

## Research brief: Analysis of policy responses to seed, fertilizer, food and fuel shocks in three African Regional Economic Communities

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### Abstract


The COVID-19 pandemic and the ongoing Russia-Ukraine war had severe implications for global

food security and nutrition. It was feared that food systems would be impacted negatively, especially food, seed, fertilizer, and fuel quantities required for agricultural production. The study aimed to ascertain the extent to which calls to action by AU policy organs, as well as recommendations by experts, to mitigate possible effects of the COVID-


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19 pandemic, were implemented at the national level across three of the five regional economic communities and whether they yielded any tangible impacts. The study conducted a desk review of literature and key informant interviews in 18 African countries. We found a wide range of variations in terms of country responses to the pandemic. Countries in the East African Community focused more on expanding targeted social protection programs, Economic Community of West African States countries focused more on supporting smallholder farmers and digital agriculture, and the Southern African Development Community focused on budgetary stimulus packages. We found a lack of coherence in responding to the crisis within each region to improve the supply and distribution of food, seed, fertilizer, and fuel; thus, necessitating an immediate and aggressive implementation of strategies aligned with continental and regional policy resolutions and recommendations.

## Keywords

seed, fertilizer, food, fuel, COVID-19, pandemic, Africa, national food policy, regional economic communities

## Abbreviations

African Union.....	AU
African Union Commission .....	AUC
Economic Community of West African States .....	ECOWAS
Food and Agriculture Organization of the United Nations.....	FAO
Regional Economic Communities .....	RECs
International Fund for Agricultural Development.....	IFAD
Southern Africa Development Cooperation.....	SADC
United Nations Children Fund.....	UNICEF
United Nations Economic Commission for Africa .....	ECA
World Food Program.....	WFP
World Health Organization.....	WHO

## Introduction

Food insecurity and malnutrition in Africa have persisted for decades despite reportedly improved

economic growth and performance of the agriculture sector. The *Africa Regional Overview of the State of Food Security and Nutrition 2021* report (FAO et al., 2021) notes that Africa is not on track to meet Sustainable Development Goal (SDG) 2 (“End hunger, achieve food security and improved nutrition and promote sustainable agriculture”) by 2030, with only 11 countries having less than 10% prevalence of undernourishment. The *State of Food Security and Nutrition in the World 2022* report (FAO et al., 2022) paints an equally worrying picture for Africa as it shows that hunger continues to rise, albeit at a slow pace.

The COVID-19 pandemic and the Russia-Ukraine war threatened food security and nutrition around the world (Ben Hassen & El Bilali, 2022; United Nations, 2020). The overlapping crises affected food, fertilizer, and fuel prices. Jaacks et al. (2021) report that the extended COVID-19 lockdown impacted Indian farmers’ ability to sell their crops and livestock products and decreased daily wages and dietary diversity. The pandemic is also reported to have negatively impacted food production systems and supply chains (Alam, 2021; Nchanji & Lutomia, 2021). It worsened the economies of countries already suffering other economic downturns such as South Africa (declining sovereign credit rating), Tanzania (significant fall in stock exchange), Angola (sharp decline in oil prices), and Zambia (facing mounting foreign debts of up to US\$11.2 billion) (Golubski & Schaeffer, 2020). The Russia-Ukraine war also is seen to have threatened economies. Its impact is being felt in dramatic consumer price hikes of major farming inputs, including fertilizer, seeds, and fuel for mechanized agriculture.

The widespread international border closures and travel restrictions following the COVID-19 outbreaks led the African Union and its partners to convene an extraordinary meeting of African Ministers of Agriculture, held virtually on April 16, 2020. The meeting came out with a declaration (AU & FAO, 2020) urging AU member states to ensure that “farmers have timely access to quality equipment and crop inputs, including seeds and planting material” (p. 5). A policy brief on input supply chains strongly recommends subsidies on inputs, among others (FAO & AUC, 2020c).

The follow-up Joint Conference of Ministers of Agriculture, Ministers of Trade, and Ministers of Finance was convened on July 27, 2020. It concluded with the “Joint Ministerial Declaration and Agenda for Action,” which made bold commitments including a call to AU member states to provide smallholder farmers with “access to quality agricultural equipment and inputs, including seeds, planting materials, breeding stocks, fertilizer, veterinary products, animal feeds, and access to pasture, while ensuring sustainable management of natural resources and conservation of biodiversity for food and agriculture” (AU & FAO, 2020, p. 5).

The goal of this study is to assess whether or not member state governments took actions on the bold, high-level commitments made nearly three years ago. Based on a comparative analysis of policy responses in food, fertilizer, and fuel in three of Africa’s Regional Economic Communities (RECs)—Eastern African Region (the East African Community and other countries in the Horn of Africa), Economic Community of West African States (ECOWAS) and Southern Africa Development Cooperation (SADC)—the study aims to establish the extent to which member states responded with policies to mitigate the effects of the COVID-19 pandemic, the Russian-Ukraine war, and other recent shocks causing hikes in prices and scarcity of food, fertilizer, and fuel. It is necessary to ascertain if the policy recommendations and calls for action by AU policy organs and experts (through policy briefs) were implemented, and if so, if they were impactful. Desired outcomes of this study are to (a) highlight important lessons learned in mitigating the crisis; (b) influence policy formulation or adjustments with regard to responding to ongoing crises or taking preventive actions ahead of the outbreak of a crisis; and (c) share experiences and lessons across countries and regions.

## Methodology

The study followed a two-track approach: a desk review of literature and key informant interviews. The literature review examined how countries in the three RECs under study responded. It also looked at whether they implemented measures to mitigate the effects of the overlapping crisis of COVID-19, the Russia war on Ukraine, and recur-

rent climate-related challenges. The focus of the desk review was on inputs and food supply, imports and exports, social protection, markets, including regional spillover effects and distribution channels, and labor supply. The key informant interviews examined the differences in national and regional perceptions (Eastern Africa, Southern Africa, and Western Africa).

Twenty-five purposefully selected key informants from 22 countries were interviewed. Interviewees were senior policy-level position holders (56%) and those who played planning and monitoring roles (36%) in government, intergovernmental, parastatal, and academic and research institutions. The majority (92%) of the respondents were knowledgeable and competent to provide the needed information. However, the rest of the respondents were excluded from the sample because they indicated that they could not provide the needed information. The purpose of the key informant interviews was to corroborate the review of literature.

## Key Findings and Discussion

### *An Overview on the Impact of the COVID-19 Pandemic and the Russia-Ukraine War and Country Responses*

African countries responded in various ways to the anticipated effects of the COVID-19 pandemic and the Russia-Ukraine war (ECA, 2020). South Africa, for instance, implemented a program of cash transfer to low-income households, which was expected to provide critical support to the most vulnerable populations during the crisis imposed by the pandemic and protracted lockdown (Arndt et al., 2020). However, it is yet to be ascertained whether the program resulted in any impact at all. In Ethiopia, Geda (2021) projected that the COVID-19 pandemic was likely to stretch the macroeconomic balance of the country, which was already “in a precarious condition” (p. 23) prior to the pandemic’s onset. Among the possible socioeconomic effects are unemployment and poverty. Pape et al. (2021) concluded that the “pandemic has had a strong impact on the livelihoods of Kenyan households” (p. 2). Onsomu et al. (2021) determined that Kenya, a country in which tourism

contributes substantially to its GDP, was worst hit by the pandemic compared to other selected industries without smokestacks (IWOSS) (Onsomu et al., 2021). The tourism sector contracted by 83.3%, with total tourism revenue losses estimated at 297.2 million dollars, including at least US\$3.60 million in park entry fees alone (Onsomu et al., 2021). Other affected sectors included horticulture; information communication and telecommunication (ICT), and youth employment (Onsomu et al., 2021).

In Nigeria, the United Nations Development Program (UNDP, 2021) reports that at least two-thirds of businesses had to close down during the pandemic. The report also outlined five different impact areas: operations; production and capacity utilization; sales, revenue, and finances; workforce; and perceptions of business owners regarding the future of their enterprises. Balana et al. (2020) reported that as a result of restricted movements imposed to curb the spread of COVID-19, on-farm activities were reduced, with 24% of farmers reporting that they reduced fertilizer application, leading to low crop productivity and production, especially of staples highly dependent on fertilizer. A study conducted in Ghana and Nigeria by Ojokoh et al. (2022) reported that the extensive lockdowns caused scarcity in farming inputs such as planting materials, agrochemicals and fertilizers, badly affecting the livestock and fish farming subsectors.

In Tanzania, the impact of the COVID-19 pandemic fell heavily on smallholder farmers, with 85% experiencing an income reduction, thus increasing the vulnerabilities of affected communities (Mugabe et al., 2022). A study by Ssempebwa et al. (2022) reported that 8% of young people in Uganda had their sources of livelihoods affected due to the increase in prices of farming and business inputs. The UNDP (2020) reported disruptions in the supply of farm inputs for both crops and animals in Uganda, which are attributed to the effects of the stringent COVID-19 restrictions on the supply of agricultural labor, technical services, and the supply of inputs, such as improved seed, fertilizer, veterinary medicines, animal and fish feed, insecticides, and pesticides. Fall et al. (2022), quoting Van Hoyweghen et al. (2021) and Sánchez et al. (2020), reported that the agriculture produc-

tion sector in Uganda and Senegal experienced strains due to low access to inputs like seeds and fertilizers, as well as the availability of labor. Nolte et al. (2022) reported accessing farming inputs being a challenge to more than 10% of respondents in Burkina Faso, Ethiopia, Uganda, and Zambia.

To mitigate the effects of the COVID-19 pandemic and other economic and livelihoods shocks on poor and small-scale farming communities, a number of institutions, academics and researchers recommend policy adjustments, apart from those made by AU policy organs. Erinle et al. (2021) outline six such policy areas: (a) establishment of community-based food networks, (b) food and agriculture data collection and maintenance, (c) stabilization of food prices, (d) infrastructural development for food security, (e) increased investment in agricultural research and policies, (f) adoption of modern farming practices, and (g) reduction and management of agricultural and food waste. Some governments in Africa played their part in implementing the measures, either through their own initiative or in alignment with the universal recommendations. For instance, Nyirenda et al. (2021) report that in the 2020–2021 farming season, the government of Malawi replaced the Farm Inputs Supply Program (FISP) with the Affordable Inputs Program (AIP), with the aim of achieving food security, improving nutrition, and reducing poverty by increasing farmers' access to improved inputs (fertilizer, hybrid maize seed packs and open-pollinated variety (OPV) maize, sorghum or rice) at reduced prices. In The Gambia, the International Fund for Agricultural Development (IFAD, 2020) reported supporting rural farming communities with seed and fertilizer, among other needs, in an effort to boost the resilience of the rural populations (Ojokoh et al., 2022).

Besides the financial and material support to small-scale farmers, digital technology (mobile communication and applications), although limited in rural areas, was used to gather information. This practice became a strategy to cope with limited physical movements after the imposition of the curfew. For example, in Tanzania, 20% of smallholder farming households surveyed reported having used digital information technology (electronic

tablets and mobile phone handsets) during the peak of the pandemic to gather information since physical movements were restricted, although Tanzania did not impose a total lockdown (Mugabe et al., 2022).

### ***Perceptions of Key Informants Regarding Country Responses to the Shocks***

An overwhelming majority of respondents (84%) reported that governments made some policy responses to the crisis and initiated input supply programs to mitigate the prevailing crisis. Food crops were targeted in governments' response to the crisis, which is a laudable action due to its effect on weakening food insecurity during the crisis. However, it was also reported that this action was not taken countrywide but in specific locations or parts of each country, mainly because they were determined to be food-deficit regions.

Among the respondents interviewed about the sources of farm inputs, they identified various sources: 28% mentioned warehouses, 44% cited local markets, and 48% referred to imports (respondents could choose more than one source). A reliable strategy would be to stock a large proportion of the inputs in warehouses rather than depending on imports, which would drain foreign reserves and weaken economies. Government (80%), foreign donation (24%), and internal aid (12%) combined as the sources of the payments for the inputs and food supplied to curb the effects of the crisis. The inputs and food supplied were mostly delivered through direct public distribution systems (72%), followed by digital platforms (16%), including web-based mediums and phone-based reporting (12%), indicating that information communication infrastructure and systems were still not commonly used across the continent to reduce delays and the costs of travel. Conventional paper-based reporting was the dominant method (68%) for tracking and monitoring progress in the distribution of inputs, while phone-based and digital platforms came in a distant second (12%).

About half of the key informants (48%) reported that governments introduced market reforms to inputs in order to mitigate the crises, which was one of the calls for action by the ministers of trade of the AU in their July 27, 2020, meet-

ing. They were reported to have come in the form of price adjustments (38.5%) and subsidies (77%). This government intervention reflects the importance of market reforms for a functioning food system that guarantees both food sovereignty and food security.

Over half (56%) of the respondents reported that governments initiated food supply programs to mitigate the COVID-19 effect. Just under two-thirds (62.5%) of the respondents reported that food was supplied to specific locations or parts of the country considered to be food-deficit. Governments depended more on markets and imports to secure food for the vulnerable population in preparation for and during an emergency. According to the respondents, government food aid came from national food reserves (41.2%) and local markets/imports (58.8%). This indicates a need to build national food-reserve management institutions, capacities, and systems. It also calls for developing harmonized continental, regional, and national strategies that target increased food storage capacities and equity in developing new food reserve infrastructure, taking advantage of recent technological advances.

A majority of the respondents (60%) perceived that governments made very limited efforts, while 36% thought governments made commendable efforts. Fifty-six percent reported the existence of coordination mechanisms (institutional setups and reporting mechanisms) for governing their response to the crisis.

### ***State Response to July 2022 Joint Declaration and Agenda for Action***

About half of the respondents reported that governments responded well to the call for opening food and agriculture input markets and supply chains. The majority of respondents (ranging from 60% to 84%) agreed that governments took affirmative action toward mitigating the crisis through support to smallholders and the private sector, expanding social protection programs, and promoting innovative digital agriculture to increase productivity and production.

About half of the respondents agreed that governments took some actions to operationalize essential food trade corridors and reduce custom

duties on food products. The majority of respondents reported that they were aware of governments keeping domestic food markets operational in support of consumers and producers. ECOWAS countries equally reduced customs duties on food products and kept domestic food markets operational. The eastern Africa region more effectively operationalized food trade corridors compared to the other RECs, but all the three RECs did well in keeping domestic food markets operational to support consumers and producers.

Half of the respondents (52%) reported that governments made favorable financial decisions to help their countries (especially private investors) recover from the effects of the recent crisis on food systems. These measures included mobilizing additional external resources to supplement domestic and private sector resources, increasing the share of direct sovereign wealth funding for investment in agriculture, and encouraging financial institutions to use guarantees and refinancing mechanisms. About a third of the respondents reported that governments took other appropriate financial measures.

## Conclusion

Our data analysis showed that member states responded variably to the crisis. While there were some attempts by AU member states to respond to the crisis, a significant number of countries were yet to implement the AU 2020 Call for Action. Indeed, only about a third of the respondents thought that governments made a commendable effort to mitigate the potential effects of the crisis.

A key takeaway from this study is that the selected regions responded to the effects of the COVID-19 pandemic and the Russia-Ukraine war on food systems, agri-food inputs (seeds, fertilizer and fuel), and food supplies to varying degrees. The Eastern Africa region did well in expanding and improving social protection programs for income support to enable food production and market access. ECOWAS provided a range of activities to support smallholder producers, promoting innovation and digital agriculture technology and supporting the private sector in accessing investment finance. The level of response to the crises in the SADC region was generally low.

The findings show that there was no coherent intervention from RECs or the mandated continental organizations in the form of an immediate and aggressive strategy to support member states in developing action plans that would have been coherent with the continental policy recommendations and commitments, which in fact were made by the member states themselves. Overall, the findings seem to point to a relatively low level of response in the SADC region based on the recommendations of the ministers responsible for agriculture, trade, and finance. This does not mean that no responses were made, but that responses in the SADC region were weaker than those in Eastern Africa and ECOWAS.

Furthermore, our analysis indicates that key informants were dissatisfied with the responses to both the COVID-19 pandemic and the ongoing Russia-Ukraine war. Additional studies will be required to establish the impact of the responses. In this case, the ultimate beneficiaries, including smallholder farmers and vulnerable groups, will need to be the respondents.

## Recommendations

Based on the findings outlined above, three recommendations can be made for continental and regional actors and member states, and also for CGIAR's National Policies and Strategies for Food, Land and Water Systems Transformation (NPS).

1. The African Union Commission and AUDA-NEPAD, working in close collaboration with RECS development partners, should:
  - Increase the capacity and develop a strategy for supporting member states to develop coherent and harmonized agri-food systems and livelihood resilience action plans. This is consistent with a recommendation in FAO and AUC policy brief (FAO & AUC, 2020b).
  - Develop and endorse an aggressive advocacy strategy for engaging with national leaders of member states to motivate the allocation of resources to implement the resolutions of the July 2020 Joint Ministerial Declaration, which point in the right direction for mitigat-

ing the effects of the crisis affecting food systems resilience on the continent. This is consistent with the policy brief on crop calendars and recommended actions during the COVID-19 period (FAO & AUC, 2020a).

## 2. Member states should:

- Pay special attention to strengthening the inputs and food supply subsectors as the critical area of intervention for effective mitigation of the crisis. In doing so, Africa can achieve food sovereignty, meet the goal of tripling intra-African trade in agricultural and food commodities, and reduce unnecessary food imports. This is consistent with the policy brief on safeguarding input supply chains for small-scale agricultural producers (FAO & AUC, 2020c).

## 3. CGIAR's NPS and other policymaking institutions should:

- Use the evidence from this study and other relevant information to develop policy briefs

that provide AU member states with policy recommendations for action.

- Use the findings of the study as a basis for conducting a larger study to establish the impact of the response interventions.



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## References

- African Union [AU] & Food and Agriculture Organization of the United Nations [FAO]. (2020, April 16). *Declaration on food security and nutrition during the COVID-19 pandemic*. <https://au.int/en/documents/20200427/declaration-food-security-and-nutrition-during-covid-19-pandemic>
- Alam, G. M. M. & Khatun, M. N. (2021). Impact of COVID-19 on vegetable supply chain and food security: Empirical evidence from Bangladesh. *PLoS ONE*, 16(3), Article e0248120. <https://doi.org/10.1371/journal.pone.0248120>
- Arndt, C., Davies, R., Gabriel, S., Harris, L., Makrelov, K., Modise, B., Robinson, S., Simbanegavi, W., van Seventer, D., & Anderson, L. (2020). *Impact of Covid-19 on the South African economy: An initial analysis* (SA-TIED Working Paper 111). International Food Policy Research Institute (IFPRI). <https://sa-tied.wider.unu.edu/sites/default/files/pdf/SA-TIED-WP-111.pdf>
- Balana, B. B., Oyeyemi, M. A., Ogunniyi, A. I., Fasoranti, A., Edeh, H., Aiki, J., & Andam, K. (2020). *The effects of COVID-19 policies on livelihoods and food security of smallholder farm households in Nigeria: Descriptive results from a phone survey* (IFPRI Discussion Paper 1979). IFPRI. <https://doi.org/10.2499/p15738coll2.134179>
- Ben Hassen, T., & El Bilali, H. (2022). Impacts of the Russia-Ukraine War on global food security: Towards more sustainable and resilient food systems? *Foods*, 11(5), Article 2301. <https://doi.org/10.3390/foods11152301>
- Erinle, K. O., Ogwu, M. C., Evivie, S. E., Zaheer, M. S., Ogunyemi, S. O., & Adeniran, S. O. (2021). Impacts of COVID-19 on agriculture and food security in developing countries: Potential mitigation strategies. *CABI Reviews*. <https://doi.org/10.1079/PAVSNNR202116016>
- Fall, A. F., Ndiaye, A., Owasa, A. H., & Ssekandi, J. (2022). Consequences of COVID 19 measures on food systems: The case of Senegal and Uganda. *ISABB Journal of Food and Agricultural Sciences*, 11(1), 1–9. <https://doi.org/10.5897/ISABB-JFAS2021.0160>
- Food and Agriculture Organization of the United Nations [FAO] & African Union Commission [AUC]. (2020a, April 12). *Crop calendars and recommended actions during the Covid-19 outbreak in the Africa region* [Policy brief]. <http://www.fao.org/3/ca8632en/ca8632en.pdf>



- FAO & AUC. (2020b, April 12). *Measures for supporting domestic markets during the COVID-19 outbreak in Africa* [Policy brief]. <http://www.fao.org/3/ca8636en/ca8636en.pdf>
- FAO & AUC. (2020c, April 12). *Safeguarding input supply chains for small-scale agricultural producers in the context of COVID-19 in Africa* [Policy brief]. <http://www.fao.org/3/ca8635en/ca8635en.pdf>
- FAO, International Fund for Agricultural Development [IFAD], UNICEF, World Food Programme [WFP], & World Health Organization [WHO]. (2022, July 6). *The state of food security and nutrition in the world 2022: Repositioning food and agricultural policies to make healthy diets more affordable*.
- FAO, United Nations Economic Commission for Africa [ECA], & AUC. (2021). *Africa—Regional overview of food security and nutrition 2021: Statistics and trends*. FAO. Retrieved from <https://www.fao.org/documents/card/en/c/cb7496en>
- Geda, A. (2021). *The macroeconomic and social impact of COVID-19 in Ethiopia in the global context* (UNCTAD Research Paper No. 75). United Nations Conference on Trade and Development (UNCTAD). <https://unctad.org/publication/macroeconomic-and-social-impact-covid-19-ethiopia-global-context>
- Golubski, C., & Schaeffer, A. (2020). *Africa in the news: Impacts of COVID-19 on African economies and elections updates* [Commentary]. Brookings Institution. <https://www.brookings.edu/blog/africa-in-focus/2020/04/04/africa-in-the-news-impacts-of-covid-19-on-african-economies-and-elections-updates/>
- International Fund for Agricultural Development [IFAD]. (2020, May 27). *Mitigating the impact of COVID-19 on small-scale agriculture in The Gambia*. <https://www.ifad.org/en/web/latest/-/story/mitigating-the-impact-of-covid-19-on-small-scale-agriculture-in-the-gambia>
- Jaacks, L. M., Veluguri, D., Serupally, R., Roy, A., Prabhakaran, P., & Ramanjaneyulu, G. V. (2021). Impact of the COVID-19 pandemic on agricultural production, livelihoods, and food security in India: Baseline results of a phone survey. *Food Security*, 13, 1323–1339. <https://doi.org/10.1007/s12571-021-01164-w>
- Mugabe, P. A., Renkamp, T. M., Rybak, C., Mbwana, H., Gordon, C., Sieber, S., & Löhr, K. (2022). Governing COVID-19: Analyzing the effects of policy responses on food systems in Tanzania. *Agriculture & Food Security*, 11, Article 47. <https://doi.org/10.1186/s40066-022-00383-4>
- Nchanji, E. B., & Lutomia, C. K. (2021). Regional impact of COVID-19 on the production and food security of common bean smallholder farmers in Sub-Saharan Africa: Implication for SDG's. *Global Food Security*, 29, Article 100524. <https://doi.org/10.1016/j.gfs.2021.100524>
- Nolte, K., Sipangule, K., & Wendt, N. (2022). Agricultural households in times of crisis. The COVID-19 pandemic, livelihoods and land-use decisions. *Journal of Land Use Science*, 17(1), 134–160. <https://doi.org/10.1080/1747423X.2021.2020922>
- Nyirenda, Z., Chigaru, F., Nyondo, C., Khonje, M., Wineman, A., & Muyanga, M. (2021, June 1). *A rapid assessment of the implementation of the 2020/21 Affordable Inputs Program in Malawi* (Working Paper No. 21/04). MwAPATA Institute. <https://doi.org/10.22004/ag.econ.319863>
- Ojokoh, B. A., Makinde, O. S., Fayeun, L. S., Babalola, O. T., Salako, K. V., & Adzitey, F. (2022). Impact of COVID-19 and lockdown policies on farming, food security, and agribusiness in West Africa. In U. Kose, D. Gupta, V. H. C. de Albuquerque, & A. Khanna (Eds.), *Data science for COVID-19, Vol. 2: Societal and Medical Perspectives* (pp. 209–223). Academic Press. <https://doi.org/10.1016/B978-0-323-90769-9.00014-1>
- Onsomu, E., Munga, B., & Nyabaro, V. (2021, July). *The impact of COVID-19 on industries without smokestacks in Kenya: The case of horticulture, ICT, and tourism sectors*. Addressing Africa's youth unemployment through industries without smokestacks. African Growth Initiative, Brookings Institution. <https://coillink.org/20.500.12592/p65rp3>
- Pape, U. J., Delius, A., Khandelwal, R., & Gupta, R. (2021). *Socioeconomic impacts of COVID-19 in Kenya*. World Bank. <http://hdl.handle.net/10986/35961>
- Sánchez, M. V., Sousa, P., & Conti, V. (2020, April 24). *COVID-19 global economic recession: Avoiding hunger must be at the centre of the economic stimulus*. FAO. <http://www.fao.org/3/ca8800en/CA8800EN.pdf>
- Ssempebwa, J., Ntege, J., Mukuna, T. E., & Tesfaye, A. (2022, May). *The socio-economic impact of COVID-19 on young people in Uganda*. Organization for Social Science Research in Eastern and Southern Africa (OSSREA).
- United Nations. (2020, June). *Policy brief: The impact of COVID-19 on food security and nutrition*. <https://unsdg.un.org/sites/default/files/2020-06/SG-Policy-Brief-on-COVID-Impact-on-Food-Security.pdf>



- United Nations Development Program [UNDP]. (2020, June). *Analyses of the socio-economic impact of COVID-19 in Uganda* [Policy brief]. United Nations in Uganda.  
<https://www.undp.org/sites/g/files/zskgke326/files/migration/africa/UNDP-rba-Uganda-Covid-Policy-Brief.pdf>
- UNDP. (2021). *The impact of COVID-19 on business enterprises in Nigeria*.  
<https://www.undp.org/nigeria/publications/impact-covid-19-business-enterprises-nigeria>
- United Nations Economic Commission for Africa [ECA]. (2020, October). *Economic and social impacts of COVID-19 in Eastern Africa 2020* [Abridged version]. [https://www.uneca.org/sites/default/files/SROs/Eastern-Africa/ICSOE-24/edited-srp\\_english\\_covid-19\\_abridged\\_version.pdf](https://www.uneca.org/sites/default/files/SROs/Eastern-Africa/ICSOE-24/edited-srp_english_covid-19_abridged_version.pdf)
- Van Hoyweghen, K., Fabry, A., Feytaerts, H., Wade, I., & Maertens, M. (2021). Resilience of global and local value chains to the Covid-19 pandemic: Survey evidence from vegetable value chains in Senegal. *Agricultural Economics*, 52(3), 423–440. <https://doi.org/10.1111/agec.12627>