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Report of the Food and Agriculture Organization of the United Nations on recent developments in agricultural and rural statistics

Note by the Secretary-General

In accordance with Economic and Social Council decision 2021/224 and past practices, the Secretary-General has the honour to transmit the report of the Food and Agriculture Organization of the United Nations (FAO) on recent developments in agricultural and rural statistics, which is submitted to the Statistical Commission for consideration. In the report, FAO provides an update on recent actions and efforts it has undertaken in that area since its previous report to the Commission at its fifty-first session, held in 2020. The report includes an update on the implementation of its statistics modernization strategy, in particular the proposed new integrated governance system for data and statistics inspired by the Data Strategy of the Secretary-General for Action by Everyone, Everywhere, and an update on the implementation of major capacity development programmes in the areas of food security, agriculture and rural statistics and Sustainable Development Goal indicators under FAO custodianship. In its report, FAO also provides a summary of the work of the United Nations Committee of Experts on Food Security, Agricultural and Rural Statistics and a synthesis of the recommendations of the three biennial meetings of its regional commissions on agricultural statistics. Action to be taken by the Commission includes commending FAO on its new integrated governance structure for data and statistics; taking note of the progress made by the task teams of the Committee of Experts and commending FAO on its progress in strengthening the statistical capacity of countries in producing food and agriculture statistics, including related Goal indicators; and taking note of the recommendations recently formulated by the FAO regional commissions on agricultural statistics.

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Report of the Food and Agriculture Organization of the United Nations on recent developments in agricultural and rural statistics

I. Introduction

1. The present report provides an update on recent actions and efforts undertaken by the Food and Agriculture Organization of the United Nations in the area of agricultural and rural statistics since its previous report to the Statistical Commission at its fifty-first session in 2020. While only two years have elapsed since then, the seismic shifts in statistical operations triggered by the coronavirus disease (COVID-19) pandemic, on the one hand, and recent broader paradigm changes towards a much closer integration of data and statistics, on the other, warrant a detailed update for the Commission's consideration.

2. The report is divided into four main sections. In section II, FAO provides an update on the implementation of its statistics modernization strategy, in particular the proposed new integrated governance system for data and statistics, inspired by the Data Strategy of the Secretary-General for Action by Everyone, Everywhere. In section III it provides an update on the implementation of major capacity development programmes in the areas of food security, agriculture and rural statistics and Sustainable Development Goal indicators under FAO custodianship. Section IV consists of a summary of the work of the United Nations Committee of Experts on Food Security, Agricultural and Rural Statistics. Section V contains a synthesis of the recommendations of the three FAO regional commissions on agricultural statistics, which meet biennially.

II. New integrated governance system of the Food and Agriculture Organization for data and statistics

3. In its report to the Statistical Commission at its fifty-first session, FAO outlined its proposed strategy for the modernization of statistics, which was to guide the organization's efforts to further improve agriculture and rural statistics over the five years to come. Four main objectives were set out in the strategy: (a) to create a data innovation lab for the development of cutting-edge methods, data integration and modern business process models; (b) to mainstream user-centric approaches to data dissemination; (c) to introduce a new model for statistical capacity development and leadership on quality standard-setting; and (d) to establish partnerships and collaboration for securing access to new data sources. In its report, FAO further stressed that the strategy would be further improved, on the basis of the Commission's recommendations and the results of the 2019 evaluation of the work on statistics conducted by FAO.

4. Taking those inputs into account, the Office of the Chief Statistician of FAO has developed an implementation plan that also benefits from insights borrowed from two major global strategic documents that have since been released: the System-wide Road Map for Innovating United Nations Data and Statistics of the United Nations System Chief Executives Board for Coordination; and the Data Strategy of the Secretary-General for Action by Everyone, Everywhere. The essential content of the FAO strategy for the modernization of statistics is closely aligned with both of those documents: in the System-wide Road Map, the Chief Executives Board calls for the United Nations system to produce timelier and more policy-relevant data and, as FAO does in its strategy, points to the need for concerted action to overcome a series of internal and external challenges in order to achieve that objective. In his Data

Strategy, the Secretary-General promotes a vision in which he stresses the power of data assets and encourages United Nations entities to embrace a more coherent and modern approach to data production and use. Consistent with the FAO strategy, unlocking the power of data is seen to pass through four fundamental enablers: people and culture; partnerships; governance; and technology. On the other hand, the new FAO strategic framework recognizes the need to strengthen data and statistics as an accelerator for the implementation of the organization's programme of work and for the production of global public goods, including statistical methods and standards, which are essential for strengthening statistical systems at the international, regional and national levels.

A. Priority action areas

5. Both documents also signal a paradigm shift towards a much closer integration of data and statistics, which was previously insufficiently reflected in the FAO statistics modernization strategy. The supplementary implementation plan, spearheaded by a proposal for an integrated governance mechanism for data and statistics, is intended to address that shortcoming and capture the paradigm shift, considering its implications for FAO governance, and to outline specific measures for translating the FAO strategy into action. The proposal is articulated across four major priority action areas:

(a) Integrate and improve the governance of data and statistics;

(b) Strengthen the statistical capacity of the decentralized offices;

(c) Optimize resource allocation and intensify resource mobilization;

(d) Improve the quality of the information technology (IT) infrastructure supporting data and statistics work.

Priority action area 1: integrate and improve the governance of data and statistics

6. In recent years, a number of essential corporate statistical governance mechanisms have been established at FAO to further strengthen corporate statistical governance arrangements. Nonetheless, FAO still has significant scope for improving its governance arrangements in order to keep abreast with contemporary challenges and maintain its leadership position with regard to food and agriculture statistics. One of the key current shortcomings of the organization's governance arrangements is the relative disconnect between statistics governance and data governance.

7. That disconnect runs counter to prevailing trends, whereby the relationship between data and statistics has become even closer, with the proliferation of new or alternative data sources alongside traditional censuses and surveys, such as big data, Earth observation data and administrative data, for the production of statistics. Integrated governance mechanisms can ensure data access, confidentiality and protection and the adoption of harmonized quality assurance frameworks. To that end, in the Data Strategy, the Secretary-General specifically advises United Nations entities to designate an executive data champion, whose principal function will be to extract the maximum value from data assets, by joining up all innovative data initiatives; enhancing data analysis capabilities and data literacy among users; and strengthening data architecture and governance.

8. Meanwhile, in the draft new strategic framework for the period 2022–2031, FAO recognizes statistics as a core function of the organization, while also identifying data as one of four cross-cutting accelerators that can catalyse its delivery of all priority programme areas under the four "betters" (better lives, better nutrition, better environment and better production). A closer integration of data and statistics in FAO

governance can therefore effectively guide the implementation of the vision of statistics as a core function and data as an accelerator to programme delivery, as set out in the new strategic framework.

9. Those shifts, both in the organization's new strategic framework and in the surrounding international context, highlight the urgency for strengthening and integrating FAO governance on data and statistics, so as to ensure greater coherence and enhanced managerial support for data innovations and to accelerate the data-driven transformations needed to implement the 2030 Agenda for Sustainable Development.

10. To that end, FAO has proposed a new integrated governance system for data and statistics, with the appointment of an executive data champion and the creation of an integrated governance structure for data and statistics, aligned with the recommendations of the Secretary-General set out in his Data Strategy.

11. Under that arrangement, the executive data champion will chair a data strategy group, comprising senior managers of the organization, which will represent both the users and producers of data and statistics within FAO. The group will therefore be in charge of endorsing policies, processes and standards for data and statistics; priority data use case curation; decisions on the allocation of resources and the acquisition of data-related skills; the resolution of issues; FAO representation on the Data Governance Council; and the promotion of FAO data-related work at the global level.

12. Under the same arrangement, the FAO data strategy group will oversee and be supported by an interdepartmental working group on data and statistics, consisting of senior FAO technical staff with the responsibility to prepare the supporting documents for the data strategy group pertaining to data protection and privacy, ethics and security, data access and partnerships, data quality and overall data IT architecture and the responsibility to implement priority data use cases. The working group will convene in plenary when addressing such cross-cutting issues, but will also form specific task forces for more in-depth technical work on particular domains. These will include, but shall not necessarily be limited to, task forces on statistics, on big data and on geospatial data. In order to ensure consistency and coherence between those groups, as well as clear reporting lines to the data strategy group, the Chief Statistician will act as Chair for both the overarching interdepartmental working group on data and statistics and the task force on statistics.

13. FAO will further encourage the use of alternative data sources and innovative methods to process unstructured data, in order to fill data gaps and improve the quality of FAO statistics. To that end, the Data Lab for Statistical Innovation was established by FAO to accelerate the development and testing of methods and tools related to alternative data sources, in order to support their adoption at the corporate level and their promotion at the country level.

14. An integrated quality framework for data and statistics will also be developed (see sect. II.B), by adapting and building on the organization's existing corporate statistics quality assurance framework. That effort will be further supported by a corporate data validation process that strikes a better balance between country ownership and the technical independence of FAO, as well as by an open data strategy, developed in consultation with the Legal Office of FAO, that will ensure open data compliance for legal and IT aspects. Both the corporate data validation process and the open data strategy will provide for appropriate levels of transparency, robust safeguards and credible assurances, while strengthening incentives for sharing data and tackling wider bureaucratic burdens and risk aversion.

Priority action area 2: strengthen the statistical capacity of the decentralized offices

15. While the new proposed integrated governance structure for data and statistics is the organization's most emblematic innovation in this sphere, in the implementation plan for the statistics modernization strategy, FAO also sets out three other key priority action areas, one of which is strengthening the statistical capacity of the decentralized offices.

16. In the current environment, in which the priorities of both the United Nations reform and its resource partners have seen their focus shift to country-level and regional projects, requests for support from FAO country offices and regional and subregional statisticians have significantly increased. During the past few years, FAO had already taken steps to strengthen the statistical capacities of its decentralized offices, for instance, by transferring three statistical positions from FAO headquarters to subregional offices.

17. To further strengthen statistics in decentralized offices in the absence of significant additional financial resources, a two-pronged approach is foreseen under the proposal. The statistical capacity of decentralized offices will be enhanced in part through numerous initiatives, which include providing regional statisticians with dedicated resources from the regional budget; providing a toolkit and guidance for supporting the implementation of country-level strategic and operational activities (e.g. common country assessments and the United Nations Sustainable Development Cooperation Framework); and providing dedicated training on Sustainable Development Goal monitoring to the data officers hired in each United Nations country office and to the monitoring and evaluation officers present at FAO country offices. Decentralized statistical capacity will also be increased by leveraging the emerging network of coordination mechanisms and partnerships among United Nations agencies at the regional level to support country-level activities.

18. While statistics is often assumed to be the preserve of specific technical units at FAO headquarters and the few regional statisticians in regional offices, FAO country offices also have a key role to play in scaling up support for countries to ensure that high quality and comparable data for food and agriculture are produced and used. In particular, they can play an essential role in identifying capacity-development needs in countries and in raising awareness and promoting advocacy for capacity-development initiatives, opportunities for resource mobilization and partnerships for supporting activities related to statistics and/or Sustainable Development Goal indicators.

19. To support country offices in effectively discharging such roles, a comprehensive toolkit for accelerating support on Sustainable Development Goal monitoring at the country level has been developed. The toolkit contains a list of recommended actions for FAO representatives and decentralized offices and an inventory of all available FAO methodological and technical resources, with a view to scaling up support for Goal achievement monitoring. Among the numerous new individual resources included in the toolkit are guidelines for mainstreaming statistics and Goal indicators into common country assessments and the United Nations Sustainable Development Cooperation Framework; guidance on mobilizing additional extrabudgetary resources; and country profiles that offer an instant and intuitive snapshot of Goal performance in each country.

20. The mobility of statistical staff between headquarters and the regional and subregional offices will be facilitated in both directions, to create a more dynamic flow in the transfer of expertise. Large global statistical capacity development programmes funded through extrabudgetary resources (see section III) will be encouraged to decentralize portions of their capacity development activities by

delegating them to regional or country offices. Regular training and information sessions targeting decentralized offices will be organized. The SharePoint platform of the FAO Technical Network on Statistics, on which a wealth of relevant information, tools, resources and initiatives for decentralized offices had already been compiled, will be further expanded, as will the FAO inventory of statistical capacity development programmes, which provides useful information on ways to request assistance and funding.

21. In addition to directly strengthening the statistical capacity of its decentralized offices, FAO will also aim to leverage the emerging network of regional coordination mechanisms and partnerships for supporting country-level activities, geared in particular towards making a meaningful contribution to common country assessments and United Nations Sustainable Development Cooperation Frameworks.

Priority action area 3: optimize resource allocation and intensify resource mobilization

22. Statistics is a perennially underfunded activity, attracting a mere 0.3 per cent of total official development assistance. To supplement its modest regular programme resources for statistics, FAO has leveraged other corporate sources and extrabudgetary funds. Such sources, however, are generally of an ad hoc nature, limited in scope as compared with the magnitude of country needs and therefore not well suited for addressing uncertainties and limitations in regular programme funding.

23. One instrument that the FAO Statistics Division has recently leveraged is the organization's flexible multi-partner mechanism, which can provide seed funds for a defined statistical area of work within a multi-year time-horizon. Combined with regular programme funds and other extrabudgetary resources, the mechanism can provide for more sustainable long-term workplans, articulated through shorter annual plans for priority actions. Currently, the mechanism funds two key statistical programmes, one contributing to the "50 x 2030" initiative and another supporting the monitoring of Sustainable Development Goal indicators (see section III). In 2020, despite restrictions resulting from the pandemic, the subprogramme on Goal indicators registered the highest implementation rate among the mechanism's subprogrammes and received a further allotment of the same magnitude for 2021. The Office of the Chief Statistician has also received complementary corporate funds for monitoring Goal indicators to finance a series of activities not planned under the mechanism.

24. Other corporate units involved in statistical work are also stepping up their resource mobilization efforts to better address emerging priorities. Extrabudgetary resources have been mobilized for food security statistics and fishery and forestry statistics, as well as for the "50 x 2030" initiative aimed at assisting 50 countries in carrying out agricultural integrated surveys by 2030, the second phase of the Global Strategy to Improve Agricultural and Rural Statistics, the World Programme for the Census of Agriculture 2020 and the Integrated Monitoring Initiative for SDG 6.

25. FAO will need to place greater emphasis on mobilizing extrabudgetary resources for statistics at the country and regional levels. To a large extent, that hinges on the ability of the decentralized offices to mobilize such resources, for which the Office of the Chief Statistician will provide tailored training and guidance, as described above (see para. 19). The likelihood of mobilizing resources for statistics at the country and regional levels also substantially increases the integration of statistics into the United Nations Sustainable Development Cooperation Frameworks. Work to support countries in mainstreaming statistics in Cooperation Frameworks and common country assessments should therefore also facilitate resource mobilization for supporting statistical activities.

26. Furthermore, FAO will aim to leverage all emerging opportunities for resource mobilization at the global level, including the new Clearinghouse for Financing Development Data or the World Bank Global Data Facility. The Clearinghouse was built as an online platform to provide information and services to match the supply and demand of financing for data and statistics and thus facilitate coordination among donors and partner countries. The Global Data Facility is a new, World Bank-hosted fund to support investments both in the fundamentals and at the frontier of data and statistics, at the global, regional, national and community levels.

Priority action area 4: improve the quality of the information technology infrastructure supporting data and statistics work

27. Improving the quality of the IT infrastructure supporting data and statistics work is vital if the FAO Statistics Division is to remain at the forefront of the information age – all the more so if FAO is to move towards a more integrated governance system for all of its data assets, as recommended above. Incompatible standards, the lack of interoperability and the fragmentation of legacy systems used in managing data must be overcome. FAO will therefore put in place and enforce an innovative statistical data management system that ensures high-quality data and the consistent application of international standards across the entire statistical value chain.

28. In its statistics modernization strategy, FAO already identifies the revamping of the statistical working system and the establishment of an integrated data dissemination platform in the form of a statistics data warehouse statistics data warehouse as the main pillars of that effort. To that end, a project proposal has been developed for establishing the system and warehouse, on the basis of inputs from multiple departments and divisions, to be funded by the organization's capital expenditure fund.

29. The upgraded statistical working system is expected to have a clear impact on cost-effectiveness, corporate data consistency, quality and institutional knowledge. It will provide an end-to-end solution for collecting and storing raw data, performing automated statistical processes, managing metadata, assessing quality and producing data that are ready for dissemination.

30. In the next statistical working system development phase, projected to start at the beginning of 2022, the focus will be on optimizing the system architecture and performance and on enhancing its user interface and functionalities. Key priorities for the next development phase include migrating the system to the cloud, re-engineering some statistical modules, ensuring the full interoperability of the system with FAO data dissemination systems and implementing a set of IT requirements and new functionalities previously discarded owing to resource and technical constraints.

31. The statistical working system and statistics data warehouse capital expenditure proposals have also benefited from an overall mapping and rationalization exercise of FAO statistical IT infrastructure conducted by the FAO Digitalization and Informatics Division.

32. Those efforts will dovetail with the push for greater "digitalization" set out in the new strategic framework, in order to catalyse innovative solutions for data production and for improvements in the quality of FAO statistics. The combination of those innovative interventions will substantially improve FAO data quality, user satisfaction and data accessibility, while decreasing data management and administrative costs, as well as the response burden on countries.

B. Development of an integrated quality assurance framework for statistics, big data and geospatial data

33. The shift towards an integrated governance structure for data and statistics, as described above, has also raised the need for developing an integrated quality assurance framework for data and statistics. FAO is actively pursuing this avenue, by updating its existing statistical quality assurance framework in order to incorporate guidelines and best practices applicable to the use of big data and geospatial data for statistical purposes.

34. As an international organization actively involved in producing and disseminating statistics on food and agriculture domains, FAO has, since 2014, assessed the quality of its statistics in terms of their "fitness for purpose" in relation to users' needs and the 14 principles outlined in its statistics quality assurance framework. The five principles related to statistical outputs correspond to the quality dimensions of relevance; accuracy and reliability; timeliness and punctuality; coherence and comparability; and accessibility and clarity. With regard to statistical processes, the FAO framework lists three principles addressing sound methodologies, cost-effectiveness and response burden. Lastly, six principles related strictly to the principles governing international statistical activities and the Fundamental Principles of Official Statistics inform the assessment of the institutional environment.

35. In its statistics quality assurance framework, FAO stresses that its statistics are based mainly on data provided by national statistical authorities (so-called "secondary data") or by other international organizations. FAO statistical processes are less articulated than those of the Generic Statistical Business Process Model, as they are based mainly on collecting and processing secondary data and therefore effectively omit certain stages, such as sampling-related subphases. Nevertheless, they require a non-negligible effort to review and validate incoming data, harmonize classifications and units of measure, edit and impute incoming data and calculate final global and regional aggregates. The fact that FAO works preponderantly with secondary data, namely, data produced at the national level, considerably affects the quality of FAO statistics and, in particular, their timeliness.

36. With the adoption of the 2030 Agenda and the associated Sustainable Development Goal indicator framework, the need for accurate and timely statistics has never been greater. As a custodian agency for 21 indicators and a contributing agency to 5 more, FAO has faced unprecedented demand for relevant, accurate and timely food and agriculture statistics. To address that challenge, it has become clear that FAO cannot rely only on collecting and processing secondary data, but must also take advantage of all other available relevant external data sources.

37. FAO already uses data and statistics produced by other United Nations and international agencies and has recently shifted its attention to other data sources, denoted as "big data", namely, mobile telephone data, social media data, geospatial data and data from electronic commercial transactions, sensor networks, smart meters and Global Positioning System (GPS) tracking devices. Earth observation and remote sensing data are especially relevant for the production of food and agriculture statistics, as they are crucial for producing land cover and land use statistics, crop statistics and forest statistics.

38. In its current statistics quality assurance framework (2014 edition), FAO refers to the selection of relevant and appropriate data sources under principles 6, on sound methodology and appropriate statistical procedures, and 9, on professional independence and impartiality. Those principles, however, are rather generic and are insufficiently adequate to capture all the implications of using big data for statistical

purposes. Several national and international statistical agencies have recognized that, in that enlarged data ecosystem, collecting and using big data for statistical purposes requires the revision of the existing framework. That should account for the changes needed at the level of the institutional environment, statistical production processes and the assessment of the quality of the statistical outputs based on the use of big data.

39. What is also clear by now is that, despite the promise for big data to increase the relevance of statistics and potentially improve both their timeliness and their accuracy, this comes at a considerable price. Collecting and processing a large quantity of data and integrating those data with data from existing sources are complex and demanding processes and, indirectly, are likely to increase the risk of errors that directly affect the accuracy of statistical outputs.

40. Against that backdrop, the ongoing revision of the FAO statistics quality assurance framework is intended to incorporate relevant guidelines and best practices for the use of big data and geospatial data for statistical purposes. During the revision process, FAO will also take stock of experiences and projects within the organization or other international statistical agencies, with a particular emphasis on the case for using geospatial data to produce food and agriculture statistics.

III. Update on the implementation of capacity development interventions

A. The “50 x 2030” initiative

41. The “50 x 2030” initiative, officially launched in September 2018, became operational in July 2019. The initiative is aimed at empowering and supporting 50 low- and lower middle-income countries in the building of more effective national agricultural data systems by 2030. The objective of the initiative is to increase the capacity of countries to produce, analyse and use high-quality and timely agricultural and rural survey data to inform policy decision-making. The initiative is of strategic importance to increasing the quantity and quality of the data available to monitor results on the agriculture-related Sustainable Development Goal targets, by providing up-to-date and timely data on indicators 2.3.1, 2.3.2, 2.4.1, 5.a.1 and 12.3.1.

42. The “50 x 2030” initiative is underpinned by two survey models built on the experiences of the International Information System for the Agricultural Sciences and Technology, an FAO farm-based agricultural survey programme, and the Living Standards Measurement Study – Integrated Surveys on Agriculture, a project of the World Bank. Countries are offered the possibility of implementing either the farm-based survey programme over a multi-year cycle or an integrated survey programme that combines a household-based rural socioeconomic component with a farm-based component. FAO is leading the data-production component of the initiative.

43. That effort is complemented by building the capacity of decision makers to expand the use of survey data to inform their policy or investment decisions, with the goal of increasing agricultural productivity in a sustainable manner, enhancing food security and nutrition and achieving Sustainable Development Goal 2. This component of the initiative is implemented by International Fund for Agricultural Development (IFAD).

44. Alongside the survey programmes, under the initiative critical methodological research on agricultural and rural surveys is also prioritized, with a view to developing methodological solutions for increasing the efficiency of its modular

survey systems. The Centre for Development Data of the World Bank is leading that component of the initiative.

45. The total cost of the initiative, shared by partner countries, donors, multilateral implementing partners and the private sector, has been estimated to range from $500 million to $700 million. Partner countries are required to gradually contribute a share of the necessary funding and to commit themselves to taking over the full cost within a period of five to eight years. A programme management team, hosted by the World Bank, is operating with full responsibility for overall programmatic and financial oversight of the initiative.

46. During its first two years of implementation, and despite the impact of the COVID-19 pandemic, implementing partners have delivered significant outputs in close collaboration with partner countries.

47. Concerning data production, the initiative has been active in nine countries: Armenia, Cambodia, Ethiopia, Georgia, Malawi, Nepal, Senegal, Uganda and the United Republic of Tanzania. It has helped to provide training and technical assistance on the preparation and design of integrated surveys, data collection and data analysis and dissemination, including with regard to microdata. In several countries where FAO has been active, an impact can be already measured: 15 survey rounds have been completed; 6 rounds are being designed or are under way; four countries (Cambodia, Georgia, Senegal and Uganda) are now able to compute results for Sustainable Development Goal indicators 2.3.1 and 2.3.2; three are able to compute results for indicator 5.a.1 (Senegal, Cambodia and Uganda); and five have already released full microdata sets (Senegal, Cambodia and Uganda).

48. Concerning data use, an initial data ecosystem assessment has been finalized in Cambodia, and similar work is under way in Ethiopia and Uganda. IFAD organized a competition for novel research projects in which data collected through the initiative is applied to national policymaking, programme design or redesign or investment decisions. Results were presented at the Global Data Use Conference organized by IFAD, and held from 30 November to 2 December 2021, and are being utilized as concrete examples of the use of survey data to address development challenges, inform policies and programmes and provide solutions to drive investments.

49. Despite the limitations imposed on the implementation of ground-based methodological validation studies as a result of the COVID-19 pandemic, research and related activities managed by the World Bank have led to significant progress being made. Work was undertaken on the integration of survey approaches (sampling design and non-standard units); technology use (labour input, soil fertility, post-harvest losses and the empowerment of women); and integration with other data sources (Earth observation data).

50. In all, 14 new countries will officially join the initiative by the end of 2023, through a planned and homogeneous onboarding process (Bhutan, Bolivia (Plurinational State of), Burkina Faso, Burundi, El Salvador, Ghana, Guinea, Haiti, Indonesia, Kenya, Mali, Mozambique, Myanmar and the State of Palestine). The integration of these countries into the initiative is expected to require additional fundraising efforts.

B. Global Strategy to Improve Agricultural and Rural Statistics: second phase of implementation (2020–2025)

51. In 2009, at the fortieth session of the Statistical Commission, the Working Group on Agricultural Statistics reported on key challenges facing the field of agricultural and rural statistics. In order to address those issues, the Commission established a

Friends of the Chair group on agricultural statistics. In 2010, the group developed the Global Strategy to Improve Agricultural and Rural Statistics and, two years later, a global action plan for its implementation, which was endorsed by the Commission at its forty-third session, in 2012.

52. The Global Strategy to Improve Agricultural and Rural Statistics was conceived as a multi-year programme to be implemented in five-year phases, enabling the programme to be constantly aligned with the evolving needs of the international and regional agenda. The implementation of the first phase of the Global Strategy was led by FAO, the African Development Bank, the Economic Commission for Africa (ECA) and the Statistical Institute for Asia and the Pacific (SIAP) and coordinated by the Global Office of the Global Strategy, hosted by FAO. The first phase of the programme was completed in 2018, and its implementation has produced significant and positive impacts on the agricultural statistical systems of many developing countries,[1] as reflected in the regular reports submitted to the Commission by the Global Office in 2013, 2014, 2015, 2017 and 2020.

53. The second global action plan, covering the period from 2020 to 2025, was built using a modular approach and was aimed at strengthening and modernizing countries' agricultural statistical systems, in line with the initial principles of the Global Strategy. It is focused on four technical areas and outputs relating to the main aspects of the process and cycle of statistical production. The action plan supports food security and sustainable development policies, in particular as they relate to the Sustainable Development Goals and the use of cost-effective methods and approaches to boost data production in response to needs. It also facilitates better linkages between data production and policymaking through better use of data.

54. For the period from 2020 to 2023, the Global Strategy has been endowed with a first investment focused on the African continent, with support from the Bill & Melinda Gates Foundation and the European Commission, for a total of $9.3 million. The programme of activities targets 25 African countries and is aimed at strengthening capacities in countries that are eligible for the "50 x 2030" initiative. The programme is implemented by FAO in collaboration with the Partnership in Statistics for Development in the 21st Century and ECA.

55. The programme is articulated across four components: (a) the development of strategic plans for agricultural and rural statistics; (b) the provision of training through improvements to existing human resources and management policies, improved graduate programmes on agricultural statistics and facilitated access to scholarships; (c) the use of cost-effective survey methodologies (agricultural production, farm economy, losses and master sampling frames); and (d) data analysis and dissemination by increasing capacities in the use of statistical tools for data analysis, the computation of indicators and data dissemination. The four components are further articulated into 15 "packages".

56. A consolidated workplan has been elaborated in close consultation with the 25 beneficiary countries. Between 5 and 7 technical packages will be administered in each country, according to the country's needs, over the full period of implementation.

57. A new Global Strategy Steering Committee has been established and has endorsed the overall workplan of activities. The Global Office hosted by FAO supervises the implementation of the workplan and pursues further efforts to raising funds, in particular in support of the regions that have not yet been included in the second phase of implementation of the Global Strategy.

[1] African Development Bank, *Capacity Building in Africa for Agricultural and Rural Statistics: Status Update* (Abidjan, Côte d'Ivoire, 2020).

C. Provision of support to countries on Sustainable Development Goal reporting

58. The COVID-19 outbreak at the beginning of 2020 has had a major impact, not only on the socioeconomic fabric of countries around the world, but also on the activities of the global statistical community. Statistical activity levels were affected by social distancing and lockdowns, which have caused disruptions in data production. Those disruptions have affected national statistical systems, along with most statistical capacity development programmes that support both Sustainable Development Goal measurement, led by United Nations agencies, and traditional data collection activities.

59. Despite those challenges, the average reporting rate on the 21 Sustainable Development Goal indicators under FAO custodianship has continued to rise since the most recent report of FAO to the Commission, increasing from 42 per cent in 2019 to 46 per cent in 2020, and again to 53.7 per cent in 2021. In 2021, for the first time, countries were able to report, on average, on more than half of the 21 indicators under FAO custodianship.

60. To large extent, that result stems from the organization's swift adaptation to the new virtual domain and, in particular, to an integrated set of complementary actions undertaken in response to the challenges posed by the pandemic, as set out in paragraphs 61–65.

61. FAO has provided guidance and support to countries on collecting nationally representative information using official data sources, by adopting new data collection tools. The use of alternative data collection modes for existing farm surveys has minimized or avoided face-to-face interviews during quarantine periods. Existing good practices by high-income countries in using modes of data collection other than face-to-face interviews are not always easy to extend to developing countries, given the absence or low quality of farm registers and the undercoverage of mobile networks in remote rural areas. Moreover, specific constraints are posed when administering complex questionnaires that are not manageable by telephone.

62. FAO has scaled up the activities of its newly established Data Lab for Statistical Innovation, in order to: (a) strengthen the capacity of the organization to produce and analyse real-time information from new data sources so that emerging crises, such as the COVID-19 pandemic, can be pro-actively addressed; and (b) fill data gaps and validate available data at the country level though alternative data sources.

63. To evaluate the impacts of the COVID-19 outbreak on food security and food access and their causes, FAO has conducted repeated rapid assessments of food insecurity using the Food Insecurity Experience Scale (FIES), which underpins Sustainable Development Goal indicator 2.1.2, on the prevalence of moderate or severe food insecurity. The survey module for the Scale has been adapted to capture the impact of the COVID-19 pandemic on households' ability to gain access to food, by slightly modifying the reference period for and wording of the Scale-related questions to make them more effective in monitoring food insecurity trends in relation to the pandemic.

64. FAO has accelerated the use of Earth observation data to produce crop mappings and crop area and crop yield estimates and forecasts. In 2019, the organization laid out a multi-year workplan to enhance its capacity to generate crop statistics within the Earth observation big data landscape, combined with machine-learning and deep-learning algorithms. It has improved its ability to build capacity in countries for the uptake of solutions based on Earth observation data, thus delivering in-country technical assistance and training. The implementation of the related workplan was

kick-started with the establishment of partnerships with major international agencies operating in the field (e.g., a memorandum of understanding signed between FAO and the European Space Agency).

65. FAO has also introduced innovative learning methodologies and delivery solutions involving multiple stakeholders, such as experience-sharing events and live interviews, synchronous and asynchronous e-learning courses, mobile responsive programmes, technical webinars and online-tutored blended learning programmes. In November 2021, the cumulative total number of learners for the 15 e-learning courses on the Sustainable Development Goal indicators under FAO custodianship – available in 43 languages – was 21,300; of those, almost 500 learners have also been officially certified with newly established digital badges, the awarding of which is conditional upon passing a final scenario-based performance evaluation with a score of 75 per cent or higher.

66. In the past two years, FAO has invested in two additional major areas of methodological support for Sustainable Development Goal monitoring: the development of guidelines for data disaggregation and private sector reporting.

67. With regard to the first area, in 2021, FAO issued new guidelines on data disaggregation for Sustainable Development Goal indicators using survey data. The guidelines were designed to respond to the overarching call in the 2030 Agenda to "leave no one behind", which requires more granular and disaggregated data than are currently available in most countries. In line with the data disaggregation work stream of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators, the new guidelines offer methodological and practical guidance for producing direct and indirect disaggregated estimates of Goal indicators that use surveys as their main or preferred data source. Furthermore, through the guidelines, FAO provides tools for assessing the accuracy of those estimates and presents strategies for the improvement of output quality, including small area estimation methods.

68. Concerning the second area of work, in 2021, FAO also published new guidance on core indicators for agrifood systems specific to measuring the private sector's contribution to the Sustainable Development Goals. In the guidance document, FAO puts forth a set of indicators that can be used by the private sector and can feed into national level reporting on the Goals. The indicators build on the broader guidance on core indicators for entity reporting on the contribution towards the implementation of the Goals, published in 2019 by the United Nations Conference on Trade and Development, and are focused specifically on the food and agriculture sector. The FAO guidance therefore provides practical information on how the contribution of food and agriculture companies to achieving the Goals can be measured in a consistent manner across countries, for both large and small private sector organizations.

D. World Programme for the Census of Agriculture

69. Following the launch of the World Programme for the Census of Agriculture 2020, FAO issued two publications in which it took stock of the national censuses conducted in the 2010 census round, covering the period 2006–2015. The first publication,[2] issued in 2019, presents a compendium of census metadata profiles and main results for a record number of 127 countries and territories. The second publication,[3] issued in 2021, presents a methodological review of the 2010 round, along with a set of internationally comparable data on selected variables characterizing the structure of agriculture. Both publications offer a distinctive panorama of census practices at the national level across all regions of the world.

[2] See www.fao.org/3/ca6956en/ca6956en.pdf.
[3] See www.fao.org/3/cb2650en/cb2650en.pdf.

70. Following the publication of the operational guidelines for the 2020 census round,[4] FAO organized a series of regional workshops to disseminate them. Workshops were conducted in the Near East and North Africa region, in Latin America, in francophone Africa and, more recently, in anglophone Africa and Eastern Europe. The latter two workshops were implemented as virtual webinars, owing to the travel restrictions imposed as a result of the COVID-19 pandemic, so that the planned dissemination of the guidelines was not significantly affected.

71. The COVID-19 pandemic has had an evident impact on the planning and implementation of agricultural censuses since 2020, when FAO began monitoring conditions on the ground and prepared regular reports about the impact of the pandemic on agricultural census activities. That work resulted in the issue of several publications, including:

(a) "National agricultural census operations and COVID-19" (2020);[5]

(b) *How Covid-19 Is Changing the World: A Statistical Perspective (Volume II)* (2020);[6]

(c) "Censuses of agriculture and COVID-19: global situation and lessons" (2020);[7]

(d) "Impact of COVID-19 on national censuses of agriculture (status overview)" (August 2021).[8] This publication is in fact a living document that has been updated four times during 2020 and 2021, covering 95, 139, 150 and 163 countries, respectively.

72. FAO has also been monitoring, reviewing and documenting agricultural censuses conducted under the current 2020 census round (2016–2025). This work involves the preparation of metadata reviews, tables with main results and the collection of census reports and materials.[9]

73. FAO has continued to provide technical assistance at the national level for the implementation of agriculture censuses, through projects and ad hoc requests. In 2020 and 2021, an average of 70 countries in every region per year received assistance from different offices of the organization. Since the beginning of 2020, technical assistance has been mainly provided remotely, through virtual meetings, owing to the restrictions imposed as a result of the COVID-19 pandemic. As a result, it is expected that about 150 countries and territories will conduct an agricultural census during the 2020 census round, compared with the record 127 censuses observed in the 2010 round.

74. At the beginning of 2020, FAO conducted a midterm review of the plans and progress for national agricultural censuses in the 2020 census round. For that purpose, a brief online survey was conducted on all member countries. The main findings of the midterm review[10] show that an increasing number of countries are shifting their census methodologies from the classical to the modular approach, while other countries are combining field enumeration with the use of administrative registers. Moreover, computer-assisted personal interviews are overtaking paper-assisted personal interviews as the main data collection method, and a growing number of countries are relying on the use of computer-assisted web interviews, computer-

[4] See www.fao.org/3/CA1963EN/ca1963en.pdf.
[5] See www.fao.org/3/ca8605en/CA8605EN.pdf.
[6] See https://unstats.un.org/unsd/ccsa/documents/covid19-report-ccsa_vol2.pdf.
[7] See www.fao.org/documents/card/en/c/cb2467en.
[8] See www.fao.org/3/ca8984en/CA8984EN.pdf.
[9] See www.fao.org/world-census-agriculture/wcarounds/wca2020/countries2020/en/.
[10] See www.fao.org/fileadmin/templates/ess/documents/methodology/census/Mid-term_Survey_2021.pdf.

assisted telephone interviews, geographic information systems and interactive online census databases.

75. In 2021, for the first time, FAO took steps to set up a new domain in its Corporate Database for Substantive Statistical Data (FAOSTAT), through which it will disseminate structural agricultural data gathered from the previous three completed census rounds (1990, 2000 and 2010). The new domain, which is expected to become public in the first quarter of 2022, contains such data as the number and size of holdings, the gender of the holder, land tenure, the legal status of holders and farm labour. The creation of the domain is aimed at providing a one stop-shop for agricultural structural data.

IV. Report on the work of the United Nations Committee of Experts on Food Security, Agricultural and Rural Statistics

76. At its fifty-first session, the Statistical Commission endorsed the terms of reference and the 2020–2023 programme of work of the United Nations Committee of Experts on Food Security, Agricultural and Rural Statistics, formerly known as the Inter-Agency and Expert Group on Agricultural and Rural Statistics (E/2020/24-E/CN.3/2020/37, decision 51/111, para. (e)). The programme of work is focused on four work streams: (a) conducting methodological research in the domain of food security statistics to further improve their relevance and accuracy; (b) developing national data quality assurance frameworks for agricultural statistics, (c) developing methods and standards for the use of alternative data sources in producing food and agricultural statistics at the national and international levels; and (d) developing innovative methods for producing real-time statistics at the country level.

77. In September 2020, three task teams, composed of members of the United Nations Committee of Experts on Food Security, Agricultural and Rural Statistics, were created to implement the programme of work by focusing on the following topics: (a) food security and food consumption measurement; (b) national quality assurance frameworks for agricultural statistics; and (c) the use of Earth observation data for agricultural statistics, which would simultaneously tackle the work streams on developing methods and standards for the use of alternative data sources and innovative methods for producing real-time statistics. For the third topic, the Committee agreed that work would be conducted through a joint task team for agricultural statistics composed of its own members and of members of the Task Team on Satellite Imagery and Geospatial Data created under the umbrella of the Committee of Experts on Big Data and Data Science for Official Statistics. The progress made by the various task teams are set out below.

A. Improving methods for food security and food consumption measurement

78. The task team created to help to develop and improve methods for assessing food security and food consumption is composed of representatives from Norway (Chair), Egypt, India, Indonesia, the United States of America, the Common Market for Eastern and Southern Africa, FAO, the Economic Commission for Latin America and the Caribbean (ECLAC), the Economic and Social Commission for Asia and the Pacific (ESCAP), the United Nations Children's Fund and the World Bank. At the beginning of 2020, the group committed to five areas of work: (a) improving methods for reconciling food consumption data from different dietary sources; (b) analysing the feasibility of extending the FAO prevalence of undernourishment methodology to the assessment of the prevalence of nutrient inadequacy using household consumption

and expenditure surveys; (c) analysing the feasibility of estimating the prevalence of undernourishment, on the basis of the FAO method, from individual dietary intake data; (d) improving methods to increase the specificity of using the Food Insecurity Experience Scale at the country level; and (e) prepare guidelines on processing food consumption data from household consumption and expenditure surveys.

79. During 2020, the task team decided to postpone its planned activities in its first area of work in order to prioritize activities under the other work streams, in particular its fourth area of work, given its importance in the context of the COVID-19 pandemic.

80. Significant progress has been made in conducting two feasibility studies aimed at addressing the first two topics of the programme of work. The Bangladesh Integrated Household Survey 2015, through which data was collected on the dietary intake of individual household members and reflects good national and rural representativity, was used for both analyses. Two harmonized nutrient conversion tables (one for individual-level data and one for household-level data) were prepared for transforming food consumption data into data on nutrients. Among the four methods usually applied to process data on individual quantitative dietary consumption, the National Cancer Institute method was selected. By contrast, the household-level data were processed using Stata software, following FAO methodologies for processing data from household consumption and expenditure surveys. The final outputs of those work streams, namely, two documents containing a review of pertinent literature and in which the methods, results and relevant remarks for each work stream are to be presented, are currently being drafted. The documents will be peer-reviewed before being presented to the Commission.

81. An extended version of the Food Insecurity Experience Scale survey module was fielded in 20 food-crisis countries between October 2020 and January 2021. The extended module was used to collect data on conditions experienced both over the previous 12 months and over the previous 30 days, for the purpose of comparing the annual and monthly assessments of food insecurity. In addition, follow-up questions about the frequency of occurrence were asked when respondents answered that they had experienced difficulties in gaining access to food in the previous 30 days. The addition of the 30-day reference period and follow-up questions allowed for the measurement of recent food insecurity and for greater discrimination among those classified as severely food-insecure, both of which relevant for the assessment of food insecurity in food crisis situations. The extended version of the survey module is currently being fielded again, in about 25 small island developing States, least developed countries and landlocked least developed countries.

82. In the resulting report,[11] FAO presents estimates of annual and recent food security levels based on the Food Insecurity Experience Scale and computed on the basis of the thresholds used for global monitoring, as well as an additional set of Scale-based estimates of recent food insecurity levels computed using severity thresholds set to correspond, as closely as possible, to the severity levels used to identify the five Integrated Food Security Phase Classification (IPC) acute food security phases. The Scale was recently included in the reference table for use in the context of Classification-related acute food insecurity assessments.[12]

83. Lastly, the task team has made some progress on the development of guidelines on processing food consumption data collected through the household consumption and expenditure surveys. The guidelines are based on existing work and methods and on recent research and build upon the publication entitled, *Food Data Collection in Household Consumption and Expenditure Surveys: Guidelines for Low- and Middle-*

[11] See www.fao.org/3/cb5623en/cb5623en.pdf.

[12] See www.ipcinfo.org/fileadmin/user_upload/ipcinfo/manual/IPC_Technical_Manual_3_Final.pdf.

Income Countries, which had been endorsed by the Commission at its forty-ninth session (E/2018/24-E/CN.3/2018/37, decision 49/112, para. (e)). Prior to finalizing the guidelines on processing food consumption data and submitting the document to the Commission for its endorsement, the task team will organize a global peer review process, in which Commission members will be invited to participate.

B. Development of a national quality assurance framework for agriculture statistics

84. The task team involved in the development and implementation of data quality standards and of a national quality assurance framework for food and agriculture statistics is composed of members from India, Indonesia, Mexico, Senegal, South Africa, State of Palestine, FAO and ECLAC. The aim of this task team is to develop a set of self-assessment tools (checklists) tailored to agriculture statistics, with the objective of supporting national statistics agencies in improving the quality of their statistics.

85. During its inception phase, the task team members noted that existing frameworks and corresponding assessment tools could guarantee consistencies of concepts and methods, but were typically too generic to serve to identify the specific strengths and weaknesses of agriculture statistics. The main difficulty lies in the variety of subdomains that fall under the agriculture statistics umbrella, including crops and livestock; fishery and aquaculture; inputs (fertilizer and pesticides; machinery; employment); prices (producer and consumer prices); food security and access; and land use and land cover. For that reason, the task team agreed to adopt the approach of the International Monetary Fund (IMF) data quality assurance framework, where the generic framework serves as an umbrella for seven data set-specific frameworks in the domain of economic statistics, and to develop a set of self-assessment checklists, starting with the following three subdomains: crops and livestock production statistics; statistics on producers' prices of agriculture commodities; and land use and land cover statistics.

86. The structure of the self-assessment checklist follows that of the updated national quality assurance framework established by the United Nations in 2019. The framework is aimed at supporting agencies interested in developing or revising their own national quality assurance frameworks, also taking into consideration the particular quality-related challenges posed by the harnessing of new data sources. The *United Nations National Quality Assurance Frameworks Manual for Official Statistics*, issued in 2019, includes a self-assessment quality checklist that can help to identify areas of strength and weakness, which, subsequently, enables countries to adopt a series of improvements.

87. Following the structure of the checklist set out for the national quality assurance framework, the self-assessment tool developed by the United Nations Committee of Experts on Food Security, Agricultural and Rural Statistics to assess the quality of agriculture statistics covers four levels of analysis. The first two levels (managing the national statistical system and managing the institutional environment) are not domain-dependent and are focused on assessing the degree of coordination of agriculture statistics at the national level and the adequacy of resources for producing agriculture statistics. The remaining dimensions of the checklist, namely, investigating the statistical process (third level) and the corresponding statistical outputs (fourth level), are tailored to the specific subdomain of agriculture statistics.

88. Since its creation in 2020, the task team has developed two specific self-assessment checklists for crops and livestock production statistics and for statistics on producers' prices of agriculture commodities. A third checklist, on land use and land cover statistics, is currently under development. Using these self-assessment checklists, data can be collected with the purpose of deriving an overall quality score,

based on a set of questions aimed at ascertaining the degree of implementation (full, partial or no implementation) of guidelines or best practices. The responses to those questions can be aggregated at different levels in order to derive a four-point rating scale that is aligned with the IMF data quality assurance framework and the related reports on the observance of standards and codes.

89. The self-assessment checklist for crops and livestock production statistics, and the corresponding assessment procedure, were pilot-tested in the second and third quarters of 2021 and improved accordingly thereafter. The pilot test of the checklist on producers' prices is currently under way and is expected to be finalized by March 2022.

90. The complete set of proposed checklists and their corresponding tools and procedures will be shared with task team members in 2022, to enable the collection and integration of additional feedback, prior to their endorsement by the Commission. Training will also be provided to countries willing to undertake an assessment in one or more of the agriculture statistics subdomains.

C. Use of geospatial data for producing agricultural statistics

91. The joint task team on the use of geospatial data for producing agriculture statistics, the Joint Task Team on Earth Observations, was officially created in the first quarter of 2021 and includes members from Canada (co-Chair), Colombia, Egypt, Indonesia, Mexico (co-Chair), Poland, Senegal, the United States of America, Queensland University of Technology (Australia), the Data for Now initiative, FAO, the Statistics Division of the Department of Economic and Social Affairs of the Secretariat and the World Bank.

92. The Joint Task Team recently finalized a peer-reviewed report that includes a collection of projects on the uses of Earth observation data for producing agricultural statistics. It also made available Earth observation data products and their potential use, as well as in situ data from Afghanistan and Lesotho through the FAO Hand-in-Hand geospatial platform.

93. A training toolkit on Earth observation data and its use in agricultural statistics is being prepared in collaboration with the Task Team of the Committee of Experts on Big Data and Data Science for Official Statistics and will be made available in 2022.

94. Members of the task team participated in various events to showcase methods and cases for the use of Earth observation data for agricultural statistics. For example, on 21 October 2021, a presentation was made during an online ESCAP event, targeting young statisticians from countries of the Commonwealth of Independent States interested in new data sources, big data and innovative technologies. The task team members also contributed to a series of webinars, organized on the margins of Expo 2020 Dubai, the first one held on 19 October 2021 and the second to be held on 26 and 27 January 2022.

V. Report on the regional commissions on agricultural statistics

95. Currently, statistics governance at FAO is structured at the regional level around the following FAO regional bodies, which have been mandated to address statistical matters:

(a) Food and Agriculture Organization of the United Nations/Organization of American States-Inter-American Committee on Education/Inter-American Institute

for Cooperation on Agriculture (FAO/OEA-CIE/IICA) Working Group on Agricultural and Livestock Statistics for Latin America and the Caribbean;

(b) African Commission on Agricultural Statistics;

(c) Asia and Pacific Commission on Agricultural Statistics.

96. The regional bodies organize biennial meetings, to which senior officials from national statistical offices and ministries of agriculture responsible for the production and dissemination of food and agricultural statistics are convened, in order to: (a) assess the status of food and agricultural statistics in member countries; (b) define priorities for statistical capacity development in the region; and (c) advise member countries on recent methodological developments and standards in agricultural statistics. These bodies report to the respective FAO regional conferences and, through them, make recommendations to the FAO Council and/or the FAO Conference.

97. The Near East and European regions do not currently have formal regional bodies for the governance of agricultural statistics. At the global level, topics of a statistical nature are included in the agenda of one of the organization's governing bodies, either an FAO technical committee or the FAO Programme Committee.

98. A summary of the recommendations of the three regional commissions on agricultural statistics that held sessions in 2021 is provided in the sections below.

A. FAO/OEA-CIE/IICA Working Group on Agricultural and Livestock Statistics for Latin America and the Caribbean

99. The thirtieth session of the Working Group on Agricultural and Livestock Statistics for Latin America and the Caribbean was hosted virtually by the National Institute of Statistics and Census (INEC) of Costa Rica, from 20 to 23 July 2021. In all, 92 attendees from 29 countries in the region participated in the meeting. The Working Group discussed the activities carried out during the 2020–2021 biennium and formulated recommendations to be brought to the attention of participants at the FAO Regional Conference for Latin America and the Caribbean.

100. The Working Group encouraged member countries to prioritize not only the digitization of the agricultural sector, but also the overall modernization of agricultural statistical systems, by adopting innovative methods and alternative data sources, with a view to producing higher quality data that would also help to build resilience to natural disasters. While acknowledging the work of the Data Lab for Statistical Innovation, the Working Group recommended that FAO develop a space for sharing resources on the use of alternative data sources and data science techniques for producing agricultural statistics.

101. In addition, the Working Group indicated that: (a) the gap in data and statistics on agriculture and food security is undermining the achievement of the Sustainable Development Goals; (b) additional national resources are required to fill data gaps and maximize the use of statistics in evidence-based policymaking; and, (c) statistics need to be made available in a more timely manner, disaggregated at lower administrative levels and geared towards emphasizing the position of vulnerable populations.

102. The Working Group acknowledged the progress made on capacity development and recommended that FAO go beyond methodological training to prioritize the facilitation of the exchange of practical experiences among countries. FAO was called upon to prioritize capacity development and technical assistance on collecting disaggregated Sustainable Development Goal-related data, which are urgently required by decision makers in order to target interventions aimed at promoting agriculture development and eradicating hunger. FAO was also urged to build countries' capacity to

leverage Earth observation data and artificial intelligence methods for producing more timely and disaggregated agricultural statistics and to develop feasible methodologies for collecting data on fisheries, including inland fisheries, given the challenges currently faced in this sector by several countries in the region.

B. African Commission on Agricultural Statistics

103. The twenty-seventh session of the African Commission on Agricultural Statistics was hosted by Senegal and convened virtually from 15 to 18 November 2021. The session was attended by 120 registered participants, including member countries and regional and international institutions.

104. In their recommendations, delegates took stock of the low rates of responses to FAO questionnaires, in particular those concerning data on forestry, water use, specific commodities, land and pesticides. Delegates emphasized the need for member countries to strengthen their efforts to maintain closer and more regular communications with FAO in order to respond to its questionnaires in a more timely and complete manner.

105. The African Commission recognized that the COVID-19 pandemic has affected data collection methods, reducing the possibility of undertaking face-to-face interviews. Delegates considered this as an opportunity to renew countries' efforts towards modernizing data collection methods, especially in agricultural censuses and surveys. Remote data collection using computer-assisted telephone and web interviews needed to be promoted through training and technical assistance. Although the adoption of those technologies was slow, owing to poor infrastructure, high access costs and lack of necessary skills, delegates encouraged member countries to introduce changes gradually, possibly starting with the larger-scale farms.

106. Delegates welcomed the organization's regional road map to accelerate support to countries on Sustainable Development Goal reporting and appreciated the toolkit of resources provided to member countries. They commended FAO for the effort it had devoted to providing technical assistance, to assessing progress made towards reaching the Goal targets and to interpreting the results. As several key Goal indicators require data at the farm level, delegates recommended that FAO continue supporting interested countries in enhancing nationally representative farm-based surveys.

107. Similarly, the African Commission recommended that member countries develop an integrated system for agricultural statistics through effective governance, strategic planning, integrated surveys and master sample frames and encouraged them to promote statistical work through the proper dissemination of survey results and microdata and to make them available for use through the "50 x 2030" initiative.

108. Strengthened collaboration was advocated between national statistical organizations and agricultural statistics units within competent line ministries to introduce best practices in the collection of georeferenced data within farm surveys.

109. Lastly, delegates advocated in favour of a better coordination of efforts to support the improvement of fisheries and aquaculture statistics and the integration of those statistics into the national statistical system.

C. Asia and Pacific Commission on Agricultural Statistics

110. The twenty-seventh session of the Asia and Pacific Commission on Agricultural Statistics was held in Ulaanbaatar, from 22 to 25 November 2021. The session was

attended by 185 participants, including 57 delegates from 25 member countries and observers from six regional and international organizations.

111. The Asia and Pacific Commission offered a number of recommendations on the enhancement of statistical systems in support of policymaking at the national level and the achievement of the Sustainable Development Goals. In particular, the Commission recommended that FAO continue supporting the integration of agricultural statistics and Goal-monitoring within national statistical systems and that it further invest in massive open online courses and improved data collection technologies, such as computer-assisted web and telephone interviews. Delegates emphasized the need to support member countries in producing voluntary national reviews for assessing progress made towards reaching the Goal targets, using harmonized methodologies suggested by FAO.

112. The Asia and Pacific Commission also suggested promoting the following efforts, taking into account the specific requirements of small island developing States:

(a) Improving the measurement of food insecurity, through a broader use of the Food Insecurity Experience Scale, especially in emergency, conflict, crisis and pandemic situations;

(b) Supporting the measurement of food losses at the national level, for which FAO was invited to provide technical assistance;

(c) Promoting the correct and gradual adoption of the questionnaires proposed under the “50 x 2030” initiative in national agricultural surveys by simplifying and tailoring questionnaires to countries’ specific needs and circumstances.

113. Another set of recommendations was offered by the Asia and Pacific Commission on the improvement of data dissemination and timely transmission of information to FAO. Delegates noted the low response to FAO questionnaires, the rate of which in some subregions was less than 40 per cent. They invited member countries to facilitate the timely transmission of questionnaires to FAO, through more appropriate questionnaire routing at the national level and closer collaboration with the organization’s decentralized offices. Moreover, the Commission recommended that FAO continue providing technical assistance to countries on anonymizing and publishing microdata collected in surveys, while broadening as much as possible the dissemination of granular information through structured and unstructured forms, with a view to enhancing access and utilization.

114. The Asia and Pacific Commission also offered a set of recommendations on enhancing data disaggregation and granularity. In particular, delegates recommended that FAO engage national policymakers in identifying priority disaggregation dimensions in survey design or, where sampling did not allow for the desired level of disaggregation, in supporting the use of indirect estimation techniques and the integration of survey data with other sources, such as census data, administrative registers and geospatial databases.

115. Similarly, the Asia and Pacific Commission recommended that member countries engage with new data science methods and non-conventional data sources. In that area, delegates noted the activities of the FAO Data Lab for Statistical Innovation, which supports access to non-conventional and high-frequency data on a range of topics. Delegates also emphasized the need to promote the use of georeferenced and Earth observation data and to address challenges that prevent the wider use of Earth observation data in several member countries. In that connection, the Commission noted the kick-off in 2020 of the Earth Observation Data for Official Agricultural Statistics (EOSTAT) project, in collaboration with the European Space Agency, which is building capacity in national statistics offices on the operational use of Earth observation data for the production of agricultural statistics.

VI. Action to be taken by the Statistical Commission

116. **The Commission is invited:**

(a) **To commend FAO on its implementation of an integrated governance structure for data and statistics, inspired by the Data Strategy of the Secretary-General for Action by Everyone, Everywhere;**

(b) **To encourage FAO to develop an integrated quality assurance framework for statistics, big data and geospatial data, in collaboration with other United Nations agencies;**

(c) **To take note of the establishment by FAO of the Data Lab for Statistical Innovation and to encourage FAO to accelerate the development and testing of methods and tools using alternative data sources;**

(d) **To take note of the progress made by the three task teams of the United Nations Committee of Experts on Food Security, Agricultural and Rural Statistics;**

(e) **To encourage its members to express their interest in participating in the work of the Committee of Experts for the review of the guidelines on processing food consumption data from household consumption and expenditure surveys;**

(f) **To call on members to renew their commitments to use the internationally agreed Sustainable Development Goal indicators to monitor the targets related to food and agriculture;**

(g) **To commend FAO on the progress made by the organization in strengthening the statistical capacity of countries in producing food and agriculture statistics and in monitoring the Sustainable Development Goal indicators and for the role played by the organization in the implementation of the "50 x 2030" initiative and the second phase of the Global Strategy to Improve Agricultural and Rural Statistics;**

(h) **To encourage FAO and its partners to continue to pursue the overall improvement of the quality of the data collected by member countries, by providing sectoral guidelines and hands-on technical assistance for the compilation of quality statistics and by promoting the modernization of the entire statistical production cycle at the national level;**

(i) **To take note of the recommendations recently formulated by the FAO regional commissions on agricultural statistics.**