

UPDATE ON THE CGIAR RESEARCH RESPONSE TO COVID-19

December 2021

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

It has been almost two years since the novel coronavirus SARS-CoV2 was identified as the cause of an outbreak of COVID-19 that originated in China and rapidly spread worldwide. Since then – and even compared to one year ago – we have gained significantly more knowledge about, and tools to address, how COVID-19 is spread and treated. Moreover, several effective vaccines have been developed and distributed – albeit very unequally – throughout the world. Despite this progress, the long-term health and economic effects of the COVID-19 pandemic continue to influence poverty, food systems, and food security, and these impacts are changing as the pandemic evolves.

Since the pandemic's onset, the modest global progress made in the past decade to reduce undernutrition has reversed. According to *The State of Food Security and Nutrition in the World 2021* (FAO et al. 2021), the prevalence of undernourishment increased by 1.5 percentage points in 2020, after remaining virtually unchanged for five years. Approximately 118 million more people are facing hunger compared to 2019, while close to 12 percent of the global population is severely food insecure. Concerningly, the gender gap in prevalence of moderate or severe food insecurity has also increased. Public health and nutrition services in place pre-pandemic suffered both supply and demand disruptions (Nguyen et al. 2021); [the lockdowns discussed in previous Hub updates](#) reduced the availability and hampered the accessibility of services, particularly for those who live a great distance away. Once lockdowns were lifted, many people were still hesitant to access services, however, due to fear of infection or a lack of appropriate providers.

The long-term consequences of COVID-19 on the basic needs of vulnerable people are concerning. The

impacts on food and nutrition security are likely to be felt, and felt significantly, for a long time, with a projected 660 million people still expected to face hunger in 2030 (FAO et al. 2021). Health, food security and economic effects go hand-in-hand. The long-term effects on children have been well described (Ruel and Headey, 2021), while the persistence of the pandemic and its disruptions have led to an increased risk of mental health symptoms and disorders for unemployed adults, youth, the elderly, and frontline healthcare workers (Marquez 2021). Moreover, Leight and Karachiwalla (2021) found that, in Mozambique, adolescents who experienced serious pandemic-related consequences such as increased hunger, job loss, migration, or early marriage of a household member exhibit a higher incidence of anxiety and lower levels of well-being.

Despite the continuing health impacts of the pandemic, the global economy is recovering. Growth of 5.9 percent is now projected for 2021 (International Monetary Fund 2021), but much lower for developing regions such as Africa (3.7 percent). Many governments are now operating in a more limited fiscal space with difficult policy choices as they confront the multi-dimensional challenges of the pandemic, climate change, rising inflation, and reduced employment opportunities. The inequalities highlighted – and heightened – by the COVID-19 pandemic are likely to persist, with near-term divergences (driven by unequal vaccine access and early policy support) expected to leave lasting imprints on medium-term economic performance (International Monetary Fund 2021).

However, these aggregate trends hide how the COVID-19 crisis affects people in different national and sub-national contexts. As the pandemic continues, its unpredictability interacts with other shocks – climate, social unrest and conflict, and economic. While large-scale, modern food supply chains proved surprisingly

resilient to the pandemic's initial impacts, some countries and food systems – particularly those heavy in small- and medium-sized enterprises and/or dependent on labor – were more vulnerable to disruptions ([FAO 2021](#)). Moving forward, uncertainty and dealing with multiple challenges will remain an increasing concern. For businesses in the food system, uncertainty will influence their willingness to invest in new technologies or hire additional employees ([Pangestu 2021](#)). For countries, a potentially complex transition from epidemic to endemic COVID-19 will require smarter policies with, in many cases, more constrained public funding ([Díaz-Bonilla 2021](#)).

CGIAR COVID-19 HUB PROGRESS OF WORK

The CGIAR COVID-19 Hub provides evidence, innovations and tools from a wide range of expertise to policymakers and food system actors as they develop and revise plans for COVID-19 response and recovery. As envisaged from its inception, the CGIAR COVID-19 Hub is complementing, not replacing, the COVID-19 research response undertaken within existing CGIAR research programs.

The Hub activities focus on delivering a set of prioritized research outputs across three thematic work areas: Value Chain Fractures, One Health, and Food System Resilience, as well as targeted work in five countries. The objectives and planned outputs under each area are listed in Annex 2 of the [June 2021 brief](#).

The Hub offers two critical cross-CGIAR functions. The first is synthesizing findings and distilling lessons from multiple CGIAR studies on value chain fractures and food system resilience. The second is coordinating prioritized cross-CGIAR support to COVID-19 response and recovery through five country teams. Further information on the three thematic work areas and work area in supporting country responses are provided on the [COVID hub webpage](#). There has been more recent work on Work Areas 2, 3 and 4 in the past quarter and so these have more detail in this brief.

Work Area 1: Value Chain Fractures

Work Area 1 completed four studies in 2021:

1. Pivoting in response to COVID-19 disruptions in the midstream of [potato and fish value chains in Kenya](#),
2. Adaptation to COVID-19 effects on rice, fish, and potato value chains in Bangladesh,
3. The role of digital platforms in maintaining the functionality of vegetable, root and tuber crop value chains in the face of COVID-19, and
4. Maintaining agri-food value chain flows during the pandemic: The procurement of produce and its impact on food security in Odisha, India.

The studies in Kenya and Bangladesh were presented in a [webinar](#) in late November. Working and synthesis papers based on these studies are forthcoming, and research from these studies, along with other work from the CGIAR COVID-19 Hub, will contribute to a second version of the e-book from the International Food Policy Research Institute on COVID-19 and global food security that will be published in early 2022.

Work Area 2: One Health

Work Area 2 used a One Health approach to provide policy recommendations and address urgent issues related to agriculture's role in spreading zoonoses and how to avoid future crossover events. Its three sub-working groups focused on cross-over, epidemiology, and economic and health modeling.

1. Wildlife value chains in Vietnam: Production, trade and management policies. Findings showing COVID-19's mixed impacts on wildlife conservation were discussed in national policy meetings. Increased political will among policymakers and more bilateral agreements to help fund wildlife conservation are positive signals, but illegal wildlife trade in Vietnam remains prevalent. Learn more [here](#), [here](#), and [here](#).
2. Surveillance and monitoring of interspecies transmission of COVID-19 in Vietnam using a One Health approach: A survey identified pan-coronavirus in bats and other wildlife species, pigs and humans. In Lao Cai province, five out of 108 bat fecal samples from four caves were positive for pan-coronavirus.
3. Seroprevalence study of COVID-19 antibodies in households and slaughterhouse workers in Kiambu County, Kenya: The study revealed the proportion

of seropositive slaughterhouse workers (63 percent) was significantly greater than the seropositive participants in the community (46 percent), suggesting slaughterhouse workers are more exposed to COVID-19 than other members of the community.

4. Land cover change and transmission of Ebola virus and other zoonotic pathogens in Guinea: This study identified methods and tools for using drones to provide data on land change and use to inform analyses of disease emergence and transmission of zoonotic pathogens.
5. A progress/activity report in collaboration with other initiatives in Bangladesh: The report found that fish farmers, researchers and policymakers are integrating a One Health approach into aquatic farming system activities.
6. Epidemiological and macroeconomic modelling of COVID-19 impacts: A review assessed the potential for existing approaches to enable a better assessment of the pandemic's impacts on equity.
7. Managing wildlife value chain risks and benefits in Asia and Africa: A brief will inform policies that balance zoonotic risk reduction in meat/animal value chains and livelihood protection and food security.
8. Typology for assessing risk and interventions for pathogen transmission at the wildlife-livestock-human interface: A literature review shows a range of zoonotic transmission pathways, species, risk factors and perceptions and behaviors, as well as mitigation strategies.

Work Area 3: Support Country COVID-19 Responses

Work Area 3's activities responded to demand and supported national partners in the Hub's focus countries, Bangladesh, Ethiopia, Nigeria, Malawi and Myanmar, where researchers employed rapid diagnostics to identify contextual preferences and needs unique to each country in response to COVID-19.

Drawing on the results of diagnostic assessments:

- In Bangladesh and Ethiopia, digital platforms to be used by national governments were established,
- In Myanmar, critical studies on resilience and value chain transformation were undertaken,

- In Malawi, economic modeling of the impact of COVID-19 on the national economy was undertaken and demonstration plots for climate-resilient technologies were established, and
- In Nigeria, initiatives were implemented to improve access to quality seeds and planting materials, foster policy engagement, and train women and youth to support nutrition and income generation.

Country team results and main lessons learned were shared in a December [webinar](#). The COVID-19 Hub's support to countries can be built upon by CGIAR for more systematic collaboration with national partners through coordination hubs at country and regional levels. Such capacity is important in supporting countries with research and evidence as they respond to a variety of crises.

Work Area 4: Food System Resilience

In 2021, Work Area 4 undertook six innovative studies to harness knowledge to design better emergency responses, support recovery efforts, and build resilience. These studies were done to complement and were coordinated with studies in the other work areas.

1. The role of crisis governance in mitigating food system risks: Lessons from the COVID-19 pandemic in five low- and middle-income countries.
2. One Health: Improving surveillance and incentives in detecting future emerging diseases.
3. A literature review on the impacts of COVID-19 on the food environment.
4. The effects of diversification on food system resilience.
5. The role of urban-rural relations in building food system resilience.
6. Preparing for the unexpected in complex dynamic agri-food systems.

While publication of the studies is forthcoming, the key findings and recommendations were assembled in a [background document](#) prepared for Work Area 4's [final webinar](#), held in December. The webinar presented a review of the work and outputs, and participants discussed lessons for future research.