Training Activities   **Global Strategy to improve agricultural and rural statistics**
Computer assisted personal interviewing (CAPI) for Agricultural surveys
Users' guide – Training material   2017

1. Background

The Global Strategy to Improve Agricultural and Rural Statistics (GSARS) aims to significantly increase the availability and quality of agricultural and rural statistics, through developing institutional, human and financial capacity. The GSARS provides a framework for national and international statistical systems to produce and to apply the basic data and information needed to guide policy on rural development and sustainable agricultural production.
Within this framework, the need for adopting efficient and cost effective technologies in the collection and compilation of agricultural and rural statistics whose timeliness is critical in policy making has been recognized. The use of CAPI was proven to dramatically reduce the time lag between data collection and data analysis, and improve data quality. Since manual coding of the responses recorded with pen and paper is no longer necessary and data validation is done at the time of data collection, the information is almost ready for statistical analysis as soon as surveying is completed.

To improve the capacity of developing countries in using CAPI for agricultural surveys, several regional trainings for country officers were organized in Africa and in Asia-Pacific, under the coordination of the respective regional implementation and training partners of the GSARS (AfDB, UNECA, Global Office of the GSARS, FAORAP and SIAP, respectively).

These workshops responded to the need of producing timely statistics and aimed to build the capacity of national statistical systems for data collection and production. They promoted a powerful CAPI software called Survey Solutions which was developed by the World Bank with support of GSARS. It has been implemented by National Statistical Agencies (NSAs) in more than 60 countries around the world, for around 300 surveys. Compared to similar products which can take years to master, Survey Solutions has a user-friendly point and click interface, allowing statisticians to gain a high level of proficiency in a matter of days. Additionally, Survey Solutions includes a powerful set of tools for creating skip patterns as well as

constituency checks, incorporates multi-language, offers sophisticated survey management platform and monitoring reports, and facilitates the data validation process. For these reasons, GSARS is promoting in particular Survey Solutions to build NSAs' capacity in using CAPI.

With the objective of further disseminating the content of these workshops, the Global Office of the Global Strategy has released some generic training material that could be used for future in-classroom training on CAPI using Survey Solutions. This users' guide describes the intended objectives, content and target audience of this training material. It provides recommendations on organizational aspects related to the organization of training on CAPI. Examples of course content and possible agenda are provided in an appendix. It can be used in conjunction with the e-learning tool that was also developed by the Global Strategy and can be found on its website (http://gsars.org/en/).

2. Objectives of the training

General objectives

The generic training material was designed with the objectives of producing the following results:
- Increase the ability of National Statistical System (NSS) to access and use ICT for production and dissemination of minimum set of agricultural and rural statistics;
- Improve the capacity of countries to adopt cost-effective and reliable methods for producing a minimum set of agricultural and rural statistics

Learning outcomes

The main objective of the training material is to provide a strong foundation in all of Survey Solutions functions. Therefore, by the end of the training, participants are expected to have acquired skills to implement a basic survey and be able to:
- Use the Survey Solutions software in the implementation of surveys;
- Use advanced questionnaire design features of the Survey Solution software such as validation and skip protocols;
- Manage surveys and generate associated reports and export data;
- Understand practices for managing survey equipment.

3. Course content

The course is designed for national statistical offices and statistical units in the ministries of agriculture. Training activities consist of a judicious mix of lectures, individual and group assessment exercises, and case study exercises. The training design also features knowledge-sharing on country practices and methods.

The training topics cover:
- Introduction to CAPI, comparison of CAPI products to Survey Solutions
- Overview of Training and Survey Solutions
- Introduction to Questionnaire Designer
- *Hands-on exercises on Register for Questionnaire Designer and Download and Install Tester*

- Basic Designer
- Intermediate Survey Design Skills, and overview of advanced features
- Mastering the intermediate survey design
- Overview of Advanced Features
- *3 hands-on exercises of survey design using basic and advanced features*
- Basic case management skills with HQ and Supervisor
- Know the difference between Administrator, HQ, and Supervisor
- *2 full survey simulations using all components of Survey Solutions*

4. Course design and delivery

Delivery mode

The course should be organized through the combination of:
- Lectures on CAPI data collection and Survey Solutions functionalities;
- Country experiences, that will provide a platform for participants to discuss the feasibility of adopting CAPI in their countries;
- Hands-on exercises in small groups
- Survey simulations using all components of Survey Solutions

Given the level of the technical nature of the topic, it is important to ensure a continuous interaction between the trainees and trainers. For this reason, most of this training should be delivered face-to-face with the trainers physically present. The face-to-face training can be followed or preceded by online lectures, readings or e-learning activities to get the participants up-to-speed on certain basic topics/functionalities of Survey Solutions and be oriented to delve deeper into certain complex Survey Solutions' functionalities.

Length of the training

It will depend on the specific objectives determined with the recipient organizations and the background of the trainees. From experience, for participants who are directly involved in primary data collection (e.g. survey design, field supervision, etc.), a five-day training, including a mix of hands-on exercises (individual or in small groups) and lectures every day, has proven to be a good format.

Recommended number of trainers and participants

Because of the hands-on nature of this training, it is advisable to keep the number of participants between 20 and 30. Past trainings on CAPI have also shown that a group of around 25 persons is appropriate: it is small enough to ensure interaction among trainees and with the trainers, organize exercises and applications and large enough to include most of the stakeholders and to allow mutually beneficial exchanges.

It is also recommended to plan for a team of trainers (one trainer per 5 to 7 participants) as it is better to assign one trainer per group during the survey simulations. It is recommend to have at least one trainer with significant knowledge and experience in Survey Solutions and one trainer with experience in general data collection aspects (questionnaire design, agricultural surveys and censuses, etc.).

5. Course material

The proposed material for the course is composed of the following:
- A set of PowerPoint presentations on the following topics:
  - Is CAPI right for my survey?
  - Overview of Survey Solutions system
  - Getting started with Survey Solutions' Questionnaire Designer and Tester
  - Basic Designer functionalities
  - Intermediate Designer topics: Special Questions, Validation, C#, Rosters, Nested Rosters, html tags and piping
  - Advanced Designers topics
  - Introduction and case management for Administrators, Headquarters and Supervisors
  - Introduction to the Interviewer Application
  - Data export
  - Tablet management, configuration, useful apps and required equipment/accessories
- Presentations of country experiences (not included)
- A series of exercises to practice:
  - Simple questionnaire design (2 exercises)
  - Basic Validation and Enablement Conditions
  - Roster and conditions
- A series of survey simulations to practice:
  - The Census Mode using the Headquarters, Supervisors and Interviewers components of Survey Solutions
  - The Census Mode using the Headquarters, Supervisors and Interviewers components of Survey Solutions
  - The Survey design to export using the Designer, Headquarters, Supervisors and Interviewers components of Survey Solutions

Country experience presentations will need to be prepared according to participants' training needs and countries' realities

The supporting material to be reviewed by the participants in addition to the training is composed of:
- [CAPI e-learning course on Using Computer Assisted Personal Interviewing for Agricultural Surveys](#) (English)
- [Survey Solutions – Support portal and knowledge base website](#) (English)

Finally, the participants should be given at the end of the training an evaluation sheet, where they will be able to provide their feedback on the course and identify the areas where further training could be provided.

6. Target Audience

The course is designed to bring together statistical officers involved in the data collection and production of indicators on agricultural statistics. The training should therefore be open to officers from the national statistical system (NSO or statistical department within the Ministry

of Agriculture, for example) as well as from other public institutions that produce agricultural information, such as data producers from different Government Departments (e.g. Agriculture, Livestock, Fisheries or Forests) as well as from research institutes.

To maximize the impact of the training, participants should:
- Be senior and middle level statisticians directly engaged in the design of primary data collection of data on crops, livestock, horticulture, fishing and aquaculture statistics;
- Have technical knowledge and involved in statistical surveys and data collection, processing, compiling and production of agricultural and rural statistics.

For example, good candidates for this training could be:
- Senior and middle managers in charge of designing and implementing the data collection methodology of agricultural and rural surveys or censuses, and
- Statisticians involved in questionnaire designs and data management processes in support to agricultural and rural surveys or censuses.

This training can also be used to train targeted trainers or technical assistance providers from Statistical Training Centers, regional economic communities and regional and sub-regional organizations specialized in statistical capacity building.

7. Main references

Global Strategy to Improve Agricultural and Rural Statistics. 2016. *CAPI e-learning course on Using Computer Assisted Personal Interviewing for Agricultural Surveys*.

Rahija M., Mwisomba T., Kamwe, M.A., Muwonge, J. and Pica-Ciamarra, U. 2016. *CAPI based surveys a cost-effective and viable alternative to PAPI surveys? Evidence from agricultural surveys in Tanzania and Uganda*. Seventh International Conference on Agricultural Statistics, Rome.

World Bank Group. 2017. *Survey Solutions – Support portal and knowledge base*. Online: http://support.mysurvey.solutions/.

Appendix: An example of agenda for a regional training workshop on Computer Assisted Personal Interviewing (CAPI) for Agricultural Surveys

	Day 1
9:00 – 09:30	**Registration**
09:30 – 10:00	**Opening Session**
	1a) Welcome statements
	1b) Self-introduction of participants
10:00 – 10:20	**Coffee Break and Group Photo**
10:20 – 10:30	**Security Briefing**
Session 1:	**Introduction to CAPI, and Survey Solutions experience**
10:30 – 11:15	**Presentation: Is CAPI right for this survey?**
11:15 – 12:15	**Country experience presentation**
12:15– 13:30	**Lunch Break**
Session 2A:	**Overview of Training and Survey Solutions** **Learning Objectives:** • Know the 4 main pieces • Be familiar with how 4 pieces fit together • Describe role of Designer • Find and register for Designer • Describe role Tester • Find, download, and install Tester on tablet
13:30 – 14:30	**Presentation: Overview of Survey Solutions System**
14:30 – 15:00	**Presentation: Getting Started with the Questionnaire Designer and**
15:15 – 15:30	**Coffee Break**
Session 2B:	**Practice: Register for Questionnaire Designer and Download and Install Tester**
15:30 – 16:00	**Hands-on:** • Create Designer Account • Download and install Tester on all tablets

Day 2	
Session 3A:	**Basic Designer** **Learning Objectives:** • Know how to create a questionnaire • Know the major question types (text, date, single and multi-answer, list) • Understand the concept for enablement condition • Be familiar with the fields to be completed for questions
9.00 – 12:00 (with Coffee Break 15 min)	**Presentation: Basic Designer**, Nayo Ankouvi, FAO • *Create a new questionnaire or clone an old one* • *Questionnaire Structure* • *Question Fields* • *Create text, date, single and multi-answer categorical questions, and list* • *Enablement conditions* • *Static Text*
12:30 – 13:45	**Lunch Break**
Session 3B:	**Practice: Mastering Basic Questionnaire Design**
13:45 – 15:30	**Hands-on: Mastering the Basics** • *Program questionnaire containing text, date, single select, multi-select, and list questions* • *View questionnaire in Tester, make edits* • *Ask for volunteer to walk through questionnaire in the designer* • *If time permits, program questionnaire without question type specified*
15:30 – 15:45	Coffee Break
15:45 – 17:00	**Hands-on: Mastering the Basics -*continued***

Day 3	
Session 4A:	**Intermediate Survey Design Skills, and overview of advanced features** **Learning Objectives:** • Know what validation conditions and messages are • Apply basic C# syntax for creating validation and enablement conditions • Know how to build a roster • Know about nesting roster • Know about using HTML tags for text formatting • Know about piping
9:00 – 10:00	**Presentation: Intermediate Survey Design Skills – 1** • *Special question types (GPS, barcode, picture)* • *Validation conditions and messages* • *C# syntax for validation and enablement*
10:00 – 10:15	Coffee Break
10:15 – 11:15	**Practice: Basic Validation and Enablement Conditions**
11:15 – 11:45	**Presentation: Intermediate Survey Design Skills – 2** • *Basic rosters* • *Nested rosters* • *HTML tags for text formatting* • *Interactive Text Substitution*
Session 4B:	**Practice: Intermediate Questionnaire Design**
11:45 – 12:30	**Hands-on: Mastering the intermediate survey design** • *Program intermediate survey using rosters, enablement, and validation conditions* • *Program questionnaire with roster from Indian Agricultural Census*
12:30 – 13:45	**Lunch Break**
13:45 – 15:45	**Hands-on: Mastering the intermediate survey design - *Continued***
Session 4C:	**Overview of Advanced Features**
15:45 – 17:00	**Presentation: Advanced designer features** • *Macros* • *Look-up tables* • *Invisible Variables* • *Masking* • *Preloading long-lists of options* • *Cascading options* • *Random number generation*

Day 4	
Session 5A:	**Basic case management skills with HQ and Supervisor** **Learning Objectives:** • Know the difference between Administrator, HQ, and Supervisor • Be familiar with workflow of Survey Solutions and events in the life a case • Know how to access HQ and Supervisor • HQ primary functions (create Supervisor, Interviewers, Import Template, Create Cases, Assign Cases to Supervisor) • Supervisor primary functions (assign cases to Interviewers) • Use HQ and Supervisor to approve/reject completed cases • Know about creating field reports with HQ and Supervisor
9:00 – 10:00	**Presentation: Intro and case management with Admin, HQ, and Supervisor** • *Differences b/t Admin, HQ, and Supervisor* • *Review overview of workflow and life of a case* • *Introduction to Admin, Headquarters and Supervisors* • *Headquarters primary functions in SuSo* • *Supervisor primary functions in SuSo* • *HQ and Supervisor primary responsibilities in SuSo* • *Data Export*
10:00 – 10:15	Coffee Break
10:15 – 11:30	**Presentation: Intro and case management with Admin, HQ, and Supervisor-** *Continued*
11:30 – 12:30	**Presentation: Introduction to Interviewer** • *Overview and Purpose* • *Set-up CAPI application and syncing* • *Dashboard* • *Open and navigate the questionnaire* • *Using colors* • *Entering responses* • *Completing a case, synchronizing*
12:30 – 13:45	**Lunch break**
Session 5B:	**Practice: Comprehensive practice with Headquarters, Supervisors, and Interviewer**
13:45 – 17:00 (with Coffee Break 15 min)	**Hands-on: Mastering the whole system – CENSUS MODE** • *TASK 1: Headquarters logs in and imports a questionnaire template in census mode.* • *TASK 2: Headquarters create Supervisor Roles.* • *TASK 3: Headquarters create Interviewer Roles and assign them to the proper Supervisor* • *TASK 4: Interviewers must download Interviewer Application and Install.* • *TASK 5: Interviewers synchronize, and complete an interview.* • *TASK 6: Supervisors review and approve the completed cases.* • *TASK 7: Headquarters review and approve the completed cases.*

Day 5	
Session 6A:	**Data Export and Tablet Management**
9:00 – 10:00	**Server and Network Configurations**
10:45 - 12:30 (with Coffee Break 15 min)	**Mini Project Mastering the whole system- Survey Design to Export Group work**
12:30 - 13:00	**Evaluation & Closing Ceremony**