Data for decision-making
Ensuring quality data and analysis for effective policy support to food systems and Zero Hunger

© FAO

The issue

The COVID-19 health crisis is having wide-reaching effects on all parts of society, including on food systems, livelihoods and food security. Timely and reliable information is essential to anticipate and mitigate its negative impacts, in particular, to identify those areas where the pandemic is generating new and unprecedented stress. Traditionally, food insecurity hotspots in emergency contexts are most affected, also due to difficulties in supplying humanitarian assistance. In addition, depending on the response to the pandemic, new pockets of food insecurity may appear, even in countries and populations that have not previously been the focus of food security crises.

It is important to act now to ensure an effective COVID-19 recovery, build the resilience of food systems and cement their role in economic growth globally. To this end, there is an urgent need to provide data and analysis to support policy formulation and programme design to prevent disruption to food systems, avoid food insecurity and protect the livelihoods of affected populations.

Data collection methods need to be urgently adapted and enhanced, as national data collection processes are disrupted by physical distancing measures to contain the pandemic. Face-to-face surveying is largely disrupted, and innovative collection methods are required to ensure timely and responsive data to meet the new demands of the pandemic. The capacity of national statistical systems and other data producers has been affected, and this could jeopardize a country's ability to produce timely and accurate analysis to support effective policy formulation.

Agricultural statistics are particularly important as agriculture accounts for a sizeable share of gross domestic product and employment in many developing economies. Agricultural holdings and smallholder farmers require targeted responses to avoid the disruption of agricultural information flows crucial to their livelihoods and food security. Agrifood sectors are also key engines of growth and jobs, and it is critical that governments secure their access to reliable information, as their business decisions will play a vital role in the global economic recovery under tight fiscal constraints.

In response to the COVID-19 pandemic, FAO is reorienting and upscaling its work on data, information and analysis. Data for decision-making aims to equip countries to implement timely and effective responses to the COVID-19 crisis and promote a swift recovery thereafter.

Budget

USD 24 million

Time frame

July 2020–December 2022
(30 months)

SDGs

Related FAO policy notes on COVID-19

▶ COVID-19 and the risk to food supply chains: How to respond?

▶ COVID-19 global economic recession: Avoiding hunger must be at the centre of the economic stimulus

▶ Mitigating risks to food systems during COVID-19: Reducing food loss and waste

▶ Simulating rising undernourishment during the COVID-19 pandemic economic downturn

The action

In the framework of FAO's comprehensive COVID-19 response, the data for decision-making programme is structured around four components:

1 rapid, repeated assessments of the impact of COVID-19 on food insecurity, using the Food Insecurity Experience Scale (FIES);

2 leveraging innovative data sources to monitor the impact of COVID-19;

3 adapting agricultural data collection methods to meet new demands, while maintaining the continuity of technical assistance on agricultural surveys;

4 evidence-based policy support for post-COVID-19 economic and social recovery.

Capitalizing on new data sources and supporting the adaptation of established data collection processes for agriculture and food security will capture solid evidence to inform a cross-spectrum of subnational, national, regional and global responses.

The power of digital technologies to incubate, accelerate and upscale new solutions will enable the production of timely and reliable data. The use of non-traditional, non-structured data sources, including the implementation of remote data collection tools, will help fill gaps in the information required for policy formulation. This comprehensive programme will help bridge data and policy by generating the required data at the right time to ensure evidence-based policy design and monitoring.

Data for decision-making relies on the collaborative work of different FAO units and decentralized offices, bringing together regional and country specificities. Activities can thus be carefully tailored to match the data needs, analysis and policy processes countries require. This approach will make a significant contribution to the design and monitoring of large-scale programmes to address sustainable food systems and the achievement of zero hunger, in addition to tackling the more pressing aspects exacerbated by COVID-19.

Expected results

1 **Rapid, repeated assessments of the impact of COVID-19 on food insecurity using FIES**

The COVID-19 outbreak demands new, rapid and real-time information to evaluate impacts on food security.

▶ Rapid, repeated, remote data collection based on FIES, which is a theoretically sound and empirically valid survey-based system that ensures cross-country comparability over time, which can be used to distinguish between different levels of severity of food insecurity.

▶ Using the FIES system, data is collected in at least 100 countries around the world; the FIES module is complemented with other sociodemographic information in three rounds of surveys that are representative of the national population. The data is collected by contracted service providers and shared with national statistics agencies.

▶ Microdata is disseminated through FAO's Microdata Catalogue to foster widespread use and analysis.

▶ Technical assistance and training is provided on the analysis of food security, enhancing capacities at national level.

▶ Analytical reports are produced together with national counterparts on the impact of the COVID-19 epidemic on food insecurity.

2 **Innovative data sources will be tapped: FAO's Data Lab for Statistical Innovations**

The use of alternative data sources – including non-official and unstructured data (big data, geospatial data, social media) and data science methods (web-scraping, remote sensing and machine learning) – to cover data domain gaps and geographical areas for which no or partial official statistics are available provide:

▶ real-time analytics and information on the impact of the COVID-19 on food chains, prices and possible interventions, created from text mining tools and web-scraping technologies;

▶ granular georeferenced datasets by country, administrative region, commodity and variables, such as agricultural production, productivity, prices and investments, built from web-scraping and existing national data sources;

▶ crop-layer maps and crop area and yield estimates for countries' main produce, created using earth observation data.

The programme supports national emergency information situation rooms, combining data from alternative and traditional sources, to provide evidence for policy formulation and project design and to minimize the impacts of COVID-19 on food systems, livelihoods and food security.

③ Adapted data collection in agriculture: Agricultural survey modifications

New, virtual data collection methods to gather crucial food and agricultural statistics provide:

▶ innovative alternatives to traditional face-to-face interviews, while maintaining data quality and reliability;

▶ a new module in FAO's Agricultural Integrated Survey (AGRISurvey) to facilitate the collection of aid data on the impact of COVID-19 at farm level;

▶ guidelines on methodologies, supporting up to 15 countries in collecting data on the COVID-19 impact at farm level, in addition to adaptation of the COVID-19 AGRISurvey module in their existing national surveys.

④ Two types of evidence-based policy analysis for post-COVID-19 economic and social recovery

▶ The programme provides a diagnostic to help determine the price distortions (incentives/disincentives) policies may be causing in food supply chains during the COVID-19 outbreak. The diagnostic is based on an innovative monthly "nominal rate of protection", based on data from FAO's Global Information and Early Warning System (GIEWS) and the International Grain Council. The initial diagnostic for 50 countries is made available for public use on an FAO Web site. This provides evidence of whether food and agriculture incentives are working in the right (or wrong) direction, and whether they may need realignment to facilitate the post-COVID-19 recovery of the agrifood sector. FAO will liaise with and assist Members in developing medium-term post-COVID-19 recovery policy agendas, including fiscal measures, trade policies and public investment.

▶ Scenario-based analyses of public investment in productive infrastructure for the agrifood sectors (for example, feeder roads, bridges, irrigation and storage) uses state-of-the-art, economy-wide country models. Scenarios developed in consultation with policy-makers considers current recession-induced fiscal constraints and economy-wide impacts of financing new public investments from different sources (such as spending reallocations, tax revenues, domestic/foreign debt or aid). This assesses their macroeconomic feasibility. Policy-makers are able to rank agrifood chains in terms of socio-economic cost effectiveness as recipients of new investments. This evidence will form the basis of policy recommendations as to where governments should invest to enable a post-COVID-19 economic recovery in food and agriculture, while ensuring social payoffs.

Partnerships

Each programme area will draw on the expertise and skills of the many highly qualified partners with which FAO was engaged prior to the COVID-19 pandemic.

▶ Rapid, repeated assessments of food security: the World Bank, the World Food Programme, the United Nations Children's Fund; specifically on the use of household surveys, the World Bank and World Food Programme.

▶ Leveraging innovative data sources: key owners of remote sensing technologies, such as the United States of America's National Aeronautics and Space Administration (NASA), universities specializing in data science, telecom companies that compile data on connections and web usage and other private sector entities that collect big data in their operations.

▶ Adapting data collection in agriculture: the 50x2030 initiative with the World Bank (specifically the Living Standard Measurement Study team), the Bill and Melinda Gates Foundation, the International Fund for Agricultural Development (IFAD), the United States Agency for International Development (USAID) and other resource partners.

▶ Evidence-based policy analysis: partnerships through the Monitoring and Analysing Food and Agricultural Policies Programme (MAFAP) project, such as the Bill and Melinda Gates Foundation, the International Food Policy Research Institute, the Organisation for Economic Co-operation and Development, USAID and other resource partners.

Programme links

This programme is a key part of FAO's comprehensive COVID-19 response package and builds on the 50x2030 initiative, the AGRISurvey programme, the European Union–FAO Food and Nutrition Security Impact, Resilience, Sustainability and Transformation (FIRST) programme, the FAO Voices of the Hungry initiative, the FAO Data Lab for Statistical Innovationand MAFAP.

Results will feed analytics to the Common Country Analyses performed by United Nations Country Teams, FAO's Hand-in-Hand Initiative and the monitoring of the Sustainable Development Goals (SDGs). They will support FAO's response programmes, including Collective Action for Sustainable Food Systems, Economic Inclusion, Trade and Agribusiness and Zero Hunger.

Regional and country focus

The regional contexts described here are subject to change in line with the results of ongoing country assessments and dialogues with Governments and partner organizations. The countries listed may therefore change.

Data-related activities will take place in Africa, Asia and the Pacific, Europe and Central Asia, Latin America and the Caribbean, and the Near East and North Africa. They will mostly revolve around monitoring food insecurity, based on the FAO Food Insecurity Experience Scale (FIES), and exploring alternative data-collection methods for farm surveys, following the AGRISurvey module, which will integrate an additional module on capturing the impact of COVID-19. In some regions - notably Africa and Asia and the Pacific - work will capitalize on and incorporate remote-sensing platforms and initiatives, as well as the Global Open Data for Agriculture and Nutrition initiative (GODAN). Evidence-based policy support for COVID-19 economic and social recovery will similarly start in Africa, Asia and the Pacific, and Latin America and the Caribbean, and expand as needed into countries in other regions.

The FIES-related technical assistance will tie in with the FAO Voices of the Hungry initiative - currently funded by the European Commission - and inform the Collective Action for Sustainable Food Systems and Zero Hunger programmes. The results will feed into analytics foreseen for the Hand in Hand initiative, measurement of SDGs and the Common Country Analyses performed by United Nations Country Teams.

Activities on farm surveys and the measurement of the impact of COVID 19 at farm level will benefit from a broad-reaching collaboration with IFAD, the World Bank and national governments of the countries in question. Actions will tie in with the AGRISurvey programme and 50x2030 initiative, which are already being implemented in partnership with IFAD and the World Bank, as well as the FAO Data Lab for Statistical Innovation. In addition to Collective Action for Sustainable Food Systems and Zero Hunger, these activities will support data collection to inform the Trade and Agribusiness and Economic Inclusion programmes.

The focus countries in each region will be determined and prioritized based on information gaps and urgency as regards the expected likely impact of COVID-19. In **Africa**, priority countries are being determined, starting from areas with high levels of food insecurity and vulnerability to the COVID-19 pandemics. In **Asia and the Pacific**, the programme will work in Afghanistan, Bangladesh, Bhutan, Cambodia, Indonesia, the Lao People's Democratic Republic, Nepal, the Pacific Small Island Developing States (SIDS), Papua New Guinea and Timor Leste. Priority countries are being determined in **Europe and Central Asia**. In **Latin America and the Caribbean**, priority countries include Bolivia (Plurinational State of), the Dominican Republic, Ecuador, El Salvador, Granada, Guatemala, Guyana, Haiti, Honduras, Paraguay and Venezuela. In the **Near East and North Africa**, the programme will focus in Algeria, Egypt, Iraq, Jordan, Lebanon, Mauritania, Morocco, Palestine, Sudan, Syrian Arab Republic, Tunisia, Yemen and the Gulf Cooperation Council (GCC) countries.

Contact

JoseRoseroMoncayo
Director, Statistics - Economic and Social Development
ESS-Director@fao.org

Marco V Sanchez Cantillo
Deputy Director, Agrifood Economics - Economic and Social Development
ESA-Director@fao.org

Alexander Jones
Director, Resource Mobilization and Private Sector Partnerships - Partnerships and Outreach
PSR-Director@fao.org

Food and Agriculture Organization of the United Nations
Viale delle Terme di Caracalla
00153 Rome, Italy

CB0279EN/1/08.20