Food and Agriculture Organization of the United Nations

Conclusions and recommendations

The 30th Session of the FAO-OEA/CIE-IICA Working Group on Agricultural and Livestock Statistics for Latin America and the Caribbean was held with virtual host INEC Costa Rica via Zoom from 20th to 23rd July 2021. The number of participants including delegates and observers was 92, from 29 countries in the region.

Session 1: Opening, and FAO activities in the LAC region since the 29th Session

The Master of Ceremonies, Ms. Pilar Ramos Vargas, formally opened the event. Words of welcome were provided by Mr. Renato Alvarado, Minister of Agriculture and Livestock of Costa Rica, Mr. Julio Berdegue, Assistant Director General and Representative of Latin America and the Caribbean of FAO, and FAO´s Chief Statistician, Mr. Pietro Gennari.

During FAO´s initial presentation regarding corporate questionnaire response rates, and activities since the 29th Session, it stressed its reliance on countries replying to official questionnaires to generate global statistics on food and agriculture. However, the response rates for questionnaires coming from the statistics division is only 45% in central America, 63% in South America, and 34% in the Caribbean. FAO proposed improving response rates by better coordination with countries through focal points, and the development of new and more user-friendly questionnaire modalities such as computer assisted web interviewing.

Furthermore, FAO noted that its portfolio of technical assistance activities can be divided into 2 groups: 1. SDG indicators, 2. Agricultural Census and Surveys. In the former, FAO is providing support 10 countries in South America through a project focusing on indicators (2.1.2, 2.3.1, 2.3.2, 2.4.1, and 12.3.1). Furthermore, there is a specific project on 2.1.2 covering 13 countries in the Caribbean. There are also 2 county level projects in Cuba and Venezuela focused on building capacity across the SDG indicators under FAO custodianship. The most progress can be seen in 2.1.2 where 13 countries collected FIES data since 2016, some multiple times.

Results of Session 1

The working group observed that:

- one of the reasons the world is off-track for meeting the SDGs is the lack of data.
- sub-national data are necessary for decision-making. For example, it is important to know who the farmers are, where they are located, and what they produce for the development of public policy.
- countries are the most important data sources, and the collaboration between FAO and national institutions is fundamental for compiling and dissemination agricultural data.

The working group highlighted that:

- high quality statistical data about the agricultural sector is fundamental for decision making.
- it is important to advance not only in the digitization of agriculture for increasing production, but also for the collection of data to inform public policies.

The working group recommended that FAO:

- support countries in collecting data on vulnerable populations, and generating relevant disaggregations.
- explore the possibility of changing the name of the working group to working group on agricultural and food statistics.

Session 2: Impact of COVID19, and adaptations of statistical operations

Session 2 began with an overview on impact of the COVID19 on agricultural censuses. It was noted that almost 64% of countries in the region which had planned to do censuses, either experienced delays, postponement, or suspended the census all together. Notably, where COVID19 did not affect census activities, there was strong use of mixed mode surveys and remote methods, online trainings, and more extensive use of administrative records.

The next presentation from the Statistics Division focused on measuring food insecurity during the pandemic. Ms. Veronica Boero noted that telephone based surveys were used extensively during the pandemic, and emphasized the related challenges in terms of shortening interviews, and biased sampling frames.

Finally, the Instituto Nacional de estadistica of Paraguay made a presentation on collecting data in the pandemic including information on safety protocol, and mixed modes of training. They will apply the lessons learned to the census for agricultural which is planned for 2022.

Results of Session 2

The working group observed that:

- the pandemic had a strong impact on statistical operations, and exacerbated the gap in information on the agricultural sector.
- the pandemic obligated countries to innovative not only in the modes of data collection, but also in training, sanitary measures and equipment for protecting enumerators, and leveraging other data sources such as administrative registers.
- the measurement of food security through telephone surveys has a major bias by the fact that the population that is most vulnerable to food insecurity is the same population that is least likely to have a telephone.

The working group highlighted that:

- institutions that produce data must diversify their tools and data sources to minimize the impact of catastrophes on statistical operations.
- collaboration with the private sector such as telephone companies is important for developing sampling frames.
- telephone surveys are a feasible option for collecting data during the pandemic, but measures must be in place to ensure data quality.

The working group recognized:

- the support of FAO to countries in the applying the FIES module in telephone surveys.

Session 3: Challenges and methodological developments for collecting SDG indicators in the Latin America and the Caribbean

The session began with a presentation by FAO emphasizing the importance of generating disaggregated statistics for vulnerable populations in order to leave no one behind. The two recommended ways of generating statistics for these groups is at design stage by ensuring representative subpopulations, and/or analysis stage by using methods such as small area estimation.

The next presentation by FAO focused on recent progress made in LAC on reporting the SDG indicators. The presenter from FAO noted that the overall response rate from LAC was 56% for South and Central America, and 40% for the Caribbean compared to a global average of 52%. Additionally, it was re-enforced that FAO stands ready to assist countries in closing the remaining gaps.

The following presentation by FAO's Chief Statistician focused on two important questions: 1. How fast are countries progressing toward SDG targets? 2. How far do countries currently stand from the target? To answer these questions, the Chief Statistician presented various statistical approaches, their advantages and disadvantages.

INEC Ecuador presented their experience incorporating the SDG 2.4.1, Area under sustainable agriculture, into their national agricultural survey program. One of the key findings was that the methodology had to be changed to open segment for certain variables. Additionally, it was not feasible to incorporate the FIES into the survey program, but an alternative survey was found.

Lastly, Ms. Valerie Bizier, of the Office of Chief Statistician presented 2 main tools for helping countries accelerate SDG reporting. The first focused on strengthening the capacity of FAO and UN country teams, and the second focused scaling-up country level technical assistance.

Results of Session 3

The working group recognized that:

- the production of disaggregated SDG indicators is fundamental for the design of public policies which leave no one behind.
- it is important to monitor progress towards the SDG targets using methodologies like trend analysis to understand if the country is on track to achieve the target.

The working group emphasized that:

- the collection of SDG data does not only require modifications to questionnaires, but also sampling strategies.
- budgetary limitations represent a major challenge in increasing sample sizes and questionnaires to collect disaggregated SDG data.

The working group recommended that:

- FAO create working groups and spaces to share lessons learned and experiences between countries.
- as the trainings and workshops in the SDG indicator methodologies led by FAO have been useful, now countries need practical support in the country level calculation and interpretation of the indicators.

Session 4: Statistical Innovation in agricultural statistics

During this brief session, Carola Fabi, Senior Statistician and team leader of the Methodological developments team of the FAO Statistics division presented the key products of the FAO Data Lab. In a nutshell, the Data Lab seeks to use alternative data sources including big data, and advanced methods such as machine learning to generate high quality and timely data on the agriculture and food sector.

The key products to date are real time textual analysis of tweets to generate information on the impact of COVID19, daily prices changes using crowd sourced price data, and the food chain disruption tool. In 2021, the initiative will focus on new products related to web scraping to generate agricultural statistics, developing poverty maps using survey data, and use of geospatial tools to improve area and yield estimates.

Results of Session 4

The working group observed that:

- the development of new technologies in FAO´s data lab is important to fill gaps of information and innovate new statistical processes.

The working group emphasized that:

- techniques such as web scraping and crowd-sourcing data have a strong potential for generating information on the agricultural and food supply chain.
- leveraging new and alternative data sources requires human resources with skills in machine learning, programming, and advanced statistics.

The working group recommended that:

- FAO create a space for sharing information, challenges, and advances regarding data collection, technologies, and methodologies for statistical innovations between countries, and international organizations.

Session 5: Use of earth observation data for producing agricultural statistics

The objective of this session was to present the latest uses and advances of earth observation and remote sensing data for generating agricultural statistics. The first presentation highlighted how FAO is working with countries to use remote sensing to monitor forestry area, and noted the number of countries with either good or very good capability of using these tools has nearly doubled from 55 in 2005, to 99 in 2020.

The next presentation from FAO´s office of Chief Statistician provided an overview of how earth observation data together with in-situ data, and machine learning algorithms can be used to generate high quality crop maps. The presentation also highlighted capacity development and training work FAO is doing with Uganda, and Afghanistan to help countries leverage these tools.

The third presentation from the Statistics Division of FAO focused on use of geospatial data for generating environment statistics. It emphasized the use of geospatial data for IPCC, and SEEA reporting, and noted that geospatial data can be used to fill data gaps complimentary to agricultural statistics.

The final presentation was jointly prepared by RLC and OCS which is a project proposal aiming to assist countries to leverage earth observation data and innovative techniques to generate agricultural statistics. The project aims to produce 4 main products. The first is series of regional virtual trainings focusing on using existing tools, and collecting in-situ data. The second and third outputs are country level including national strategies for integrating earth observation data into agricultural statistics systems, and country level platforms. The last output is a project proposal to be prepared by a group of countries, and submitted to the Inter-American Development Bank´s Regional Public Good Project. This proposal would aim to finance the development of regional strategy for using remote sensing, and earth observation data to generate agricultural statistics.

Results of Session 5

The working group observed that:

- the combination of information from satellite images with other data sources such as surveys and administrative registers is a powerful tool for generating agricultural and environmental statistics, as well as land-use maps, validating data coming from other sources, developing sampling frames, and general monitoring of the agricultural sector.
- the costs associated with these techniques were cost-prohibitive, but are declining rapidly due to technologies like Google Earth Engine, and free satellite images from Sentinel-2.

The working group emphasized that:

- a large amount of heterogeneity exists in the capacity of countries to leverage geospatial data and tools for producing agricultural statistics.

The working group approved:

- the proposal presented by FAO, “Promoting innovative technologies and earth observation data for improving agricultural and food security information systems¨, and recognized the project as an important opportunity to homogenize and increase the level of knowledge and capacity in the use of geospatial data and tools in the region.

  Notably, Bolivia, Panama, Mexico, Jamaica, Venezuela, Argentina, Chile, OSPECA, Colombia, Costa Rica, Uruguay, and Brazil expressed interest in country level outputs.

The working group recommended that FAO:

- not limit its efforts in the use of geospatial data only for the agricultural sector, but also to study how they can be used for producing information on the fisheries sector.

Session 6: Enhancing fishery and aquaculture data to support the monitoring and sustainability of the sector, and contribute to SDGs – Achievements and challenges

The objective of this session was to provide an overview for members of the role of fisheries statistics, with their corresponding challenges and opportunities in the region.

The first presentation was given by Ms. Stefania Vannuccini, Senior Fisheries Officer of FAO highlighting the role of statistics, and the main challenges at the international level including environmental destruction, loss of biodiversity, climate change, and illegal and unregulated fishing amonst many others.

The second presentation was given by Ms. Tania Norori, of OSPECA. Ms. Norori spoke about various fisheries data collection efforts in Central America, and highlighted the main actions they are planning to implement such as regional interventions for combating illegal fishing, revision and updating of regional rules and protocols, developing collaborations and knowledge transfer, and developing a database to preserve historical memory of projects and human resources. The third presentation, by Mr. Lester Gittens, of the Ministry of Agriculture and Marine Resources of the Bahamas, noted the importance of statistics on catch, size-frequency, number of days fishing, etc., and how some of these data needs are met through stock assessments. He also emphasized the Ministry is mandated to produce data and statistics using international standards per the Fisheries Act of 2020. Finally, he noted the main challenges facing the Bahamas such as the constant needs to reassess stocks, monitoring subsistence and small scale fishing, and data on illegal and unregulated fishing. The last presentation of the session was made by Mr. Tomas Willems of the Ministry of Agriculture, Animal Husbandry, and Fisheries of Suriname. He noted the main weaknesses in their data collection of limited collection of social, economic, and biological data, as well as lack of interoperability between data registries.

Results of Session

The working group acknowledged:

- the key role that fisheries and aquaculture statistics play in monitoring the trends and the progress towards national and international development goals and targets.

The working group highlighted:

- the main challenges faced in the collection of fisheries and aquaculture statistics in the region.

The working group recommended:

- countries to adopt proper collection systems according to appropriate international standards and improve the collection of small-scale fisheries and subsistence fisheries.
- that FAO should continue its capacity building activities in supporting countries to set proper collection systems according to appropriate and accurate international standards and to work closely with sub-regional, regional and international organizations on issues related to data collection and analysis.
- that countries to reinforce the collection of data to report on SDG 14, in particular on SDG 14.4.

The working group called upon:

- FAO to provide support and develop proper methodologies for the collection of data in fisheries, including inland fisheries, due to the challenges being faced on this sector by some of the countries in the region.