

**Second RAP Regional Workshop on
Building Training Resources for Improving Agricultural and Rural Statistics:
Sampling Methods for Agricultural Statistics- Review of Current Practices**

Tehran, Islamic Republic of Iran

10 – 17 September 2013

Concept Note

I. BACKGROUND & RATIONALE

Agricultural and rural development in the 21st century, is seen not only as having an essential role in poverty reduction, but also as a contributor to global warming, water scarcity and pollution, and land degradation resulting from attempts to increase production to feed a growing world population. Thus, data and statistics are now needed to better understand the cross cutting issues-- how population growth, demand for natural resources, competing uses of food crops, and the effects of extreme weather and climate change affect food security, poverty, and well-being.

These emerging data requirements are occurring at the same time that the quality and quantity of agricultural statistics has eroded to the point that many countries lack the capacity to produce and report even the minimum set of data to monitor national trends or guide the ongoing development debates. The Global Strategy to Improve Agricultural and Rural Statistics¹ establishes the framework to rebuild statistical systems producing agricultural statistics and to meet the emerging data requirements and the need to monitor cross cutting issues. The framework is based on three pillars— establishment of a minimum set of core data each country will produce; integration of agriculture into the national statistical system; and building statistical capacity and improving governance and coordination across the institutions producing agricultural statistics.

In the Asia and the Pacific region, the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), the Food and Agricultural Organization Regional Office and the Asian Development Bank, in close consultation with countries, developed the Asia- Pacific Regional Action Plan to Improve Agricultural and Rural Statistics (RAP) to implement the Global Strategy in the region. The RAP was subsequently endorsed by the Asia and Pacific Commission on Agricultural Statistics and the ESCAP Committee on Statistics.

The RAP translates the Global Strategy framework into three statistical capacity building components— technical assistance, training, and research— and has two essential goals:

¹ *Global Strategy to Improve Agriculture and Rural Statistics*. September 2010.

http://www.fao.org/fileadmin/templates/ess/documents/meetings_and_workshops/ICAS5/Ag_Statistics_Strategy_Final.pdf

- Halt the decline in the content and quality of agricultural production statistics by restoring sustainable systems to produce them and making use of new methods and technologies and
- Meet the emerging data requirements to not only support policy decisions regarding the linkage of agriculture to poverty and the environment, but also to monitor how a decision in one area affects the others.

As coordinator of the training component of the RAP, the United Nations Statistical Institute for Asia and the Pacific (SIAP), a regional institution of ESCAP, is collaborating with institutional partners in the conduct of a series of regional training-of-training workshops to build training resources for improving agricultural and rural statistics. The current workshop, the second in the series, will focus on practices and issues in applying sampling methods for collecting data on agricultural statistics.

The workshop will be conducted by SIAP and RAP implementing partners in collaboration with the Statistical Centre of Iran from 10th to 17th September 2013 at the Statistical Research and Training Centre, Tehran, Islamic Republic of Iran.

II. OBJECTIVES OF THE WORKSHOP

The workshop aims to assist countries in the process of identifying suitable strategies for integrating statistical exercises and adopting appropriate sampling methods for producing agricultural statistics. The workshop will provide an overview of the sampling methods used for agricultural statistics; explain the concepts underlying the strategy for an integrated approach to sample surveys recommended in the *Global Strategy*; explore effective training strategies useful for reviewing and revising present practices of sampling; and facilitate development of a training syllabus for conducting training on sampling methods.

III. EXPECTED OUTCOMES OF THE WORKSHOP

As a result of the Workshop, participants are expected to be able to:

- (a) Effectively explain and lead discussions on sampling methods and their applications to data collection for agricultural statistics outlined in the *Global Strategy*;
- (b) Identify strategies and activities for supporting the process of identifying suitable sampling frames and sample designs in their respective countries; and
- (c) Develop a training syllabus and training design for a course on sampling methods that will assist their respective countries in adopting most suitable sampling methods for collection of agricultural statistics.

IV. TARGET PARTICIPANTS

The Workshop is designed for middle- and senior-level government statisticians who are in positions that entail designing, organizing and conducting trainings for those who manage,

supervise and perform tasks relating to sample designs and sample selection – both at head office and the field. Participants should have a strong technical background in sample design and estimation as well as experience in designing and implementing sampling methods for data collection on agricultural statistics.

As the workshop will be conducted in English, all participants are expected to be proficient in speaking and writing in the English language

Approximately 25 participants are expected to attend the workshop.

V. WORKSHOP PROGRAMME

Workshop Design

The Workshop is designed to train trainers—covering both the knowledge-base (subject matter content) and the training strategies and tools. To achieve the expected outcomes, the activities over the 5-day duration of the workshop will be a mix of expert lectures on sampling methods, participant presentations on country practices, facilitated group discussions on training strategies, and sessions where participants write –out elements of a training syllabus.

Topics to be covered

Topics to be covered in the workshop and their contents in some detail are as follows:

Topic/Activity	Content Outline
Theme I: Global Strategy and the Regional Action Plan	Pillars of the Global Strategy and Implementation Steps at the Country-Level
Theme II: An Overview of Agricultural Statistics	• Needs and use of agricultural and food statistics • Constituents of agricultural statistics; • Sources of agricultural statistics – administrative, statistical census & surveys; • Specific objectives of census & different kinds of surveys – estimation of production & yield, crop forecast, farm management studies, price collection; livestock inventory and production etc.
Theme III: Basic Concepts of Sampling – Brief review	• Sampling frame • Sampling designs and sample size • Estimation & weights • Sampling & non-sampling errors

Topic/Activity	Content Outline
Theme IV: Sampling schemes for area-frame based sample surveys	• Application of multi-stage sampling and sampling schemes like PPS – covering both selection and estimation procedures. • Use of area frames a. Area sampling – using a frame or list of area units (like fields, plots and parcels) - use of agricultural census data for frame construction and b. Household/ holding/ farm sampling – using a list of units or drawing a sample of small administrative or operational area units (enumeration area)
Theme IV: (Contd.) <u>Country Presentations</u> (selected countries) on the area-frame based sampling methods adopted for agricultural statistics.	Covering the issues of: • Estimation of production, area & yield of crops – major / minor • Livestock and livestock products • Fishery and aquaculture • Cost of production – agricultural inputs
Theme IV: <u>Group work</u> on formulating multi-stage sample design for different kinds of surveys for agricultural statistics.	Including: • Identification of sampling frame(s) • Defining sampling units • Determination of sample size – at different stages • Sampling schemes – size variables if any •
Theme V: Estimation of Parameters and Sampling Variance	• Estimation of parameters and estimates of sampling error • Conventional design based estimates • Approximate methods for complex designs
Theme V: <u>Country Presentations</u> (selected countries) on Estimation for Agriculture Statistics from Sample Surveys	Illustrating issues in estimation procedures for parameters and sampling errors on: • Production and yield (crops, livestock, fisheries and agriculture, cost of production) • Crop area • Fisheries

Topic/Activity	Content Outline
Theme VI: Sampling frames of surveys for producing agricultural statistics– Modular/Integrated Approaches	• Including: ▪ Modular/integrated approaches – Recommendations in <i>Global Strategy</i> ▪ Strategies of modular/integrated approaches ▪ Linking population and agricultural censuses • Use of remote sensing • Use of GIS for locating area units
Theme VI: <u>Discussion</u> on frame building in a modular/integrated approach	Elements involved: • Examining applicability and sustainability • Possible problems of building maintaining frame / master frame • Linking multiple sources
Theme VII: Designing a course and syllabus for training on sampling methods for agricultural statistics	To cover: • General structure of a training course • Constructing a syllabus • Distribution of contents into sessions, with specific focus on training on sampling methods
Theme VII: <u>Group work</u> on preparing a draft course design for training on sampling methods for agricultural statistics – elements involved.	Elements involved: • General description of the course: – Specifying the objectives – Identifying the participants – Brief description of course content and time schedule • Contents
Theme VII: <u>Presentations</u> of draft course designs – followed by discussions	