***Strengthening Agricultural Market Information Systems globally and in selected countries (Nigeria, India, Bangladesh) using innovative methods and digital technology***

**Case Study: Nigeria**

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LIST OF ACRONYMS

|  |  |
| --- | --- |
| ADP | Agricultural Development programmes |
| AfDB | African Development bank |
| AMIS | Agricultural Market Information System |
| ATA | Agricultural Transformation Agenda |
| BMGF | Bill and Melinda Gates Foundation |
| CAPI | Computer Aided Personal Interviews |
| CBN | Central Bank of Nigeria |
| CPI | Consumer Price Index |
| DAC-OECD | Development Assistance Committee – Organization for Economic Cooperation and Development |
| FAO | Food and Agricultural Organization |
| FEWSNET | Farming Early Warning Systems Network |
| FMARD | Federal Ministry of Agriculture and Rural Development |
| GPS | Global Positioning System |
| GSARS | Global Strategy on Agriculture and Rural Statistics |
| IdCA | In-depth Capacity Assessment |
| LGA | Local Government Area |
| LTO | Lead Technical Officer |
| M&E | Monitoring and Evaluation |
| MAPS | Marrakesh Action Plan for Statistics |
| MDA | Ministries, Departments and Agencies |
| NAERLS | National Agriculture Extension, Research and Liaison Services |
| NAMIS | Nigerian Agriculture Market Information System |
| NAMRP | NiISER Annual Monitoring Research Project |
| NBS | National Bureau of Statistics |
| NCX | Nigerian Commodity Exchange |
| NISER | Nigerian Institute for Social and Economic Research |
| NPC | National Planning Commission |
| NPFS | National Programme on Food Security |
| NSDS | National Strategy on Development of Statistics |
| NSS | National Statistical System |
| FAO-OED | FAO-Office of Evaluation and Development |
| SDMX | Statistical Data and Metadata Exchange |
| SPARS | Strategic Programme on Agriculture and Rural Statistics |
| ToT | Training of Trainers |
| UNDAF | UN Development Assistance Framework |
| UNDP | United Nations Development Programme |

# 1. Introduction and Context

## 1.1 Agricultural Sector and Economy

1. Declining revenues from crude oil sales resulted in a sharp decline in the availability of foreign exchange reserves in Nigeria over the last decade. The subsequent adoption of a floating exchange rate resulted in about 40 percent reduction in the value of the Nigerian Naira, negatively affecting the cost of basic necessities that rely on import base. Thus significant price escalation resulted for commodities such as rice, sugar, edible oil, wheat which are heavily imported for both consumption and industrial use. The impact of this on purchasing power of poor market-dependent Nigerian households was drastic, worsening poverty and food security.
2. Paradoxically, the above scenario also led to heightened interest in agricultural commercialization as the prices became attractive to investors including for export purpose, in quest for scarce foreign revenue. The agricultural (and solid minerals) sectors therefore recorded positive growth as government sought to diversify the revenue base away from dwindling crude oil revenue. The recently adopted Agricultural Transformation Agenda (ATA) was a major catalyst for strengthening the role of the private sector in development. ‘Farming as a business’ initiatives unleased unprecedented interest in agriculture. Locally produced commodities such as maize and cassava acquired export value and even competed in industrial use and drawing significant influx of private capital towards commodity export and value chain development. Therefore, despite the outlined challenges facing the economy, some positive trends have emerged largely through massive commodification of agriculture, making the role of agricultural prices to become more significant, both as production incentive (supply response) and also as a point for policy management of food output and prices for the welfare and food security of her citizens.
3. The two scenarios continue to have conflicting effects on food prices. For instance, in 2016, although prices of locally produced food declined seasonally in November and December, these prices were still more than double their 2015 and five-year average levels (FEWSNET, 2017). And although agricultural production increased in the 2016/17 production year, Nigeria remains heavily dependent on imports to meet food needs whereas high regional export demand was recorded, in competition with domestic demand. All this is expected to result in low stock levels during the 2017/18 lean season as exports compete with local demand. This implies that the inflationary impacts of the depreciating NGN are stronger than the effects of price induced supply response. Also with the protracted conflict and insecurity in the Northeast, local production zones that were once surplus-producing are now deficit zones, relying on imports of supplies of major staples from neighboring states (FEWSNET, *op cit*), and also, supplemented by donors’ imports from other countries. The ability of the country to monitor production potentials and especially output prices in a timely manner will contribute to stability of food prices as price volatility remains a constant policy concern.
4. Managing price volatility is as important in the Nigerian economy as it is in the global space, which led to the G20 initiative for Agricultural Market Information System (AMIS) programme following the 2007-2008 food crisis. Meanwhile statistical information management in general and agricultural market price production and dissemination in particular have been observed to be very weak in the country, contributing to the frequent price distortions and poor policy impacts.

## 1.2 Nigeria’s statistical capacity and rational for project support

1. Nigeria’s statistical system operates at both national and sub-national levels. The country operates a federal system of government with 36 States and Federal Capital Territory and 774 Local Government Areas (LGAs). At the federal level, each Ministry, Department and Agency has a Director of Statistics. The same structure is maintained at the states and local government levels. All these including the main Statistical Institute, the National Bureau of Statistics (NBS) and State Bureaus of Statistics constitute the Nigeria Statistical System (NSS). All these statistical agencies collect price data for food and non-food items and rural and urban goods to compute the Consumer Price Index (CPI), a key input for monitoring general inflation trends. The NBS works in close partnership with the Ministries, Departments and Agencies (MDAs) and other data producers to generate official statistics on each sector via an open access data portal with a fairly coordinated release calendar for key national indicator profiles. Individuals have open access to analyzed and disseminated data but not to the primary data, except those that are obtained from the MDAs via official requests requiring approval from heads of organizations.
2. In terms of agricultural price information, the Federal Ministry of Agriculture and Rural Development (FMARD) and its implementing agencies – the Agricultural Development Programmes (ADPs), the National Programme of Food Security (NPFS) – formally the coordinating body for the ADPs and the National Agricultural Extension and Research Liaison Services (NAERLS) – the major coordinating agency for agricultural extension systems, all collect agricultural price data. The Central Bank also uses agricultural price data for national income accounting, given that over 60% of the GNI is from the sector. Other agencies such as the Nigerian Commodity Exchange also collect price data on tradable commodities. The National Strategic Grains Reserve collects price data and generates stock data from the 29 odd grain silos across the country. The NBS collaborates with the agricultural agencies to carry out statutory surveys such as the National Agriculture Census in collaboration with lower tiers of the FMARD and the ADPs in the enumeration areas of the state bureaus of statistics – where functional (see Appendix 1 Table 1 for the agencies and details of their data production processes and outputs). While the different producing agencies are also users of price data for their internal planning and management, including monitoring and evaluation (M&E) of their major programmes, other potential users of agricultural price data are the growing numbers of private commodity traders and hedge fund managers (in commodity futures) and agricultural market researchers (Interview Notes from African Exchange, 2017) continue to raise the demand for agricultural price data.
3. Price data from variable sources therefore becomes problematic as information from other data producing agencies often conflicts with the claim of NBS as a primary producer of price data. Given that the NBS is the only agency with mandate to release official statistics, it is possible that it receives unofficial primary data from these other agencies, analyzes and harmonizes them for official release. The claim of data production and plethora of unofficial agricultural price data is the problematique that previous statistical programmes such as the countrySTAT, on-going Strategic Plan for Agriculture and Rural Statistics (SPARS) programme under the Global Strategy to improve Agricultural and Rural Statistics (GSARS) have yet to fully resolve. Hence the usefulness of the project to contribute to solving these pressing problems. Appendix 2 shows the different price data collection agencies in the country. This shows much duplication of function and lack of clarity about mandates and actual producers and users. The need for harmonization of mandates, instruments and dissemination modalities on centralized and/or jointly maintained IT platforms is an urgent need.
4. The AMIS needs assessment for Nigeria (FAO, 2014) indicates systemic weakness of the agricultural price data production as well as the general state of development statistics. Previous attempts at agricultural price data management via such programmes as the NAMIS, CountrySTAT, National Databank project as well as more recent SPARS under the National Strategy for the Development of Statistics (NSDS) have not yielded the expected effect. Most statistics including price data production suffers from duplication of mandates, lack of harmonization and standardization, lack of timeliness and continuity due to poor and inconsistent funding, as well as poor institutional linkages that could promote a reversal of these challenges (Box 1). The aforementioned assistance programmes of the FAO (CountrySTAT) has helped to standardize agricultural statistical weights and measures and developed a data collection template used across most countries for easy comparability. This has helped to some extent but harmonization is still problematic due to lack of effective central portals or lack of maintenance of same. These and other problems remain intractable and thus, it is challenging to obtain timely, accurate and quality data on most development indicators, not least agricultural price information. All these are justifiable rationale for AMIS in Nigeria.

Box 1: Challenges of Agricultural Price Management in Nigeria

-Duplication of functions: Many agencies claim to collect agricultural price data for their internal use without any effective harmonization strategies so far.

-Poor funding of data collection activities: Most surveys to generate price data continually fail to be carried out due to funding constraint.

-Low accuracy: Price data, like other statistical information are collected with paper questionnaires without effective software to manage field biases. Data reliability is very low because of this.

-Poor dissemination: Most of the data producing agencies lack e-platforms for consistent dissemination; where these are present, infrastructural and financial limitations persist.

-Portal Connectivity: Institutions that have data portals include the FMARD, NAERLS, NBS and NPFS which are largely dysfunctional due to poor software management skills and lack of funds to maintain the web-portal subscriptions. The FMARD requires USD 2 million to retain its server subscription.

-Harmonization of web-portals is problematic because of variability in software, questionnaire and indicator formats.

*Source: Culled from Nigeria AMIS Prodoc (2014) and Interview Notes (June, 2017)*

## 1.4 Overview of “AMIS” project in the country

1. The Bill and Melinda Gates Foundation (BMGF) funded project *“Strengthening Agricultural Market Information Systems globally and in selected countries (Nigeria, India, Bangladesh) using innovative methods and digital technology*” aims to address the outlined problems and gaps. It also contributes to the overall AMIS initiative by linking the AMIS global platform with the national information systems of Bangladesh, India and Nigeria, in order to establish a data sharing network where commodity balances and quality market price data could be made accessible as public good on regular basis (at least monthly). In particular, this project addresses Pillar 3 of the global AMIS goals – capacity building of national data producing agencies in these three countries towards a more efficient, accurate and timely processes and outputs. Annexure 2 shows the global Results Framework for the Strengthening AMIS project for the three countries with outcomes specific to different countries. Nigeria’s focus is on improvement of market price management although this focus also strengthens the application of stock estimation and crop forecasting methodologies.
2. The project in Nigeria, as conceptualized, is aimed to address the outlined problems of the national statistical system with specific focus on agricultural price data for selected (AMIS) crops – rice, maize, wheat, soybean and cassava which are all strategic crops in Nigeria both as staples and as traded commodities. A pilot process would create a functional model that can be replicated and fully owned by Nigerians and the Nigerian government. The branch of the project in Nigeria was designed by the HQ technical team in Rome after a scoping mission to Nigeria in 2014. The Project document (Prodoc), results matrix and work-plan were amended by Nigeria’s primary stakeholders, midwifed by the FMARD (on the policy side) and the National Bureau of Statistics (NBS) on the technical side to develop the Nigerian AMIS Prodoc (FAO, op cit). The Nigeria Activities and Results Matrix is shown in Annexure 3.
3. Recruitment of facilitators were carried out both by FAO and the key national institutions – FMARD and NBS. A Consultant who was employed at the NBS was recruited by FAO project team while a national coordinator was recruited, initially from the FMARD and later at the NBS. The expected working relationship was to forge both country ownership as well as technical soundness with sustainable influence at the same time. The extent that this expected working relationship was achieved is subject to much concern due to an implementation process which was driven by outcomes and efficiency while bypassing usual government bureaucracy and inefficiency

# 2. Methodology

## 2.1 Evaluation objective and questions

1. The Objective of the evaluation is to assess the extent that the AMIS project as designed has achieved the intended objectives and to identify the factors responsible for its outcomes. The objective is driven by stated evaluation questions which were designed into question templates for the targeted stakeholders.

Box 2: Evaluation questions

* *How adequate was the project’s design and approach used at (global and) national levels?*
  + *To what extent the project achieved its intended (or unintended) outcomes at national (and global) level?*
  + *In what ways has the project assisted in improvements in price data collection methodologies?*
  + *In what specific aspects has the project contributed to improving in national capacities of technical/ statistics professionals?*
* *Which are the main illustrations if any of the knowledge is being applied in formulating food security and market/pricing and procurement policies?*
* *What have been the main contributing/limiting factors for the results achieved?*
* *What steps are being taken in the countries to sustain, continue and develop capacities and allocate appropriate resources for price monitoring and estimation?*
* *What are the lessons learned for future design of similar projects?*
* *To what extent the project contributed to the achievement of AMIS and GSARS objectives and to results under FAO’s Strategic Objective 4?*
* *To what extent have gender issues been considered in project design and implementation?*

1. The ToR for the evaluation mission and the results matrix for the global project (Annexure 2) guided the evaluation framework and the conceptual lines followed, while a standard evaluation concept commonly adopted in donor-assisted development programmes (DAC-OECD, 1992)[[1]](#footnote-1) was used. The concept, design, management, implementation, outcomes and exit strategies of AMIS were assessed based on each of these criteria and with reference to the overall goals of AMIS and the specific BMGF-funded component for each country.

## Evaluation process

1. The Nigeria evaluation mission took place from June 19 to 23, 2017 in Abuja, the country’s capital where most of the implementing agencies have their head offices and where FAO country office is also based as well as in Kaduna and Niger states where the sub-national project took place. Pre-scheduled interviews were held with a cross section of stakeholders including FAO staff (country staff and national consultant on the Strengthening AMIS project), the focal persons for the Strengthening AMIS project in the participating institutions which include: (i) NBS, (ii) FMARD, (iii) NAERLS based in Kaduna state, (iv) NPFS, (v) Nigerian Commodity Exchange and (vi) the Farming Early Warning System Network. In addition, there were pre-schedule interviews were also conducted with two private sector organizations – (i) African Exchange and (ii) Digital Connect. The participating organizations, their mandates and their roles in the project is shown in Annexure 4.
2. The evaluation took the form of key informant interviews and focus group discussions (FGDs) as well as document analysis of major reports from the project activities and background documents from FAO HQ. An interview template developed to address key evaluation questions, aligned with the evaluation framework defined above was developed collaboratively by the evaluation team and the evaluation manager. Access to relevant documents (briefing letters, workshop reports and methodology notes, policy drafts) were made available to corroborate interview notes. There was full cooperation of the FAO country office, AMIS Consultant and sub-team at their FAO location and the stakeholder institutions, through AMIS focal points.
3. Prior to the mission, the evaluation team met with experts from the FAO’s Statistics Division, the FAO’s Trade and Markets Division, the Global AMIS Secretariat and the Global Strategy to Improve Agriculture and Rural Statistics Secretariat, and the donor agency (BMGF) in order to ensure a deeper understanding of the project from all aspects. These meetings were conducted between 31st May- 2nd June 2017.

# 3 Assessment of Project Design and Implementation

## 3.1 Relevance: Project Conception and Project Design

1. The needs assessment for AMIS activities at the global level, as amplified in a report by the implementing partners[[2]](#footnote-2) documented gaps such as non-availability of official country data on crop production and consumption forecasts between national outlook agencies (data providers) and international information providers, none existence of reliable official information on food stocks, lack of indicators that are meaningful and comprehensive for predicting price trends, weak linkages with the private sector especially on private stocks and weak capacity by developing countries that are major producers of certain commodities, such as Nigeria, to produce timely and accurate information on all three areas of interest of AMIS.
2. The AMIS initiative in Nigeria was aimed to address these gaps in the specific area of market price production and dissemination by building the capacities of national institutions who are data producers with state-of-the-art knowledge and tools to improve on this important mandate – given the constraints of these organizations identified in the report of Nigeria Needs Assessment by HQ Team, including the LTO[[3]](#footnote-3) as (i) lack of sustained skill by relevant staff (ii) governance instability which often led to rapid changes in headship (particular case of the NCX) (iii) funding constraints which did not allow continuous implementation of relevant surveys – had not carried out annual surveys since 2012 and where surveys had been carried out, funding shortages precluded data processing and dissemination and (iv) lack of up-to-date tools of data management in the agencies. They still depended on questionnaire surveys which is expensive and often inefficient, without adequate skills in data processing to eliminate biases and field-based errors.

## 3.2 Relevance to Nigeria’s context and needs

1. Nigeria is one of three non-G20 countries whose status as a major producer and with a big consumer market compels its inclusion specifically to improve country level capacity in any of the three key aspects of price management. Nigeria produces 21.7 million metric tonnes of coarse grains annually and is a major consumer in Africa (FEWSNET, 2017). The development and use of market price statistics to enhance policy formulation and monitoring in agriculture, as aimed by AMIS, is consistent with the goals of the Nigeria’s Agricultural Transformation Agenda (ATA). ATA has a major focus on enhancing agricultural production in a sustainable and inclusive manner as a driver for development. The ATA is managed by the FMARD as its coordinating body for state level policies and activities as well as the effective linkages of agriculture with other agencies of government and sectors of the economy. This is premised on the huge population engaged and employed in agriculture. Under the ATA, FMARD plans to strengthen markets for agricultural commodities through the establishment of commodity marketing corporations. In this perspective, quality of statistical information is of vital importance to decision making. At the domestic level, managing farmers’ production incentives for value chain development and to also impact positive consumer demand requires that factors which influence food prices (supply and demand) be monitored for timely intervention both to ensure food affordability as well as supply response by farmers.
2. Nigeria has a broad policy on development of national statistics - The National Strategy for the Development of Statistics (NSDS) which was developed in response to the Marrakesh Action Plan for Statistics (MAPS, 2004) [[4]](#footnote-4). It encourages the countries to “mainstream Strategic Planning in their Statistical Systems” with a view to producing high quality statistics for national and international use. The NBS is coordinating the development of the Strategy for the entire country with the active support of Development Partners especially the African Development Bank (AfDB) and the UNDP[[5]](#footnote-5). This strategy which partially led to the decentralization of the NBS to the sub-national level would be greatly enhanced by the AMIS with particular reference to the agricultural sector.
3. Nigeria is focusing on only one focal area of the BMGF project,that is, strengthening of market price statistical system, which also feeds into the other two aspects of the three outcomes of the project[[6]](#footnote-6). The other focal areas (crop forecasting methodologies and stock estimation methodologies) are presently being undertaken through other programmes. The NAERLS is implementing basic research models based on production trends and meteorological forecasts to generate crop forecasting statistics. The Nigerian Institute of Social and Economic Research (NISER) a leading government Think-tank conducted a panel study from 1990 to 2000 to pilot a crop forecasting methodology for the country which is still available for up-scaling (NISER-NARMP, 2012.) These research initiatives can be tapped upon with input of advanced data collection software generated with CAPI and with further geo-referencing capabilities to advance the other aspects of the Strengthening AMIS project in Nigeria. Furthermore, the new crowdsourcing application developed by the Nigeria project was piloted for household and market stock estimation. There is adequate scope to advance the other aspects of the Strengthening AMIS project outcomes through these initiatives.

## 3.3 Relevance and Consistency with FAO Programming in Nigeria

1. FAO opened its doors in Nigeria in 1978 and is still renown as the lead donor organizations mainly in technical support to the countries agricultural system. FAO projects are typically considered small in scope and funding capacity. The strength of the organization is in providing technical support to solve real and anticipated problems identified by the country. Current FAO priority in Nigeria as shown by the 2013 – 2017 Country Programming Framework (CPF) which derives from national priorities are also relevant to AMIS (FAO CPF for Nigeria, 2013). In particular, the FAO will support the “Support for agricultural policy and regulatory framework” via “Inclusive and evidenced-based development of policies and strategies for agriculture and natural resources …”.
2. There are also other past and on-going FAO programmes that are relevant to the project. The most relevant of these are the CountrySTAT[[7]](#footnote-7) which ended in 2014. Capacities had been developed by the CountrySTAT for the standardization of commodity weights and measures, standardized framework of indicators, questionnaires and analysis models for implementation of the Agricultural Census Surveys (ACS) at both national and sub-national levels. There was also development of the national IT portal for archiving and dissemination of agricultural statistics through the National Databank Project which was supported by the UNDP. While all these form a useful precursor for the AMIS especially in providing basic statistical capacities for the lead agencies such as the FMARD and the NBS, documented limitations of these programmes necessitated the AMIS. Effective implementation and sustainable support by the FAO becomes critical to lasting outcomes of AMIS.

## 3.4 Participation in Project Design

1. The project document with its results framework were designed at FAO-HQ by the Lead Technical Team without the countries input. The design issues were raised in the pre-project documents and approved in Rome. However, there was no problem in seeing them as important in Nigeria since *“..it was clear that Nigeria has a data management and sharing problem…*” (Former FAOR for Nigeria). A desk review and interviews were held in Nigeria over the period March-August 2014 with a wide range of stakeholders who provided objective and reliable status report about country needs. The report presented and discussed with officials from the Nigerian Government. However, according to Nigeria needs assessment report, no formal endorsement mechanism from the Nigeria Government has been pursued. *(see report of exploratory visit in 2014)[[8]](#footnote-8)*

1. The Nigeria focus was determined at country level through a participatory outreach to all the data producers and users. This is proven by the list of invited participants to the needs assessment outreach and most of the agencies relevant to policies and programming for statistical development and use in the country were invited to participate in the initial “high level meeting” to re-conceptualize AMIS to country specification.
2. Several of the implementing agencies were excluded from the initial outreach activities. This may be due to information gaps between the representatives that attended the “high Level” meeting, usually the agency leaders and those that eventually participated (middle-level officer). The final design can be said to be participatory in intent but in practice most of the secondary stakeholders were unaware of the scoping mission and the follow-up inception meetings midwifed by the FMARD. Also, some other institutions especially those that would be central to the continuity of the project via policy and budgetary support such as National Planning Commission, Central Bank of Nigeria, Farmers Association of Nigeria (apex organization) were not carried along in the management and implementation.

## 3.5 Appropriateness of Project Design

1. Market price data are collected by many agencies at the federal and state levels in Nigeria (see Table 1). Five of these agencies were involved in the implementation of the Strengthening AMIS project at the federal level while two state organs of the NBS and FMARD participated at the sub-national level. The fact that these agencies collect price data for its own peculiar purpose in different markets with diverse frequencies, employing a varied set of tools and specifications has contributed to duplication of efforts and user confusion, especially when the resulting data is conflicting. Institutional linkages that would foster the much-needed harmonization of functions is one of the expectations of Strengthening AMIS project. The implementation plan (design) of the project in Nigeria would involve most of the market price producing agencies from across the population – government, non-government, communities of practice – farmers, marketers and the private sector, either in coordinating/management capacity, contributors of skills and knowledge or as beneficiaries whereby their existing capacities were upgraded through the staff training programmes for greater harmonization of data and stronger institutional portals for better dissemination.
2. After the design stage, the need for the involvement of the private sector in the project’s implementation was required due to potential delays and capacity issues of some national agencies expected to participate, especially the Nigerian Commodity Exchange. This approach to implementation proved to have contributed to project efficiency.

## 3.6 Gender issue in the conceptualization and design of AMIS

1. Gender was not conceptualized into the project initiative at global level, neither was it conceptualized into the Strengthening AMIS project at the country level. Several factors were given:

* In spite of the FAO Gender Policy[[9]](#footnote-9), there appears to be very limited gender capacity in the FAO Nigeria office to pursue more aggressive gender conception and implementation of the project. The programme officers may be better equipped to provide administrative more than technical support since there was no evidence of in-house hands-on gender expertise in the country office.
* At the conceptual level, data is seen as being gender-neutral by the FAO experts so there was no real justification for gender mainstreaming.
* At the national institutions, there is more gender-awareness and efforts at gender sensitivity mainly by way of representation or gender quota as entrenched and recommended in the implementation framework of the country’s gender policy (NGP, 2006, 2008). There is a Gender Focal Points in every Ministry, including agriculture. Gender disaggregated statistics have also been incorporated in the CountrySTAT as a policy for data collection. However, the extent of the actual practice and the skills for gender analysis required to generate relevant gender statistics in statutory data platforms and/or to meet specific demand by users appears to be limited.

# 4. Efficiency of Project Management and Implementation

## 4.1 Project Management structure at the FAO

1. FAO maintains two country offices in Abuja and Maiduguri, the latter to focus on agricultural revitalization in the north east affected by the Boko Haram insurgencies. The country offices staff are made up of country staff and project consultants on short and long-term contracts. Apart from the FAOR and assistant FAOR, there are two programme officers supporting all country programmes in clusters, mainly in administrative issues. Technical staff are handled by consultants with expertise in given areas. The regional office and headquarters in Rome are usually called upon to provide technical and administrative support when there is dire need.
2. In the case of AMIS, there was no standing internal technical committee and there was no national steering committee. Support for AMIS was of two kinds - administrative and technical. Administrative support was vested in the country office while technical support was vested in FAO-HQ through the Lead Technical Officer for the global AMIS programme. Funding for the project from BMGF was transmitted directly to FAO with FAOR as the budget holder. The Africa Regional Office (RAF) had no role to play in AMIS Nigeria. There was no role for other national and regional officers working on related strategic objectives (SOs), neither were other consultants working related projects such as the SPARS involved. There appeared to be little information available to the country officers beyond the financial administration and statutory reports such as the Prodoc, project assessment reports accessible from the internal programme website. As a result, the current Acting FAOR had limited historical knowledge of the AMIS project process. The team obtained most of the official details from the former FAOR as well as the archived documents.

## 4.2 Implementation Structure by National Stakeholders

1. The implementation structure of AMIS is mirrored by the stakeholder map (Figure 1). It indicates that all had some degree of relevance to the goal of the project in terms of their primary mandate as either data producers or users. While the majority of them had basic capacities and functions such as a functioning web-site, a running mandate for agricultural surveys with templates harmonized with the CountrySTAT, the participants who were considered primary stakeholders are those who contributed resources as well as benefitted from new knowledge and technical resources provided during the project. The secondary stakeholders either had less functional resources and activities and have simply used project-imparted skills and resources to develop new capabilities and functions. In most cases, capacity building occurred to all stakeholder institutions.
2. Annexure 4 shows the main mandates of the stakeholder organizations which indicates that both primary and secondary stakeholders often have overlapping functions; however, their relationship with each other is strengthened as part of the Strengthening AMIS project team. There was good working relationship between FAO Consultant and the heads of the relevant units of the participating agencies. Most of these were interviewed and showed adequate knowledge about the goals, conceptualization and design of AMIS. There was high acceptance and demand for further support from FAO in scaling up the various training to benefit a greater proportion of their operational staff. All invitations were formally routed through the heads of the organizations such that full knowledge of the process could be retained as institutional knowledge.

Figure 1: Stakeholder Map for Strengthening Agricultural Market Information System Project in Nigeria

**AMIS HQ**

**(G20 Partners)**

**FAO- HQ**

**Global Stratey Team (LTO) (Technical)**

**AMIS Project Team in FAO Country Office**

**FAO- HQ**

**Global Strategy Team (LTO) (Technical)**

**AMIS Project Team in FAO Country Office**

## 4.3. Financial Management

1. Initial planned budget of USD 600,000 was based on the design of the country projects in the three countries from the HQ. After the scoping mission, project activities were redefined based on needs assessment and the budget was increased to USD 608,600. Fund release was efficient through the FAOR as budget holder and fund utilization was effective via close monitoring of procurement activities by FAO and the AMIS Consultant. Usual bureaucratic delays were experienced but minimized by bypassing steering and technical committees within FAO and the national institutions. In FAO, most contribution was in kind, in terms of using existing infrastructure, utilizing country support staff and vehicles as well as office space assigned within the FAO office. While this contributed to efficiency of resource use and minimized delays, there were complaints regarding this especially by the appointed National Coordinator at the NBS of being bypassed throughout the implementation. Reasons adduced for this seeming exclusion was for efficiency concerns regarding management of funds and timeliness of planned activities. The project was thus completed successfully within the budget limit – actual spent was USD 605,441.[[10]](#footnote-10) Although the project was granted a 12-month time extension, further demands for extension of the training activities could not be accommodated within the budget. There was a no-cost extension until July 2017.

## 4.4 Gender consideration in management and implementation

1. There is generally a pre-determined low involvement of women in the more technical aspects of the project such as software development, programming applications and statistical modeling, basic skills required for data processing and analysis. This is due to traditional and historical marginalization of females from STEM disciplines in the (higher) educational system (Odejide, Akanji and Odekunle, 2006). Hence low involvement of females in the project implementation was an indirect outcome of pre-existing conditions in the implementation. However, these do not necessarily apply in the field application of the developed tools such as CAPI and the crowdsourcing app for which end-users are usually trained. Females are usually highly represented among field enumerators in agriculture, including for cultural gender issues in rural communities. Capacity building for the use of the tools could have been more gender-balanced.
2. Gender quota and female representation is a very sensitive and political issue in Nigeria as earlier stated (NGP, *op cit).* The NAERLS, FEWSNET and the Fadama Programme of the NPFS have become major platforms for reaching women farmers. The former is due to the well-documented high representation of women and children among the poorest and most food insecure as well as among farm workers. Participation of women was therefore higher among the farmers and traders because of their predominance in the Fadama programme as members of Fadama Users Associations although the participation was still limited due to small size of female farms as well as relative illiteracy compared to male farmers which precluded many female farmers from being selected.
3. Women-focused activities in the aforementioned organizations are usually concentrated in the nutrition components of their programmes as well as many other agricultural development programmes in the country. (Interview responses from NPFS and FEWSNET; Nigerian Agricultural Investment Plan, 2013). Although the Project had no focus on nutrition data, there is an invariable link between food prices and nutrition status, in relation to food accessibility, food affordability and food adequacy (Smith et al, 2005) which the project did not address in the selection of participants. This consideration may have increased female participation in the project implementation.
4. These institutions confirmed high level of gender sensitivity of their regular programmes especially when it is focused on food security as well as gender-aware farm technologies. In spite of this, they found no further basis for gender mainstreaming in the AMIS. At the NBS, the appointed National Coordinator is female and one of the key resource persons is also female. The distribution of participants at the various workshops was also perused. There seemed to be inadvertence scarcity of females eligible with initial skill sets to participate.
5. Private sector organizations, on the other hand were more gender conscious as this was based on functionality rather than deliberate conformation to policies. The African Exchange has a functional focus on the involvement of women for specific programming activities due to the perceived “.higher attention of women to details”. Thus, gender parity practices (perhaps unwritten) will continue to dominate their activities, including all future expansion activities of AMIS. Digital connect worked with farmers through the Fadama programme to select farmers for the crowdsourcing pilot exercise. However, a limitation to higher gender balance is that the pilot exercise selectively worked with bigger and more literate farmers who could more quickly relate to the training and whose farm sizes were amenable to the desired volumes of business reported.

## 4.5 Participation

1. All participants in the beneficiary agencies as well as other participants at the NBS, a key actor, were officially designated to support the project with any in-house IT capabilities and in updating this with the advanced CAPI software to ensure an effective harmonization plan of the CAPI-piloted module (agricultural market prices for selected AMIS crops) with the web portal of the NBS. These plans for future harmonization were well documented and approved by the leadership of the NBS. The other major implementing partner, FMARD was central to all major decisions – on participating institutions, schedule of training workshops, briefing notes of all the processes were presented by the AMIS focal point at the FMARD. Interview held with the Director of the Planning and Coordination Department, the receiving Unit of FMARD confirmed full knowledge and full approval of the future plans to upscale the use of the CAPI and the crowdsourcing apps. A communication strategy plan is in the making to increase sensitization across all potential users of the products as well as to bring on board the cooperation and approval of the main policy makers whose approval will be critical to sustainability of the project.
2. With more than 20 key stakeholders attending the initial meeting, participation of the implementing agencies was considered satisfactory to formulate the Nigeria Strengthening AMIS work plan[[11]](#footnote-11). Field missions were undertaken to Kaduna and Niger states to consult with state level officials including NAERLS. Key decisions about participation was taken mostly by the FMARD and assigned staff attended training workshops and documented their new knowledge gained, also confirmed this at the interviews. The selection of Kaduna and Niger states along with FCT Abuja were done after due considerations and appropriate selection criteria, although a few stakeholders were not of the same view.

### 4.5.1 Participation Profiles by Gender

1. A gender approach was not part of the project design but within the institutions, attempt was made to include as many women as were eligible to participate based on their prior knowledge.The Table 1 details the gender profile of some of the training workshops. It shows that female participants were usually more at the Abuja venues than in the sub-national states (Kaduna and Niger). Abuja workshops had 24% or more female participants, demonstrating the more progressive gender culture at the capital. Lower participation of women in workshops in Kaduna and Niger states is indicative of the regional differentials in female literacy between the southern and the northern of Nigeria.

**Table 1: Gender Profile of a Sample of Training and Technical Validation Workshops**

|  |  |  |
| --- | --- | --- |
| Workshops | Total participants | % Female Participants |
| Micro-data Documentation and Archiving | Abuja - 22 | 31% |
| Kaduna - 21 | 24% |
| Niger - 18 | 11% |
| Understanding SDMX | Abuja - 24 | 30% |
| Open Data High Level Forum | Abuja – 18  Kaduna – 17  Niger - 17 | 27.7%  11.8%  24% |
| One-day Training on Crowdsourcing application | Abuja – 21 | 24% |
| Technical Validation/High Level Forum | Abuja - 30 | 16.7% |
| Abuja - 18 | 22.2% |

*Source: Compiled from Workshop Reports of the Strengthening AMIS Project in Nigeria*

1. Women participated in the IT-based on-hands training sessions as well as the market surveys. Figure 2 shows some female participants during the training workshops. The short-term consultant engaged for data archiving from the data collection agencies was female. The main facilitator at the Data Documentation and Archiving workshops in all three locations was female, a retired staff of the NBS. Participation of women at the High Level technical meetings where major institutional decisions were taken was 16.7% to 30%. All these took place in Abuja. It can be concluded that there was sufficient attention to gender balance in the capacity building and decision making forums. However the limitation was the existing low representation of women at sufficiently high level in the specific fields of focus (statistics and IT capabilities especially programming).

|  |  |
| --- | --- |
| Figure 2: Women participants in Strengthening AMIS Project Workshops in Nigeria | |
| *../../20160609_144103.jpg* | *../../price%20pict.jpg* |

# 5. Efficiency of the Implementation: Project Achievements

## Achievements at Output Level

Major outputs of AMIS are as follows:

### 5.1.1 Methodology Development

1. *Development of the CAPI application for smart devices* to be used for different surveys by all agencies under FMARD. The most important constraint to statutory surveys is lack of funds. To this end, FAO engaged a technology company to upgrade the standalone CAPI software used in NBS to an enterprise application that will be used by all MDAs and to serve as a system that is reliable, scalable, efficient, and most importantly reusable for the purpose of near real-time data collection in Nigeria. Rather than using traditional method of collecting data via printing of numerous questionnaires, utilizing courier services to dispatch the questionnaires nation-wide, and hiring data entry operators to key-in collected data, via the use of their existing smart devices powered by reliable and efficient software resulting an efficient use of the already limited resources currently available to the MDAs (AMIS-FAO)[[12]](#footnote-12).
2. *Development of the crowdsourcing application* to aid users’ access to real-time price data to enhance food market transparency and encourage coordination of primary action for five crops – Maize, rice, soybean, cassava and wheat with pilot activities in three (3) states – Kaduna, Niger and FCT on the AMIS crops. A Clients Identification and Assessment component was carried out to map farmer’s characteristics that will enhance the development of the SMS-based app and to in future, upgrade it to an SMS-to-web app which facilitates wider utility especially for low-literacy rural-based users without access to smart phones. A Nigerian Farmers Data Exchange platform for agriculture data producers and users was thereby created.

### 5.1.2 Capacity Building activities

1. Training Workshops were carried out in Abuja and the two participating states (Kaduna and Niger) for selected middle-level personnel of the participating agencies in the areas outlined in the planned activities in Table 1. Workshop reports were produced in the following areas:

* Micro-Data Documentation and Archiving Standards: Practices and Tools;
* Technical meetings on on-line access and IT platforms and data fluidity;
* Training and sensitization SDMX workshop on statistical data and metadata exchange standard for ease of data sharing across agencies and platforms;
* Technical workshops on market prices data production process;
* Technical workshop on use of the CAPI;
* Technical validation workshop on CAPI: lessons learnt and scaling-up after the pilot;
* Technical Validation workshop on the Crowdsourcing Application.

1. The maximum capacity at the training workshops was 24, kept low because of the on-hands nature of the training. A total of 10 training workshops were conducted across three locations while three High Level Management meetings as well as three technical validation workshops were held in Abuja. About 150 middle-level officers were trained across all the participating institutions. Perhaps less overall because some trainees participated in all the various modules of the capacity building programme. Considering the extensive nature of the government agencies in agriculture and general statistics production in Nigeria, this number is relatively low. The length of the training was also usually short – one to three days, considered to be too short, given the capacity gaps in the system.

### 5.1.3 Sensitization on AMIS

* High level meetings on open data for AMIS/Ag data
* Meeting with key stakeholders on the adoption of the approved data dissemination, access, and usage policy
* Official launching ceremony of the open data and online data portal for public utilization.
* A communication strategy is being developed by FMARD

### 5.1.4 Policy Development

The Strengthening AMIS project drafted policy papers in the following areas:

* The Nigerian Data Documentation and Archiving Policy
* A comprehensive data dissemination, access, and usage policy.

However, there is no further evidence on whether these draft policy papers have been received either by the top officials of the key organizations or the apex decision making bodies in the sector such as the ACF.

## 5.2 Achievements at Outcome level

1. Strengthening AMIS was a small project that lasted only 2 years from 2014 to 2017 and was a pilot focusing mostly on methodology development, pilot testing and capacity building of a small critical mass in relevant organization. The major stakeholders considered that the scope of the pilot would not allow any generally applicable outcomes such as nationally representative estimates from the small demonstrations during the training. The evaluation therefore considers the potential outcomes and impacts based on perspectives of stakeholders interviewed in the following areas:

### 5.2.1 Improving Data Collection, transmission and Validation

*Immediate Opportunities for NSS Statutory Activities*

1. The availability of the CAPI is being immediately cashed upon within the National Statistical System (NSS). For instance, implementation of the 2018/19 Agricultural Census for Nigeria which was piloted in 2014 and suspended due to fund constraint and which has now been approved for implementation by the National Council on Agriculture. CAPI has the potential to drastically reduce cost of the field activities once adopted for wide use within the NBS and the FMARD and ADPs who are involved in this survey.

### 5.2.2 Improving Data Access to Users

1. Food security analysis will be strengthened by the greater accessibility of data via the Open data initiative. The activities of the stakeholders, especially FEWSNET and NPFS who focus on food vulnerability analysis have been enhanced.

*Institution strengthening and Collaboration*

1. The project brought together several agencies with related mandates that were hardly working in synergy or cooperation. This will lead to enhanced harmonization of data and access across institutions, *inter alia*.
2. High level support especially from the Office of the Vice President is currently enjoyed by some of the institutions that participated in the project such as the NCX, FMARD and NPFS. AMIS-Nigeria output which was (politically) launched with involvement of the Minister for agriculture will lead to further strengthening of ties between the participating agencies.
3. The implementation structure of AMIS is considered innovative in effectively adapting a model of Public-Private Partnership (PPP). Involvement of the private sector was not initially designed but resulted from exigencies surrounding the government institutions. The alliances built will further strengthen PPP in other agricultural programmes in Nigeria.
4. The involvement of the private sector should increase the efficiency of data collection, transmission and validation, as well as data quality and access in future due to higher value for money spent than through government agencies. A summary assessment of project activities and outcomes is shown in Annexure 5.

### 5.2.3 Effectiveness of Capacity Building

*Outcome at individual level*

1. There was sufficient evidence of improved skills by the workshop participants (Box 3). Immediate knowledge gained would be applied to:

* developing harmonized survey templates;
* carrying out more efficient and timely enumeration;
* skills for improving organizational web-portals.

1. For farmers and traders, positive outcomes include:

* Skills in using cell-phones to obtain timely price information;
* Accessibility to more efficient private sector organizations;
* Sense of inclusiveness or relevance to policy issues that affect their enterprises.

1. Evaluation of the capacity building was carried out using the OED framework. See Annexure 6.

Box 3: Comments by some Workshop Participants in Nigeria

*“The FAO workshop was elaborate, comprehensive and coherent on the data access and use to different organizations that participated in the workshop. It was satisfactory”*

*“I want to use this medium to thank the organisers and consultants for a beautiful and well spent time in this workshop. I have benefited so much”.*

*“The workshop is an eye opener, very interactive, and exposed me to a lot of things, about NBS, and importance of data”.*

*“The open data workshop was a welcome development”*

*“The workshop helped me to improve our website and also know how to get more information from different sites e.g FAO site NADA and NBS”.*

*“Couldn’t have asked to be at a better place and doing something better than this workshop. It sure came at the right time”.*

*Outcome at Organizational Level*

1. There was a general consensus of significant knowledge and skills gained during the training workshops. At the institutional level, existing methodologies were built upon and improved at the NBS, NAERLS and the FEWSNET. Existing facilities were seen to be below expected standard at the FMARD and the NPFS as well as the NCX. There was eagerness to collaborate to improve their existing sub-standard facilities and skills but this would require significant financial resources by the government, especially to update web-servers and improve the IT facilities. Thus, actualization of the desire for application of new tools and skills would depend on the subsequent support from the government and donors. Requests for assistance were extended to the FAO by the FMARD and the NPFS. The in-house capacity at the NBS, NAERLS and the FEWSNET was quite amenable to immediate upscaling given better in-house capacities as well as national support given to these organizations. The FEWSNET, being an international NGO is able to immediately utilize new skills and institutional collaboration to update some of the statutory activities.

*Specific Outcomes at Institutional level*

1. The participating organizations improved their internal data management systems

* NAERLS improved the existing CAPI software; potentials for improving the software specifically for the statutory surveys (The Agricultural Performance Survey – APS); Availability of more accurate price data for market research; ToT capacity gained through the participants;
* NBS gained knowledge for improving on the existing CAPI software, harmonizing the price module into the main data portal, potential huge cost savings on all statutory surveys; AMIS-branded tablets for data collection, providing the samples for national buy-in at the institutional level. ToT capacity gained;
* FMARD/NPFS– potentials for implementing major moribund statutory surveys; potential for harmonizing data from other institutions for planning and coordination and to inform policies. ToT capacity gained;
* FEWSNET potential for expanding the scope of market price collection and better analysis of Vulnerability Analysis; possible reduction of cost of data collection by improved partnership with national agencies; More timeliness in harmonizing Nigerian data with FEWSNET global data portals;
* NCX: Presently sees no immediate organizational gains as the management was not carried along;
* Private sector organizations: Enhanced capacity to intervene in small farmer performance through software application;
* Niger state BS: State funded tablets provided for 30 LGAs; potentials for further state-buy-in to provide more facilities. Training modules gained for further state-funded training.

*Outcome at Policy Level (Enabling Environment)*

* Two policy drafts were produced which could be adopted, given high-level buy-in especially through the Agriculture Consultative Forum[[13]](#footnote-13) ;
* Performance templates show-cased in each institution for future enabling environment for better data management – however contingent on stronger policy engagement at the leadership of the participating institutions;
* The project helped identify needs to enhance agricultural statistics and national action plan via the future NSDS.
* Potential for greater institutional partnerships, for instance for centralization of web-server subscriptions.

### 5.2.4 Partnerships and Alliances

*Public-Private Partnership*

1. This PPP model of implementation was a major outcome of the project which may be a more efficient and sustainable way of implementing a host of agricultural programmes in the country.

* The involvement of African Exchange on a pro bono basis shows that the private sector is well incentivized by potential gains to provide technical support in a more efficient manner;
* Involvement of DigitalConnect with the pilot activities of the crowdsourcing demonstrated the wide availability of community-based development strategies across the private sector in Nigeria, contrary to the belief to the contrary;
* Creation of a Farmer Data Exchange Platform as part of the national data portal is a resource that is useful for different forms of engagement with farmers through their associations;
* Sensitization of farmers to the benefits of working with the private sector was created in Kaduna state. This has provided farmers and traders alternative options for accessing needed technical and material resources. The willingness-to-pay demonstrated shows that cost may not always be the barrier to farmers’ access to better technologies.

1. Stronger partnership between farmers and private sector operators: farmers and traders very soundly approved of the new relationship with the private sector and expressed the wish to sideline government channels in their commercial activities.

C*ivil Society Engagement*

1. Involvement of the civil society was brought in through FEWSNET. This will also ensure ownership of stakeholders at the community level in the future plans for upscaling and modification of the project to suit local needs. Given the AMIS global initiative, immediate outcomes for the participating countries included adaptation to needs while the strengthening AMIS project was aimed at improving national capacities.
2. Involvement of farmers and traders through their community associations was a positive (potentially stronger) partnership between government and the civil society. Although the project did not specify capacity building at the community level, this has been introduced as a desirable outcome for the future.

### 5.2.5 Unintended Outcomes

1. Since the design of Strengthening AMIS project, was conceptualized as gender-neutral, it did not have any specific gender component or strategy. However, some gender outcomes could be considered incidental or unintended, and/or a product of existing gender-aware strategies (or otherwise) of individual stakeholder organizations.
2. Usual low access of women to cell phones as well as their low representation among big farmers may have kept more women out of the participation and benefits loop of AMIS (such as piloting and using the crowdsourcing app). However, there was some conscious effort in some of the stakeholder organizations to include females as trainees. This can have positive spill-over effects in future capacity building activities.

## 5.3 Results and Contribution to Other FAO and National Objectives

1. Table 5 shows the achievement of results according to the evaluation of activities drawn in the work plan. Based on the interview responses, especially with the Project Coordinator, it is considered that the deliverables 1 to 3 were well delivered. Methodology and software development, training and pilot testing were all carried out within the stated timeline. Deliverables 4 and 5 were partially achieved, mainly because these are not the main focus of the Nigeria programme however, these are complimentary to the main outcomes. Activities on these are being supported and funded through other initiatives. The remote sensing application is being supported by the UNDP and implemented by the NAERLS.

*Contribution to SPARS (against stated objectives)*

1. The SPARS activities are being carried out with support of the FAO Global Strategy under a different technical group. These will improve overall efficiency of data management via CAPI use not only for other agricultural indicators but also other major economic and social sector indicators in Nigeria.

*Contribution to SO4 output 4.1.3 (against stated objectives):*

1. FAO Strategic Objective 4 aims at more inclusive and efficient agricultural and food systems at local, national and international levels. The Strengthening AMIS project potentially should contribute to organizational outcomes through:

* policies, regulatory frameworks and public goods enhance inclusiveness and efficiency of food, agriculture and forestry systems;
* enhanced public-private collaboration in addressing the challenges and risks faced by smaller and disadvantaged participants in food and agricultural systems; and
* international agreements and mechanisms promote inclusive and efficient markets. (FAO,2013).

1. By implication rather than deliberate activities, some positive contribution to all stated outcomes of SO4 expected outcomes can be inferred, as well as how the project built on earlier and on-goings FAO assistance projects such as the CountrySTAT which ended in 2014, the Cadre Harmonise and the GSARS or other activities around the National Strategy on Development of Statistics (NSDS) in the country, as it has impacted the agricultural sector. There was also no doubt as to the ways that the CAPI software and crowdsourcing app as well as the Open Data initiatives of the Strengthening AMIS project have huge potentials to enhance the implementation of data collection field work and access to statistics in general in the sector. In addition, policy documents were developed, PPP model was promoted and [methodologies for] national data management (documentation) provided for harmonized, more accurate and better global comparability of Nigeria’s market price data. In these ways, the project has the likelihood to promote not just the SO4 objectives but also the NSDS in Nigeria.

# 6. Impact and Sustainability

1. In general, the Strengthening AMIS Project outputs have been formally handed over to the Federal Ministry of Agriculture and Rural Development. It is expected that FMARD will work in collaboration with the NBS which has the mandate for harmonizing and disseminating formal statistics in the country. NBS has bulk of the capacity for further training, access to IT platforms and web servers in the country. Therefore, the roles of these two organizations will be key in ensuring that the project outputs are enlarged for sustainable use in Nigeria. It was reported that a communication strategy is being developed by the FMARD to create more awareness and secure state and local government buy-in towards the necessary country funding and policy and programming that will be needed; however, the evaluation was not clear as to when this would be ready. The involvement of farmers and traders also opened up the space for their involvement as potential beneficiaries of a robust, evidence-based policy in agriculture. It can be concluded that there is high visibility of the project outputs and there is high interest in using the products. The public support and organizational partnerships, including with FAO and other donor partners, for the future strategies will be key to sustainability

## 6.1 General Concerns on Sustainability

1. There were several concerns raised on the continuity and sustainability of the project by stakeholders. For this, further involvement of FAO and major national partners are seen as crucial to sustainability unless certain steps are taken.
2. FAO country office had no initial role in the design although the country scoping mission enabled a revision of the Prodoc and work plan. Despite of the fact that the pilot was undertaken only in two states and the FCT Abuja, the thirty-six statistical officers from each of the thirty six states were invited to Abuja for initial CAPI training. Funding for scale-up may be an issue, after the project ends. Absence of a national steering committee leaves the future of the project to be dependent on the politics of national budgeting *vis a vis* its prioritization for upscaling and the necessary budgetary support for FMARD.

*Political Economy*

1. Vested Interests: It is noteworthy that the CAPI software has been available within the NBS since 2010 but there was push-back against its use because of vested interests in questionnaire printing, recruitment of huge population of enumerators, training activities at different levels of government and so on. These political interests had resisted the application of CAPI and may still constitute a threat to sustainability.
2. Rapid change of leadership is not uncommon in Nigeria: This has particularly affected one of the agencies most relevant to AMIS at the global level – the NCX. Information gap and poor institutional memory within participating agencies would be created in the event of this before AMIS is effectively up-scaled.

*Institutional partnerships*

1. Institutional linkages forged during the project may not be sustained. There was no sustained institutional interactions between the organizations outside the FAO-project activities and mandates. There were no direct meetings of these organizations with the FAO country staff. There was no interaction between the heads of these organizations. Only the invited participants who benefited from the training related across the board. These are middle-level officers that cannot influence future policies and activities The Lead consultant liaised directly with the participating agencies as well as directly with the FAOR, assistant FAOR and the Lead Technical Officer (LTO) at the headquarters in Rome.
2. Given the absence of a national steering committee for AMIS, engaging the interest of the major policy makers as well as the counterpart funding of other states may be challenging.
3. Institutional Memory is limited: Absence of an in-house and national technical committee leaves the knowledge base of the project in the hands of the consultant who is a short-term consultant whose contract ended at the conclusion and handing over of the project outputs in June 2017. However, it was noted that the consultant was hired by FMARD in supporting next steps.
4. Absence of a national steering committee also precluded the potential partnerships that could have been built with other donor partners which could open up avenues for future resource support for upscaling the project outputs, as well as among other related government institutions such as the CBN, SGR and so on.

## 6.2 Limitations and Success Factors to the Implementation of the project

### 6.2.1 Limitations

1. Country Support to the Implementation: Being a small project, Strengthening AMIS was managed by a small team throughout, including within the FAO. Within national institutions, most of the participating agencies, although had relevant mandate and basic resources such as web-sites, dissemination formats, basic software for data compilation, only the NBS, NAERLS and the FMARD (Planning and Coordinating Department) provided intellectual support through resource availability and resource persons appointed to support training workshops.
2. Low level of support from FAO country and regional offices due to low financial capacity and limited funding of most FAO projects in Nigeria, including the AMIS. The small size of the country project staff may be one potential limitation to the sustainability of AMIS.
3. Weak national Institutions: Most of the agencies had outdated resources that mainly stood to be improved by AMIS and most still requested extended support from FAO to sustain critical aspects of their activities to ensure continuity of the activities.
4. CAPI has yet to be synchronized with the NBS data portal. This needs continuous engagement of FAO and the trained personnel at NBS and FMARD.
5. The crowdsourcing pilot was a particularly useful aspect of AMIS. However, because it was implemented independent of the NBS, there is concern about integrating the new module into NBS portal. The key outputs were developed by private sector, therefore much less ownership and control is ceded to national institutions.
6. Presently, the FMARD which has direct mandate for sustaining AMIS and effecting national coverage is yet to develop a communication strategy and to seek buy-in of key institutions such as National Planning Commission, Ministers for Agriculture, Trade, Finance and Budget as well as adequate representation from the Agriculture Consultative Forum (ACF) where major sectoral policies are midwifed.

### 6.2.2 Success Factors

1. Participating staff of the stakeholder organizations were mostly mid-level staff who are involved with day-to-day operations to support their agencies mandates. This would ensure that capacity building was imparted to those who would really benefit and utilize the skills.
2. Initial output to the NSS by CountrySTAT addressed issues of weights and measures which would have been one of the biggest challenges to software development for data harmonization.
3. Private sector involvement was a key factor for efficiency and timelines of operations.
4. There is presently high level of support from Office of the Vice President on reform of major institutions, which includes a high visibility of the agricultural sector in the nation’s priorities. However, the Office of the VP had no formal involvement in management of the project.
5. National Consultant had a good reach within NBS and understanding of government bureaucracies and strategized to by-pass these, even at the risk of sidelining appointed National Coordinator. This has both risks and strengths.

# 7. Conclusions and Recommendations

## 7.1. Summary and Conclusions

1. The evaluation aimed to address the following broad queries:

* How appropriate was the concept and design of the Strengthening AMIS project in the three countries?
* How effective was the implementation process?
* To what extent did the implementation lead to positive (expected) outcomes?
* In general, were the right processes followed and did they lead to the right outcomes?

1. In general terms, the Strengthening AMIS project in Nigeria was successful, given the design, timeless and budget application. The design of the project component implemented was very relevant to the needs of the country, especially as it provided immediately usable outcomes that could promote existing national policy initiatives under the now not updated National Strategy for the Development of Statistics (NSDS)[[14]](#footnote-14), but if and only if the pilot results are fully owned and speedily up-scaled by the country’s government and other vested stakeholders. The institutional linkages forged during the project have the potential to enhance the much-needed harmonization of data management mandates, processes and outputs, if and only if the national stakeholders retain and expand the training and other networking opportunities that have been forged. The skills provided to individual trainees have to be institutionalized through further retraining. Adoption of the tools developed have a huge potential for cost-saving and thus, inter alia, more timely conduct of relevant statutory surveys generating market price information in the agricultural sector. Despite the fact that the design and implementation of the project was not guided by the FAO Gender Policy, there were attempts to include eligible women in the trainings.
2. Although the right processes were followed, according to the project document, work-plan and results framework, the implementation process may have been flawed especially, given the absence of any enduring management and technical committees. This may be a threat to sustainability. At the time of evaluation, there was limited evidence that the project activities and outcomes would be speedily replicated, fully integrated and fully owned by the government institutions vested with the responsibility to popularize the project outputs. However, follow up activities by the FAMRD, such as TOT of one official from each of the 36 states is an effort to replicate AMIS. FAO Nigeria is aware of follow up activities and appears set to support any future initiatives by the government. The draft policy documents need to be speedily moved up for country review and approval. Only this can lead to concrete policy commitment and budgetary allocations for a national coverage of the capacity building in the immediate future. Fund availability and further counterpart financial leverage by the government at the federal, state and local government levels will be critical for this to occur. Yet, the present financial capacity especially at the lower levels of government may be less than sufficient to allow this continuity. Apart from the PPP model which was successfully carried out, other innovative strategies will be required to ensure country ownership, people’s interest and commitment in addition to meeting the critical funding needs.

## 7.2 Recommendations

*Implications for further action: Need-based Recommendations*

* The use of the CAPI in the pilot revealed that huge time and cost savings are possible for all kinds of national statistics. However, development and harmonization of the questionnaires for all modules beyond the price modules will need to be implemented through a larger project, for this to occur.
* Although the CAPI has GPS capabilities, similar capability will be needed to advance the crowdsourcing app for location-specific intervention programmes especially in emergency situations. Ongoing work in the north-east could benefit greatly from the project outputs in this regard, as well as other planned interventions on acute food insecurity. However, the need for rapid up-scaling and full uptake by relevant agencies still needs to be addressed. Also, low access of farmers and traders, the primary data providers to smart phone remains a challenge that should be addressed through education and some subsidy to willing participants.
* A standing steering committee of all the institutions in the project implementation would strengthen the newly built partnership. Awareness has been created across the institutions of mutually beneficial capabilities and resources, including data sharing, cost sharing etc. There was a valid suggestion that the institutions centralize their servers and share the cost of maintenance (annual subscription). These needs to be further strengthened through a national standing committee or by harmonizing the mandates with the national implementation committee on statistics (if any).
* The harmonization of questionnaires for all modules of the ACS will require further training (ToTs) of more participants across all the states and sub-sectors of agriculture. Also training should be speedily extended to other states with equal importance in production and consumption of the AMIS crops. This will address the political undertone of state selection for the project.
* There is willingness on the part of the FAO to support further use of the application through expanding access of farmers and traders to smart phones as well as complementary literacy. This is a worthwhile initiative that will ensure long-term sustainability of this useful initiative. There is need for a strong policy push for the PPP model that emerged during the project.
* A high-profile communication strategy will be required to popularize the process and outputs of the project with clear evidence of the advantages well presented in readable form for varied audiences.
* High level support especially within the Agriculture Consultative Forum and the Office of the Vice President including major policy adoption and budgetary support should be sought to support full national buy-in and adoption of the enabling policies to secure the future use of the CAPI.
* Wider donor partnership will also need to be secured. Effective partnership among the donors currently supporting related project and the FAO will be helpful to work in synergy. The upscaling of Strengthening AMIS project should be included in the next CPF (2018 – 2022) as well as the UNDAF[[15]](#footnote-15) plan of action for the next five years.
* There is need for proper briefing and full in-house documentation of the project activities for briefing the permanent country staff of FAO as well as within the participating institutions to build institutional memory.

# 8. References

Baden, S. (1998). *Gender issues in agricultural liberalisation*. Institute of Development Studies at the University of Sussex.

FAO-FGN (2013); FAO Country Programming Framework (CPF) 2013 – 2017. Federal Republic of Nigeria. Abuja.

FAO (2011): AMIS Project Concept Paper <http://www.fao.org/docrep/005/y3914e/y3914e0f.htm>

FAO (2012): Strengthening Agriculture Market Information Systems in Nigeria, India and

Bangladesh, using innovative methods and digital technology. Prodoc prepared for Bill and

Melinda Gates Foundation. Rome.

FAO (2013): Conference on Reviewed Strategic Framework. Thirty-eighth Session Rome, June 2013

FAO (2014a): Nigeria AMIS Data Assessment Report, Rome

FAO (2014b): Strengthening Agriculture Market Information Systems in Nigeria using

innovative methods and digital technology (Baby Project). MTF/GLO/359/BMG

FEWSNET –Nigeria (2017)’ Nigeria Market Monitoring Report, January 2017

FGN (2010) Nigeria agricultural Transformation Agenda (ATA) Abuja. Also Known as The Green Alternative.

FGN (2006): National Gender Policy. Federal Ministry of Women Affairs, Abuja

FGN (2008) National Gender Policy Implementation Plan (2008 – 2013) Federal Ministry of Women Affairs, Abuja

NISER, 2012: NISER Monitoring Research Project: Survey of Crop Conditions (1990 to 2000). NISER, Ibadan

Odejide, A., Akanji, B., & Odekunle, K. (2006, December). Does expansion mean inclusion in Nigerian higher education? In *Women's studies international forum* (Vol. 29, No. 6, pp. 552-561). Pergamon.

*OECD (1986): 'Methods and Procedures in Aid Evaluation'*

*OECD, (1991): The DAC Principles for the Evaluation of Development Assistance Programmes*

*OECD (2000): Evaluation and Results Based Management (RBM) Terms*

OECD, (2017), DAC Criteria for Evaluating Development Assistance. <http://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm>

Smith, L. C., Ruel, M. T., & Ndiaye, A. (2005). Why is child malnutrition lower in urban than in rural areas? Evidence from 36 developing countries. *World Development*, *33*(8), 1285-1305.

1. OECD, 1992, 2017, DAC Criteria for Evaluating Development Assistance. <http://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm> [↑](#footnote-ref-1)
2. AMIS Concept Paper [↑](#footnote-ref-2)
3. FAO (2014): AMIS Nigeria Data Assessment Report. [↑](#footnote-ref-3)
4. “MAPS emerged from the 2nd Round Table for Managing for Development Results in 2004 as a global plan to improve development statistics based on an informal partnership involving developing countries, donors and statistical agencies worldwide.” [↑](#footnote-ref-4)
5. In Nigeria, the NSDS was a 5-year plan spanning over 2008/09 – 2012/13 to provide mechanisms for a holistic reform of the National Statistical System (NSS) [↑](#footnote-ref-5)
6. The project has three components: (i) the development of methodologies as global public goods on crop forecasting, stock estimation and food price using digital technology; (ii) the adaptation and further development of existing data and analysis tools and AMIS Platform for use at global and country level for sharing, analyzing and disseminating international and national data; and (iii) building capacity of the three focus countries (India, Bangladesh and Nigeria) to ensure they have the capacity to implement the methodologies for improved. [↑](#footnote-ref-6)
7. The CountrySTAT is a global initiative of the FAO. It is a statistical framework designed to organize, integrate and disseminate statistical data and metadata on food and agriculture coming from different sources by harmonizing scattered institutional statistical information for compatibility with each other at the country level and to promote international comparability. [↑](#footnote-ref-7)
8. Nigeria AMIS Data Assessment Report (2014). Compiled by visiting team from Rome. [↑](#footnote-ref-8)
9. FAO, 2011. FAO Gender Policy <http://www.fao.org/docrep/017/i3205e/i3205e.pdf> [↑](#footnote-ref-9)
10. FAO HQ – Strengthening AMIS project data (September 2017). [↑](#footnote-ref-10)
11. FAO (2014) Back to Office Report – May 2-10, 2014. During the Fact Finding Mission – FAO/AMIS also met with NBS, NPFS, Strategic Grain Reserve, FEWSNET, Nigeria Commodity Exchange, NPC, FMARD, NAERLS (Kaduna), MOA (Kaduna), MOA (Niger), Bank of Agriculture (Kaduna), Ministry of Economic Planning – Dept. of Statistics (Kaduna), State Bureau of Statistics (Niger), and Planning Commission (Niger) among others. [↑](#footnote-ref-11)
12. Proposal - CAPI Software Design and Implementation. MTF/ GLO/359/BMG. [↑](#footnote-ref-12)
13. However, there is no further evidence on the status of these draft policy papers if have been received either by the top officials of the key organizations or the apex decision making bodies in the sector such as the ACF. [↑](#footnote-ref-13)
14. Nigeria NSDS expired in 2014 (NSDS Progress Report, February 2017 – PARIS21) [↑](#footnote-ref-14)
15. The United Nations Development Assistance Framework (**UNDAF**) is a strategic, medium term results framework that describes the collective vision and response of the UN system to national development priorities and results on the basis of normative programming principles (https://undg.org) [↑](#footnote-ref-15)