



**The Sixth Scientific Advisory Committee (SAC)
Meeting of the Global Strategy to Improve
Agricultural and Rural Statistics**

Meeting Minutes

27-28th February 2017,
Mexico Room, FAO Headquarters

MEMBERS PRESENT

Michael Steiner (Chair)

Cristiano Ferraz (Vice-chair)

VK Bhatia, Seghir Bouzzafour, Jacques Delincé, Eva Laczka, Dalisay “Dax” Maligalig, Backary Sacko, Edwin St. Catherine, Zhengyuan Zhu

INVITED PARTICIPANTS

Naman Keita, Javier Gallego (JRC), Piero Conforti, Neli Georgieva

DAY 1

Meeting opened with remarks by FAO Statistics Division Director, Pietro Gennari

Mr. Gennari opened the meeting by thanking the SAC members for making the time and long journey to attend the 6th SAC meeting. Furthermore, he emphasized the important contributions of the SAC over the years, not only for research, but also for providing ideas to increase country level adoption and field test methodologies in countries. Mr. Gennari also pointed out that the research topics has changed from more traditional areas such as sampling, crops, livestock, to more niche topics with specialized programs related to the SDGs. Finally, Pietro concluded by noting the importance of the 2030 Agenda on the work program of the statistics division in FAO, and described some pipeline projects such as GRAINS that will be begin in 2017.

Presentation by Global Office (GO) Coordinator, Christophe Duhamel, Global Office Activities

Mr. Duhamel gave a brief presentation describing the success and progress of the research and training/technical assistance components of the Global Strategy, AGRIS field testing activities in Ghana, accelerated technical assistance activities in Africa, and the way forward. Notable points from the latter part of the presentation are that the Global Strategy is in its last year of implementation, but has received a non-cost extension to continue technical assistance activities in 2018. Also, atask force will be established to develop a proposal for a second phase of the Global Strategy and to define a potential research agenda.

F. Bolliger, Research Coordinator of the GO gave a brief presentation on the Status of the Implementation of the Research Program

Mr. Bolliger described the overall progress that’s been in the research component and laid out the work ahead in 2017 and 2018. Since the start of research in 2012, the GS has mobilized about 120 consultants, held 26 expert meetings, and six SAC meetings. Furthermore, 12 Handbooks and Guidelines, 19 technical reports, and 16 working papers have been published. Field tests have taken place every continent. In 2017, the research agenda will focused mostly on completely research activities related to sustainability lines of research. However, the line of research on rural statistics, and SDG indicator 2.4.1 will carry-over into 2018.

CONCLUSIONS AND RECOMMENDATIONS FROM DISCUSSIONS

- The SAC congratulated the Global Office (GO) for the strong research outputs, and providing Guidelines for different domains of agricultural statistics which did not exist before.
- The SAC further emphasized the need to make sure that the GO outputs are readily available for country-level adoption. This includes providing summarized versions of methodology available for NSO managers in multiple languages.
- The SAC requested that the GO systematically track the adoption of GO methodologies to monitor the success its developed methodologies.
- A brief discussion on future research topics took place which is more fully described in the minutes for the last session of the SAC.

Proposal of a methodology to include a Wood fuel supplementary module into existing surveys, and suggestions on data analysis

Presentation was given by A. Borlizzi, Consultant in Forestry Division, FAO

Mr. Borlizzi gave a presentation on the methodology for measuring wood fuel use. He described the overall approach of developing a questionnaire which could be integrated into a national household survey. Furthermore, he described the main methodological issues related to weighing wood fuel, recall period, data collection modes and local adaptations, as well as sampling. Finally, Mr. Borlizzi described how the proposal module on wood fuels could be integrated into various types of existing survey. To conclude, Mr. Borlizzi laid out some very specific questions to SAC members to solicit their feedback on certain aspects of the proposed methodology.

CONCLUSIONS AND RECOMMENDATIONS FROM DISCUSSIONS

- The development of a standard wood fuel which can be adopted by countries, and will give internationally comparable statistics is certainly useful.
- Close attention should be paid in the length of the recall period as the longer the recall period is, the higher the bias will be.
- The literature on measuring household consumption may provide some ideas on determining the optimum recall period.
- In national level surveys such as the LFSs, the samples may have an urban bias and wood may not be consumed evenly across the country. Particularly since the recommendation is to integrate the module into an existing survey, options will be limited for the sample size of wood consuming households. Sub class analysis should be considered, as well as the standard errors and representivity.
- Measurement issues related to humidity, and moisture content of the wood should be carefully considered and a cost-effective approach should be recommended.
- It may be too difficult to convert different wood species into biomass.
- Households are not the only consumers of woodfuel, small enterprises are as well. Perhaps a module for establishment surveys should be included.
- The first question, "Did you consume wood fuel?" may be confusing for some respondents. A series of filter questions may be more useful.
- Rather weighing at the household, a series of controlled experiments may be more appropriate. Then, the questionnaire could just include subjective questions for the respondents.

Agri environmental statistics and indicators for the measurement of agriculture-environment interactions: a literature review and a proposal of key indicators for sustainable agriculture

Presentation was given by M. Madrid, Consultant, GO

Ms. Madrid gave a presentation on the research program related to agri environmental statistics and indicators. Her presentation included the background, trends and challenges, research objectives, main activities and associated outputs, as well as the progress on the literature review and future activities. Notably, there has been a large and changing group of experts working on this topic which has been a significant challenge. The next steps are to finalize the literature review, organize an expert group meeting, draft and test a methodology, and finally to publish the related Guidelines.

CONCLUSIONS AND RECOMMENDATIONS FROM DISCUSSIONS

- There are some redundancies in the report which should be removed. Also, the overall structure is a bit hard to follow.
- The discussion on the justification for environmental indicators can be reduced, and the section on how to measure the indicators should be expanded.
- A consideration was given to also consider the impact of the environment on agriculture.
- Indicators on the air including number of days above/below some temperature, number of days with wind more than some speed, etc seem to be measured easily, but are omitted.

- The current framework seems that it will lead to the conclusion that hydroponic agriculture is the best because it limits the environmental impact across all dimensions.
- Other relevant data source that might be managed outside the statistical system should be included.

The measurement of productivity and efficiency in agriculture

Presentation was given by Franck Cachia, Statistician of the Global Office. Peter Lys, Consultant for the Global Office joined via Skype for follow-up questions and comments

Mr. Cachia gave a presentation on the research program related to measuring agricultural productivity. Mr. Cachia began the presentation describing the differences between measuring productivity and efficiency, and defined the scope of the research program. Next, the objectives and overall approach of the research program was discussed, and the work plan and outputs were described. Finally, the presentation concluded with the proposed outline for the Guidelines, and specific questions were posed to the SAC regarding the contents of the same. At the request of the SAC, Mr. Cachia gave a brief summary of the contents of the literature and the overall approaches covered for measuring productivity.

CONCLUSIONS AND RECOMMENDATIONS FROM DISCUSSIONS

- There is an emphasis in Africa on measuring producer prices and price indices. The question of valuation of inputs and outputs should be covered thoroughly in the Guidelines.
- As a result of consultation with the USDA, transformed products are excluded from the outputs, providing that the inputs/costs used to produce these products can be measured separately. Otherwise, they should be included.”
- The inclusion of some Asian countries with good data may be useful in the desk study.
- It may be useful to include comparisons using quantities rather than monetary conversions.
- Comparisons of productivity should also be made across time, so using a country with a frequent data collection in the desk study will be useful.
- The criteria for AGRIS generating data of sufficient quality should be defined. How should quality be determined?
- The topic of efficiency is important and may warrant its own chapter in the Guidelines.

Methodological Proposal, and Field Test Protocol for Rural Statistics

Presentation was given by Susan Offutt, Consultant for the Global office via Skype

Dr. Offutt gave a thorough presentation on the GS research program on rural statistics, including the research objectives, selecting indicators, methodological approach to developing an international definition of rural areas, and pilot testing. Notably the approach currently being proposed, and tested involves a discrete typology that combines a population grid with a land cover classification. The pilot test will be undertaken by the Joint Research Centre of the European Commission and involves two steps. The first is classification of global grid cells according to the rural population density/land cover typology. Then, grid cell classifications will be overlaid on country maps.

CONCLUSIONS AND RECOMMENDATIONS FROM DISCUSSIONS

- The most important aspect of this research to be sure that a single definition is found which all national and international organization will agree to adhere to. There is likely to be little differences made with or without the use of land cover. As a result, if use of land cover causes disagreements between organizations, it may be better to exclude it and only use population.
- The idea of defining 1 square kilometre area is great, but surrounding areas should be accounted for in the classifications. It will be important to use shrinking and blowing operators which account for surrounding areas to ensure that park areas of cities are not defined as rural.
- Data on population density in some countries may not be reliable.
- Some developing countries may not have grids readily available, but they are likely to have information on some spatial units like enumeration areas used in the population and housing census.

- In general it may be easier for developing to adopt the classification of enumeration areas, then 1 kilometer square grids because of existing sampling frames.
- Additional remote sensed data for example light rays may also be helpful to improve the classification.
- For the test, it may be better to take the continuum approach of measuring rurality. Then see if some patterns emerge in terms of comparability.
- How to aggregate up from 1 square kilometre grids to large administrative boundaries need to be considered, and explained with the methodology.

DAY 2

Methodological Proposal for SDG Indicator 2.4.1

Presentation was given by Carl Obst, Consultant of the Global Office via Skype and Jean Marc Faures, Senior Officer of the Strategic Program 2, FAO

Mr. Faures begin the presentation providing for the Sustainable Development Target 2.4, and emphasized the complexity of creating an indicator which can fully capture all of the dimensions of the target. He then described the SDG process, defined the indicator, key principles of indicator selection, and data collection methods. Mr. Obst then went in-depth into the overall approach and indicators of 3 thematic areas, economic, environmental, and social and indicators captured by indicator 2.4.1. It is important to note that the indicator being proposed is a farm level indicator.

CONCLUSIONS AND RECOMMENDATIONS FROM DISCUSSIONS

- Given the data demanded across the themes for this indicator, and the difficulties experienced during implementation of the EU's Farm Accountancy Data Network (FADM), concerns were expressed about the feasibility of the indicator. A partial indicator may be more realistic.
- The desk study, or pilot test should include a large range of countries across various lengths of time to evaluate the quality and feasibility of the proposal.
- The setting of thresholds across the themes could make the indicator vulnerable to countries being able to manipulate the results.
- Remote Sensing approaches may be easier in terms of measurement, but impractical in terms of cost.
- The indicator on biodiversity is likely not useful at farm level, and perhaps some other unit of analysis should be chosen.
- The indicator on energy use may vary widely across time, and location. Accordingly, a common threshold may not make sense.
- There was a concern from many SAC member regarding the data availability to feed this indicators and the cost of data collection.
- The exclusion of forestry, fisheries, and aquaculture should be reconsidered especially for countries where those practices are prevalent.
- For the decent work indicator, unpaid family labor should be included.
- Farm surveys may not have sufficient sample sizes to measure the required variables at acceptable levels of precision.

Field Test Protocol on Measuring Decent Work and Youth Employment in Agriculture

Presentation was given by Marya Hillesland, Economist of the Global Office

Dr. Hillesland gave a brief presentation describing the upcoming field test related the measuring decent work in agriculture research program. She began by briefly describing the motivation for the research program, and field test. Then, she described the problem of measuring unemployment in agriculture. The current proposed alternative to the traditional time based measure of underemployment will be a skill based measure for inadequate employment, and a measure of inadequate employment based on quality of work. The field test will employ each of the methods, and the results will be compared against the traditional method of time based underemployment. The sample for the field test will focus on agricultural households

in Kenya. A further question was placed to the SAC regarding the use of holding level indicators to measure certain aspects of decent work performed on the holding.

CONCLUSIONS AND RECOMMENDATIONS FROM DISCUSSIONS

- Regarding the skills based indicators, the thresholds might need to be reconsidered. If the threshold is 1 standard deviation on either side of the mean, and the distribution of skills is normal, the shares under or over skilled can already be derived.
- Long-term unemployment may be a more important indicator even in terms of youth employment, than underemployment.
- The classification system for education is an important consideration.
- This research program should develop a module which can be integrated in different types of surveys. However, attention should be given to the representivity of the agricultural sector with different types of survey instruments.
- The Handbook on Use of Mixed Surveys contains some important information on measuring informal employment and should be considered in the research.
- Production side indicators could be helpful.

Technical Report and Guidelines of Reconciling Census and Survey Data,

Presentation was given by Eloi Ouedraogo, Senior Statistician of the Statistics Division, FAO, and Ulrich Nyamsi, Emergency Agriculture and Livelihood Assessment Specialist, Technical Cooperation, FAO

Mr. Ouedraogo and Mr. Nyamsi gave a joint presentation on the research program for reconciling census and survey data. The presentation began with an introduction and described the problems that can arise when comparing results across censuses and sample surveys. Then they described some of the sources of discrepancies, proposed ways to overcome them, and showed the results of testing the proposed methods using data from Burkina Faso and Georgia. The concluded by discussing some recommendations from the research.

CONCLUSIONS AND RECOMMENDATIONS FROM DISCUSSIONS

- Some parts of the document are confusing and hard to understand. There are some omissions, and confusing terminology. For example, consider referring to the cross entropy method as a pure likelihood because it is more precise.
- The document lists several reasons that results from a census and survey can be different. However, the methods that are proposed rely on assumptions that those problems aren't present.
- There is no need for the change point detection. When there is a census, it can always be used to improve a sample survey. The farther away the census is from the sample survey, the less improvements can be made.
- When reconciliation should occur exactly is not clearly stated in the document.
- The document provides a lot of technical information, but should also provide practical information. Options should be given based on a variety of circumstances to be useful to countries.
- Methods for reconciliation given in the orange book for the Food Balance Sheets may be useful.
- Additional data should be taken into account during reconciliation such as data on import and exports.

Agricultural Integrated Survey (AGRIS): progress on the methodological development, and report from Expert Meeting

Presentation was given by Neli Giorgieva, Statistician of the Statistics Division, FAO, and AGRIS

Ms. Giorgieva gave a brief presentation which included an overview of the AGRIS methodology, and timeline and review of past presentations to the SAC. She also noted further methodological developments and priorities. .

Summary of discussion

- A brief discussion took place regarding the need to carefully consider the unit of analysis. Many countries take plot level measurements, and restricting the AGRIS methodology to holding level may be a disincentive for some countries. It was also noted that the current is to allow country level customization which could capture plot level information.

Proposed topics for a Phase 2 of the Global Strategy

Presentation was given by Michael Rahija, Research Officer, GO

The GS requested that SAC members provide ideas of potential research topics of Phase 2 of the Global Strategy. However, Mr. Rahija noted that this is simply a brainstorming session, and a formal process including donors and stakeholders will take place later in 2017 to create a proposal for Phase 2. Essentially, the ideas received from the SAC members prior to the meeting fell in two categories: those not covered at all in Phase 1, and those not covered sufficiently in Phase 1. The list below includes ideas presented during the presentation as well as those suggested during the discussion.

Proposed Topics

- Extractive agriculture: wild products data
- Measuring permanent crops area, production, and yield
- Split survey designs
- Agricultural value chains statistics
- Use of crowd sourcing to collect price data
- Use of advanced machine learning tools to identify complex land features from remote sensing
- Mechanisms for measuring reliability of administrative reporting systems
- Comparison of collecting holding vs. plot level data
- List frame compilation, duplicate identification, and maintenance
- Additional work on environmental statistics including land erosion

General recommendations

- Phase 2 should focus more on direct technical assistance to help countries produce the minimum set of core data
- Special attention should be made to catalogue instances of countries adopting methodologies produced under the Global Strategy
- Technical assistance may be needed for micro data archiving
- A consultation with countries should be undertaken to identify gaps, and priority research topics

Closing

- **Next SAC meeting**
 - Next SAC meeting would be organized at the end of 2017, or beginning of 2018 and will mainly include drafted Guidelines from the Sustainability lines of research.

At the end of the meeting, after consultation of members, it was decided that the remaining comments are to be provided by March 10, 2017.