource capacity of the GSS.
9. Review the questionnaire against FAO/IMF/World Bank recommendations.
10. Discuss the objectives for mission 3 to confirm if they remain as was previously outlined or have changed. (Previously, GSS identified their need

¹ FAO, World Programme for the Census of Agriculture 2010, p. 6, see http://www.fao.org/es/ess/census/PROGwca2010/chapter01_r5.pdf

as a “review of methods and processes of conducting Annual Surveys using modern techniques”).

11. Prepare a report on this work to be submitted to the GSS and the World Bank.

Timing and Effort for Mission 2

- 10 days actual mission time
- 3 day consultant preparation time
- 2 day additional report writing time.
- Total time is 15 days.

ANNEX II
GDDS2 SECOND MISSION WORKPLAN

- Day 1 Meeting with the Government Statistician and GDDS Country Co-ordinator
List all 16 item Core questions (Level 1) with their options where necessary
- Day 2 List level 2 questions (supplementary modules) with options for all modules
- Day 3 List level 2 questions (supplementary modules) with options for all modules
continued
- Day 4 List level 3 questions (surveys) with options for all modules
- Day 5 List level 3 questions (surveys) with options for all modules continued
- Day 6 Draw tabulation plan for all core questions
- Day 7 Meeting with stakeholders
- Day 8 Revision of levels 1, 2, 3 questions with comments received from stakeholders
- Day 9 Preparation of mission report
- Day 10 Preparation of mission report continued
Presentation of mission report to Government Statistician and GDDS
Country Co-ordinator

ANNEX III

Analysis of Agricultural Surveys in Ghana Framework (please see a separate digital file named ‘Analysis of Agricultural Surveys in Ghana Framework.doc’)

1. SRID Annual Crop and Livestock Survey aka Multi-Round Annual Crop and Livestock Survey (MRACLS)
 - Select 20 EAs per district (138) = 2760 EAs (but lack of resources reduced these to 10 EAs per district)
 - Form 1 list of all household in Selected EAs (March-April) from these 10 ag holdings (+ 2 more) are randomly selected (end April)
 - Form 2 (end of April) *not processed since 2001*
 - Form 3 (May –June) southern; (June- July) Northern sector *not processed since 2001*
 - Form 4 (May – September) southern; (July – Nov) Northern sector *not processed since 2001*
 - Form 5 (sept- Oct) southern; (nov- Dec) Northern sector; only to large scale ag holdings more than 8 ha *not processed since 2001*

	Basic Demographics	Animals	Crops	Production Values	Stocks and inventories	Horticulture	Fisheries/aquaculture	Organic	Forestry
Survey design	VG	G	VG	G	G	G	N/A	N/A	N/A
Questionnaire design	VG	G	VG	G	G	G	N/A	N/A	N/A
Sample design	VG	G	VG	G	G	G	N/A	N/A	N/A
Data collection	VG	G	VG	G	G	G	N/A	N/A	N/A
Data processing	Multi Round Annual Crop & Livestock Survey MiRACLS specially designed software by FAO in 2004 was implemented in 10/138 districts need dedicated computers in district and training for remainder 128 district (Form 2 has not been collected because it can only be processed by computer). They also need WAN district to region to national HQ.								
Data analysis	Compare with previous year by district. Estimation from sample is a problem: N/n x P/p x F/f x a but they are getting a huge figure						N/A	N/A	N/A

Data production	VG	G	VG	G	G	G	N/A	N/A	
Data Dissemination	A4 stapled printout of summary table by Region/district that users come and pick-up at their office							N/A	N/A
Data Management	Poor	Poor	Poor	Poor	Poor	Poor	N/A	N/A	

(but livestock ag holdings are under- represented, therefore require larger sample)

Budget has been decreasing: specially the district level, they don't even have a budget and field collection cannot be carried-out. Need 4000 Cedis per district x 138 = 552000 for enumerator emoluments + 6000 per district for measuring equipment= 828,000 total 1,350,000 Cedis

But money allocated is decentralised and depending on interest of District manager, this allocation may or may not go for stats.

2. Annual crop Budgets survey by SRID 10 farmers per district and same for tree crops

	Basic Demographics	Animals	Crops	Production Values	Stocks and inventories	Fisheries/ aquaculture	Horticulture	Organic	Forestry
Survey design	VG	G	VG	G	G	G	N/A	N/A	N/A
Questionnaire design	VG	G	VG	G	G	G	N/A	N/A	N/A
Sample design	VG	G	VG	G	G	G	N/A	N/A	N/A
Data collection	VG	G	VG	G	G	G	N/A	N/A	N/A
Data processing	VG	G	VG	G	G	G	N/A	N/A	N/A
Data analysis	VG	G	VG	G	G	G	N/A	N/A	N/A
Data production	VG	G	VG	G	G	G	N/A	N/A	N/A
Data Dissemination	VG	G	VG	G	G	G	N/A	N/A	N/A
Data	VG	G	VG	G	G	G	N/A	N/A	N/A

Management									
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3. Fisheries (by fisheries directorate.)

	Basic Demographics	Production Values	Machinery & equipment	Fisheries/ aquaculture
Survey design	308 landing sites Good	308 landing sites Good	308 landing sites Good	308 landing sites -partial
Questionnaire design	Good	Good	Good	Good
Sample design	Good	Good	Good	Good
Data collection	Under-financed	Under-financed	Under-financed	Under-financed
Data processing	ARTFish from FAO	ARTFish from FAO	ARTFish from FAO	ARTFish from FAO
Data analysis	ARTFish from FAO	ARTFish from FAO	ARTFish from FAO	ARTFish from FAO
Data production	ARTFish from FAO	ARTFish from FAO	ARTFish from FAO	ARTFish from FAO
Data Dissemination	Printed Publication	Printed Publication	Printed Publication	Printed Publication
Data Management	Poor	Poor	Poor	Poor

4. Veterinary services (MoFA): Livestock survey (trying to collaborate to make one good quality livestock survey)

	Basic Demographics	Animals	Crops	Production Values	Stocks and inventories	Fisheries/ aquaculture	Horticulture	Organic	Forestry
Survey design	n.a.	Simple count	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Questionnaire design	n.a.	idem	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Sample design	n.a.	No	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Data collection	n.a.	Simple count	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Data processing	n.a.	manual	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Data analysis	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Data production	n.a.	Simple count	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Data Dissemination	n.a.	To Mofa users and annual report	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Data Management	n.a.	n.a	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

5. National Accounts: Preferred source of data: Value Added Taxes. Obtains data from secondary sources (SRID, Cocoa Board, Cotton Board, Forestry, Export statistics, etc.)

	Basic Demographics	Animals	Crops	Production Values	Stocks and inventories	Fisheries/aquaculture	Horticulture	Organic	Forestry
Survey design	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Questionnaire design	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Sample design	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Data collection	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Data processing	From Demographic Census	From Veterinary Services	From SRID	From SRID	From SRID	From Fisheries	From SRID	n.a	From Forestry
Data analysis	SNA I/O	SNA I/O	SNA I/O	SNA I/O	SNA I/O	SNA I/O	SNA I/O	n.a	SNA I/O
Data production	SNA I/O	SNA I/O	SNA I/O	SNA I/O	SNA I/O	SNA I/O	SNA I/O	n.a	SNA I/O
Data Dissemination	SNA I/O	SNA I/O	SNA I/O	SNA I/O	SNA I/O	SNA I/O	SNA I/O	n.a	SNA I/O
Data Management	Poor	Poor	Poor	Poor	Poor	Poor	Poor	n.a	Poor

6. Forestry: Via Remote Sensing, Satellite Imagery. Excludes private forests.

	Basic Demographics	Animals	Crops	Production Values	Stocks and inventories	Fisheries/aquaculture	Horticulture	Organic	Forestry
Survey design	n.a.	n.a.	n.a.	Good	Good	n.a.	n.a.	n.a.	Good
Questionnaire design	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Sample design	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Data collection	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	Good
Data processing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	ARC Info
Data analysis	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	ARC Info
Data production	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	Good
Data Dissemination	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	Very Good
Data Management	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	Very Good

7. Cocoa Board: Compiles and Publishes data from reports of licensed buyers and exporters on several export commodities (Cocoa, Cashew, Shea Nuts, etc.). Has not taken a survey since 1997. Needs from a Census: area data, age of trees by type.

	Basic Demographics	Animals	Crops (selected)	Production Values	Stocks and inventories	Fisheries/aquaculture	Horticulture (selected)	Organic	Forestry (selected)
Survey design	n.a.	n.a.	n.a.	n.a.	Partial 1997	n.a.	n.a.	n.a.	n.a.
Questionnaire design	n.a.	n.a.	n.a.	n.a.	Partial 1997	n.a.	n.a.	n.a.	n.a.
Sample design	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Data collection	n.a.	n.a.	Good, weekly	Good, weekly	Partial 1997	n.a.	Good, weekly	n.a.	Good, weekly
Data processing	n.a.	n.a.	Excel	Excel	Excel	n.a.	Excel	n.a.	Excel
Data analysis	n.a.	n.a.	Excel	Excel	Excel	n.a.	Excel	n.a.	Excel
Data production	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Data Dissemination	n.a.	n.a.	Annual Report	Annual Report	Annual Report	n.a.	Annual Report	n.a.	Annual Report
Data Management	n.a.	n.a.	Poor	Poor	Poor	n.a.	Poor	n.a.	Poor

8. Cotton Board:

	Basic Demographics	Animals	Crops	Production Values	Stocks and inventories	Fisheries/aquaculture	Horticulture	Organic	Forestry
Survey design	n.a.	n.a.	n.a.	n.a.	Partial	n.a.	n.a.	n.a.	n.a.
Questionnaire design	n.a.	n.a.	n.a.	n.a.	Partial	n.a.	n.a.	n.a.	n.a.
Sample design	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Data collection	n.a.	n.a.	Good, weekly	Good, weekly	Partial	n.a.	Good, weekly	n.a.	Good, weekly
Data processing	n.a.	n.a.	Excel	Excel	Excel	n.a.	Excel	n.a.	Excel
Data analysis	n.a.	n.a.	Excel	Excel	Excel	n.a.	Excel	n.a.	Excel
Data production	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Data Dissemination	n.a.	n.a.	Annual Report	Annual Report	Annual Report	n.a.	Annual Report	n.a.	Annual Report
Data Management	n.a.	n.a.	Poor	Poor	Poor	n.a.	Poor	n.a.	Poor

9. National Association of Farmers and Fishermen: Compiled membership list, Incomplete (2005).

	Basic Demographics	Animals	Crops	Production Values	Stocks and inventories	Fisheries/aquaculture	Horticulture	Organic	Forestry
Survey design	OK	OK	OK	n.a.	n.a.	OK	n.a.	n.a.	n.a.
Questionnaire design	OK	OK	OK	n.a.	n.a.	OK	n.a.	n.a.	n.a.
Sample design	n.a	n.a	n.a	n.a.	n.a.	n.a	n.a.	n.a.	n.a.
Data collection	Insufficient funds	Insufficient funds	Insufficient funds	n.a.	n.a.	Insufficient funds	n.a.	n.a.	n.a.
Data processing	MS Access GHADIS	MS Access GHADIS	MS Access GHADIS	n.a.	n.a.	MS Access GHADIS	n.a.	n.a.	n.a.
Data analysis	MS Access GHADIS	MS Access GHADIS	MS Access GHADIS	n.a.	n.a.	MS Access GHADIS	n.a.	n.a.	n.a.
Data production	MS Access GHADIS	MS Access GHADIS	MS Access GHADIS	n.a.	n.a.	MS Access GHADIS	n.a.	n.a.	n.a.
Data Dissemination	n.a	n.a	n.a	n.a.	n.a.	n.a	n.a.	n.a.	n.a.
Data Management	poor	poor	poor	n.a.	n.a.	poor	n.a.	n.a.	n.a.

	Basic Demographics	Animals	Crops	Production Values	Stocks and inventories	Fisheries/ aquaculture	Horticulture	Organic	Forestry
Survey design									
Questionnaire design									
Sample design									
Data collection									
Data processing									
Data analysis									
Data production									
Data Dissemination									
Data Management									

ANNEX IV

Analysis of Publications Ghana

- 1) Annual book “AGRICULTURE IN GHANA – Facts & Figures” = compendium of statistics (mainly) from different sources compiled and published by SRID.
- 2) Annual Book “CROP BUDGETS” (for crops and for Tre-crops). Prepared by SRID, detailing costs of Agriculture production and revenues in Ghana.
- 3) Annual report: “BASIC AGRICULTURAL STATISTICS” publishes data from Form 1 of the SRID Annual Crop and Livestock Survey by districts, Regions and National totals. (No intro, notes, explanations or comments).
- 4) Annual report: “ANNUAL SAMPLE SURVEY OF AGRICULTURE – GHANA”, similar to (4) above, except it is from Form 3 (includes yield and production data).
- 5) Annual Report of Veterinary Services of MoFA includes Local Meat Production, Local Slaughter Figures, Imports of Meat and other Livestock Products; Imports of day old chicks and hatching eggs, Imports of Live Animal, Exports of Live and Non Traditional Animals as well admin data on vaccine production use and availability
- 6) Livestock Census Estimates and projections (annual) by MoFA’s Veterinary Services directorate
- 7) Marine and inland fish catch. (By former Ministry of Fisheries – now MoFA).
- 8) Census of Fishing Canoes and motorised vessels (By former Ministry of Fisheries – now MoFA).
- 9) Processed fish (data collected from fish markets By former Ministry of Fisheries – now MoFA).
- 10) Annual Report of Cocobod (Cocoa, Sheanut, Coffee, etc...) deliveries for export
- 11) Annual Report of Cotton Board (Cotton production and export)

ANNEX V

Invitation to agriculture statistics producers meeting (see a separate digital file named ‘INVITATION_TO_AGRIC_STATS_PROD_MEETING rev AT’)

Tel: Accra 682654
Cables: GHANASTATS

*in case of reply the number
and date of this letter
Should be quoted.*

Our Ref. ...
Your Ref. No.....



REPUBLIC OF GHANA

26TH FEBRUARY, 2009

STATISTICAL SERVICE

P. O. BOX 1098, ACCRA

Dear Sir/Madam,

INVITATION TO AGRICULTURE STATISTICS INTEGRATION WORKSHOP

The Ghana Statistical Service is privileged to receive technical assistance from the General Data Dissemination System (GDDS phase 2) project organized by the IMF/World Bank with the aim to improve statistical practices and procedures in recipient countries.

On behalf of the World Bank's GDDS project, I have the pleasure to invite you to participate in our "Workshop to discuss Ghana's integrated approach for Agricultural Statistics", starting at 9:30 sharp, on Thursday March 12, at the Accra Novotel's TANO hall. The workshop will be facilitated by Mr. Antoine Terjanian, a Canadian Expert and Statistical Consultant for the World Bank.

The program is as follows:

9:30 Welcoming the participants by Mrs. Araba Forson, Director Industrial and Trade Division

9:35 Introductions by each participant about themselves explaining their involvement and interest as users and/or producers of agricultural statistics.

9:50 Opening remarks by Mr. Francis Dzah, Head Agriculture Statistics Unit (GSS) on the GSS's objectives, expectations and present and planned activities in the production and dissemination of agricultural statistics for Ghana.

10:00 Presentation by Mr. Antoine Terjanian of the discussion procedures for this workshop and discussion of the reasons for an integrated approach to agricultural statistics.
10:15 Tea/coffee and pastry break, informal discussions
10:45 Brief presentation on Agriculture Statistics Required for the Computation of the Gross Domestic Product – Mr. Ebo Duncan, Head Economic Statistics & National Accounts, Statistical Service.
10: 55 Brief presentation by Messrs. Banini and Alfred Mensah of MoFA’s SRID on the Agricultural statistics SRID has been collecting and disseminating, the way these respond to Ghana’s National Accounts requirements and the problems they are facing at this time.
11:05 Brief Presentation by Dr. Banor, Deputy Director, Veterinary Services on the livestock statistics the Veterinary Services Office has been collecting and the problems they are facing at this time.
11:15 Brief Presentation by Mr. Paul Bannerman Assistant Director Marine Research (Fisheries) on the Fish statistics the Fisheries Office has been collecting and the problems they are facing at this time.
11:25 Brief Presentation by M..... (Forestry) on the Forestry statistics the Forestry Office has been collecting and the problems they are facing at this time.
11:30 Brief Presentation by Mr Nii Quaye Kumah, Director Dangme west district on the Agricultural statistics they have been collecting and the problems they are facing at this time.
11:35 Demonstration of the CountrySTAT- a web-base software for organizing, analysing and disseminating Agriculture Statistics – GhanaCountrySTAT Team.
11:45 Discussion facilitated by Mr. Antoine Terjanian on the Integrated Agricultural System and the role of Agriculture Statistics Producers in Ghana.
13:00 Closing remarks by Mrs Araba Forson, followed by Buffet lunch and informal discussions at the Novotel Accra.

We look forward to your full participation. Thank you.

ARABA FORSON (MRS.)
(DIRECTOR, INDUSTRIAL AND TRADE DIVISION)
For: Government Statistician

RSVP: Francis Dzah on Tel. 0206370354

List of expected participants:

1. The Government Statistician
2. The Director, Statistics Research and Information Directorate, MOFA
3. The Director, Forestry Directorate, MOFA
4. The Director, Fisheries Research Directorate
5. The Director, Veterinary Services
6. The Research Director, Ghana Cocobod
7. The Head, Industrial and Trade Division, Statistical Service

8. The Head, Economic Statistics Division, Statistical Service
9. The Head, Trade Statistics
10. Mr. Nii Quaye Kumah,
11. Mr. Paul Bannerman,
12. Mr. Alfred Mensah
13. Mr. G.K. Banini
14. Mr. Alex Anyetei
15. Mr. Richard Manu
16. Mr. Bright Atiase
17. Mr. Rochester Appiah Kusi
18. Mr. Kwesi Appiah-Dapaah
19. Mr. Johnson
20. Head Agricultural Statistics

ANNEX VI

Powerpoint Presentation by Nii Quaye-Kumah (see a separate digital file named 'Agricultural Statistics Collection in Ghana')

ANNEX VII

ANNEX VII: Powerpoint Presentation by Mr. Banini (see a separate digital file named
'COLLECTION OF AGRIC STATS BY SRID Banini')

ANNEX VIII

ANNEX VIII: Powerpoint Presentation by George Nipah (see a separate digital file named 'Veterinary services Directorate')

ANNEX IX

Powerpoint Presentation by Magnus Ebo Duncan (see a separate digital file named 'National Accounts Agric')

Annex X

Powerpoint Presentation to agriculture statistics producers (see a separate digital file
“Workshop Presentation by Terjanian Part 1”)

Annex XI

Powerpoint Presentation to agriculture statistics producers (see a separate digital file
“Workshop Presentation by Terjanian Part 2”)

Annex XII

Powerpoint Presentation by Francis Dzah (see a separate digital file “PROD & DISS OF AGRIC STATS BY GSS”)

Annex XIII

Activities during this mission

Activities during the mission

January 24 to Feb5, 2009: Mission preparations: Conform to visa / vaccination requirements; finalize the itinerary/travel plans; make financial arrangements; review TOR (Terms Of Reference), research TOR requirements; download relevant info and background documents from the internet; study and research the available documents; correspond with Ghana Counterpart and GDDS 2 Module Manager; plan the mission to achieve TOR's requirements. Study all the material sent to me. Review archived material on Agriculture Surveys, Farm registers and Sampling methods and frames. A number of reference documents¹ were selected and brought to Ghana.

Sunday, February 22, 2009: arrival Accra airport 9:30 pm.

Monday, February 23, 2009: Meeting with Francis Dzah: I am advised that the GSS has decided to have me hosted by the Ministry of Agriculture's SRID project. I have physically moved to the MoFA. Mr. Samuel Oku, Head of the Ministry of Agriculture's SRID project is now my counterpart contact for this mission. Review and discuss TORs with Ghanaian counterparts (GSS/Ag Stat Section and MoFA/SRID G.K. Banini and Alfred Mensah) and get acquainted with specific problems and expectations. Discuss program to achieve the TORs.

Tuesday, February 24, 2009: Brief GDDS Co-ordinator on program and objectives. Review, together with GSS and MoFA counterparts FAO Green bible (Chapters 9 and 10) on agricultural Surveys. Review and analyse existing surveys. Several missions with the aim to strengthen ag stats were undertaken (FAO, GTZ). There were in recent memory two important input missions: one in 1999, followed by one in 2004. There are around 3,000,000 Ag. Holders in Ghana.

Wednesday, February 25, 2009: Visit to the (Former) Ministry of Fisheries (now MoFA), Mr. Seto Avoke. They collect Marine and inland fish catch data through their Research Unit (we decided to visit them for details). (1) a "frame survey" every ten years, from fishing villages and along Lake Volta (vessels, gear, catches), but has not been carried-out since 1996 because of staff/funds shortages (2) Processed fish by collecting data from fish markets

Visit to Veterinary Services (Dr. Banor, Deputy Director) , they are supposed to collect an annual Census of Livestock (straight count Nov-Dec at community water holes) and project the figures, but they have only been projecting the figures since 1996. They badly need a benchmark. They publish an annual report covering: Local Meat Production: Local Slaughter Figures; Imports of Meat and other Livestock Products; Surveillance of various diseases and epidemics by the Veterinary Directorate for vaccination etc...

Visited the Fisheries Research Unit, met with Paul Bannerman Assistant Director Marine Research 0244794859 paulbann@hotmail.com. They collect stats since 1969, using S.K.

Banerji's method (1972 FAO, Rome WS/E7 100). They sample villages, sample days, sample canoes (vessels). They used in the beginning Lotus 123 wks and then Excel. They have been using very successfully FAO-developed ARTFish (basic and serv). They produce an excellent analytic annual publication. They used to have a (Japanese donated) research vessel (1979-1996) but it lost its sea-worthiness and has not been replaced (no funds). Lack of planning for sustainability.

Thursday, February 26, 2009: Visit to Dangme west district. District Nii Quaye-Kumah (tel:24.4268333; degangs@yahoo.com) Director (team-leader) having a monthly staff meeting.

The district's strength & its weakness are data collection and use. SRID leads them from Accra. They collect: # farmers, sex, age, crops, acreage, socio-economic settings that influence actions. The numbers they produce are used by all in Ghana and by themselves for: coverage extension Agent / farmer ratio, budget received, vehicles and performance (motobikes) accommodation office, personnel farmer-based organizations. They collaborate with local NGOs.

This District is the largest in Ghana: They have plenty of real-estate encroachment and large reserves (they need to modify the sampling methods, exclude certain areas EAs). With a sample we cannot get accurate data on specialized crops. They face logistics problems and staff shortages: 10 AEAs reduced to 5 AEAs.

Data collection is biggest weakness of Ghana

Nobody knows the numbers... Pineapple and rice farm are a rare occurrence in this district, they rarely get in the selected sample.

Ag labour wages \$ 5 /day

Mr. Simpson is team-leader for stat collection and processing. It takes him 4hrs / day for 10 days for form 1.

Last year the whole system was wiped-out from the Office hard disk, no data on the computer.... He informed Ben at SRID, a replacement system will be installed. Now he is compiling the data manually. There is No electronic data back-up.

Friday, February 27, 2009: The appointment with Forestry was unsuccessful (funeral) we will meet them on Tuesday instead. Began constructing tables of required output. Attempted to contact Ms Jill Fletcher for mutual debriefings

Saturday, February 28, 2009: Attempted to contact again Ms Jill Fletcher for mutual debriefings. Prepared workshop presentation strategy.

Sunday, March 01, 2009 : Reviewed, commented and suggested modifications to the Workshop program proposed by Mr. Dzah.

Monday, March 02, 2009: Meeting with Mr. Duncan for review of National Accounts and agriculture data entering into the calculations of the national accounts, in the company of John Nortey and Mr. Banini of SRID and Mr. Dzah. Mr. Nortey suggests “Community-based statistics”. Meeting with Mr. Dzah and Mr. Banini to discuss workshop program. Draft table for Gap Analysis.

Tuesday, March 03, 2009:

- Meeting with Mr. Fredua Agyeman, Technical Director, Forestry, Ministry of land and Forests 21-666801 / 687307 fredua@mlf-gh.com . They work with the International Tropical Timber Organization (ITTO). They manage the reserve and community forests on behalf of the State and these communities. They have developed/adapted a sophisticated centralized database and tracking system for wood harvesting, transportation and export FROGI. They define a forest as any area with 40 forest trees per ha, They use remote sensing/satellite imagery for their estimates of forest coverage and wood species. Mr. Agyeman feels private forest is negligible and does not influence total production.
- Meeting Mr. Osei Owsu, (021-774296) Statistics Research Office of the Cocoa Board of Ghana. They rely on weekly reports from “licensed buyers” of products of interest (Cocow, Sheanut, cashew, etc.) on quantities purchased by these buyers. They have no idea about areas planted (Sheanuts grow wild). Their last partial estimate was done in 1997 (1.6 million ha for Cocoa). If a baseline survey is taken, they would like area planted by age of the trees by tree type (amelenade, Damazin and hybrid).

Wednesday, March 04, 2009: Meeting with Mr. John Dziwornu, National coordinator Ghana National Association of Farmers & Fishermen (GNAFF). An organization for lobbying and advocacy, housed by the Ministry of Food and Agriculture. It received help for some projects by NGO’s in the Netherland (eg. CTA- Center for Agriculture and Rural cooperation). They initiated the Ghana Development Information System (GHADIS) where they tried to capture the 3,000,000 farmers and fishermen in Ghana through a membership registration drive subsidized by CTA Netherlands. They however did not have sufficient funds and managed to key into an MS Access database about 400,000 farmers and fishermen. At the time of our visit the system was not operative. GNAFF had formulated a strategic plan in 2004 but did not receive sufficient funds from the previous Ghana administration and are hoping that with the newly elected government they may receive financing. In the meanwhile, their Farmers and Fishermen List is of little use to the survey taking operations we are helping develop.

Thursday, March 05, 2009: Analyse the list created by the National Association of Farmers and Fishermen (NAFF), study possible alternative sources for the Farm Register (Deeds Office).

Friday, March 06, 2009: Compilation and organizing collected info

Saturday, March 07, 2009: Analysing info and Preparing recommendations

Sunday, March 08, 2009: Prepare recommendations and ppt presentations

Monday, March 09, 2009: Review progress on Workshop invitations and agenda. Visit the GSS Regional District Office (Asama region, Greater Accra, Ga West). There was no electricity, so we could not view a demo of their operating computer and systems. Met District staff (Mr. Otcheri – Diplome in Statistics; Ms. Baidanouf – Senior Secondary; Doreen Ikosiya, Emmanuel Ajepung) They have lists of establishments in the District for their different surveys. They key collected data on their district computer to keep, but send a paper report to Accra for National data compilation. They have no means of transportation They have not yet started formal recruitment for the 2010 Demographic Census (one year away). They will be training enumerators in local schools (they will be on vacation for Easter break next March and from June to September). Met Mr. Ado from the local MoFA regional district Office. The district is becoming more urbanized with un-controlled construction and surface soil sand-mining. Some cash crops are produced for export (Pineapple, Mango, vegetables etc..) They could successfully grow cashews if encouraged. They have transpo and computers, but could use more. Both offices look forward to the Census as an opportunity to modernize their equipment.

Tuesday, March 10, 2009: Visit to “Ghana Info” the organization within GSS that handles their website to disseminate data about Ghana on the internet. They use DevInfo, a system developed in India to upload and mange the data. They upload data from soft copies of published documents or by keying the data for indicators by hand from hard copies. There are considerable gaps because the data is not always provided to them. They carry less than 100 data cells on Agriculture for a variety of indicators.

Wednesday, March 11, 2009: Review preparations for workshop tomorrow, offer assistance to GSS and MoFA staff. Prepare presentations.

Thursday, March-12-09: Workshop, Questions and Answers, Lunch, post workshop analysis. Briefing at World Bank Office with Chris Jackson and Jill Fletcher.

Friday, March-13-09: Discussions and analysis of workshop results with Mr. Dzah and Alex. Exchange of files, farewells to colleagues

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