UPDATE ON THE CGIAR RESEARCH RESPONSE TO COVID-19

Executive Summary

The COVID-19 pandemic has caused a global health crisis and massive disruptions to economies and livelihoods. As the global leader in agricultural research, CGIAR immediately took action to analyze and counter the pandemic's potentially devastating impacts on food security and nutrition worldwide, particularly in low- and middle-income countries. CGIAR is working with partners to develop solutions for COVID-19 response, recovery and resilience.

IMPACTS OF COVID-19 AND RESPONSE MEASURES ON POVERTY, FOOD SYSTEMS AND FOOD SECURITY

The pandemic, combined with the social and economic impacts of measures to stop its spread, triggered a deep recession in 2020, with global GDP projected to contract by 4.4 percent. CGIAR country models estimated a sharp drop in national incomes during the second quarter of 2020; in Kenya, Myanmar, Nigeria, Rwanda and South Africa, for example, the models estimated a decline of 30 to 40 percent in total GDP during these countries' lockdown periods.

The economic fallout of COVID-19 could result in more than 140 million people falling into extreme poverty – an increase of 20 percent – and raise the number of acutely food insecure people from 149 million to 270 million by the end of 2020. While global food markets remained resilient to COVID-19 shocks, increased poverty is affecting food consumption. Low-income households have been forced to reduce spending on food and switch to more staples, reducing dietary diversity and consumption of nutrient-rich foods such as fruits and vegetables. In many cases, restrictions on market activity (for example, export restrictions and market closures) exacerbated disruptions to agri-food systems, affecting all but with more severe impacts for the poor.

CGIAR COVID-19 HUB PRIORITY ACTIONS AND PROGRESS OF WORK

The CGIAR COVID-19 Hub provides a coordinated research response to the global pandemic threatening health systems, national economies, livelihoods and food security. Harnessing knowledge for COVID-19 response, recovery and resilience, the Hub provides evidence, innovations and tools to policymakers, partners and food system actors under four prioritized Work Areas:

1. Address value chain fractures: Developing country-, value chain- and commodity-specific case studies and research to inform policy and investment decisions to restore agri-food value chains.

2. *Integrate a One Health approach to COVID-19 responses*: Integrating health, economic and agri-food system modelling and using epidemiology tools to de-risk agricultural hotspots and avoid future zoonosis cross-over events.

3. *Support country COVID-19 responses:* Providing national partners with analyses, evidence-based recommendations and scalable solutions for integrated COVID-19 crisis and recovery responses.

4. *Address food systems' fragility and building back better:* Mapping COVID-19 impacts on food systems to understand key fragility points and underlying vulnerabilities to identify ways to build back better by making food, land and water systems more sustainable, inclusive and resilient to shocks.

A summary of the activities undertaken by the COVID-19 Hub and related research outputs from across CGIAR is provided in the table below. Together with partners, CGIAR is conducting more than 80 COVID-19 relevant studies, supporting response and recovery work at national and global levels.

The research outputs, engagement processes and partnerships emerging from the COVID-19 Hub will feed into the development of the new research portfolio under the CGIAR 2030 Research and Innovation Strategy, which targets risk management and resilience as critical qualities for food, land and water systems.

Work Area	COVID-19 Hub research activities	Examples of additional CGIAR research
1. Address value chain fractures	• Developing a conceptual framework for research to assess the effects of COVID-19 and possible policy responses for mitigating the impact of COVID-19 on food supply chains. • Synthesizing completed research from within and outside CGIAR on key questions related to value chain fractures.	• Evaluating the economic costs of COVID-19 in LMICs, and identifying policy and public investment priorities for relief and recovery. • Assessing impacts of COVID-19 and providing policy recommendations for rice value chains in West Africa, with solutions for upgrading rice value chains. • Evaluating COVID-19 impacts on on aquatic food supply chains in Bangladesh, India, Myanmar, Nigeria, Egypt and Timor-Leste.
2. Integrate a One Health approach to COVID-19 responses	• Creating a typology of situations in which crossover of new pathogens from animal to human hosts is likely or has occurred. • Developing a framework and review of risk factor studies and risk analysis. • Conducting One Health risk analyses of COVID-19 in aquatic systems. • Integrating economic and epidemiological modelling methods to estimate the impact of COVID-19 on public health, agriculture and national economies.	• Produced an evidence-based assessment report on the risk of future zoonotic outbreaks: Preventing the next pandemic: Zoonotic diseases and how to break the chain of transmission • Creating a new One Health Research, Education and Outreach Centre in Africa (OHRECA) in Kenya to address neglected zoonotic diseases, antimicrobial resistance, food safety and emerging infectious diseases in sub-Saharan Africa.
3. Support country COVID-19 responses	• Cross-CGIAR country teams in Bangladesh and Ethiopia are facilitating coordinated, multi-disciplinary responses from various CGIAR research areas in close collaboration with national partners. • Three additional countries will be included to follow the process for identifying and delivering cross-CGIAR country-specific research responses to COVID-19.	• CGIAR, FAO and IFAD conducted a second rapid assessment of food and nutrition security in the context of COVID-19 in Bangladesh. • Conducted phone interviews with key stakeholders to assess impacts of the COVID-19 crisis on vegetable value chains in Ethiopia.
4. Address food systems' fragility and build back better	• Developing a conceptual framework for mapping impacts and analysis of key food system vulnerabilities. • Mapping key fragility points from COVID-19 to food systems and identifying underlying vulnerabilities. • Conducting rapid surveys to assess the impacts of COVID-19 in different types of agriculture, value chains and food systems.	• Developed a framework for analyzing the resilience of local food systems and links to food security, identifying lessons for improving our understanding of food system resilience in the context of COVID-19 and other shocks. • Assessing the role of water in the COVID-19 crisis, particularly water inequalities and innovations to address them. • Helping partners to adapt delivery models for nutritious crops and foods under COVID-19, paying particular attention to the role of women in averting negative impacts of the pandemic.