

REGIONAL DEVELOPMENTS

AS THE CORONAVIRUS PANDEMIC REACHED EVERY CORNER OF THE WORLD IN 2020, countries responded rapidly with an array of policies to stop the spread of the highly contagious disease, and then with social and economic policies to protect food security, incomes, and livelihoods. This experience brought attention to weaknesses in health, economic, and social protection systems. But it also showcased new innovations, policy approaches, and the surprising resilience of food systems. The diverse experiences of the world's major regions have important lessons for creating sustainable, equitable, efficient, healthy, and resilient food systems. The impact of COVID-19 on food systems, wellbeing, and future transformation is examined for each major region:

- Unprecedented scale-up of social protection programs in Africa south of the Sahara
 - Falling household incomes for rich and poor in the Middle East and North Africa
 - Central Asia's risky reliance on remittances
 - Impacts of South Asia's stringent lockdowns on migrant and informal labor
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Africa south of the Sahara has so far escaped the direst health impacts of the coronavirus pandemic, but short-term policy responses and the global slowdown have had major impacts on growth, value chains, incomes, trade, poverty, and consumption. The medium- to long-term impacts on nutrition and health will depend on the rate of recovery. To build greater resilience to future shocks, African countries will need to take a food systems approach to agrifood policy planning and implementation that includes better anticipation of risks and preparedness for shocks. They must also find ways to expand limited fiscal resources to make investments that embrace inclusion and promote good governance and accountability in all parts of the system.

SHORT-TERM IMPACTS OF COVID-19

The health effects of the COVID-19 pandemic in Africa south of the Sahara have been less severe than first anticipated given the region's overall fragility. With 14 percent of the world's population, Africa had reported less than 5 percent of global confirmed cases of COVID-19, and about 89,000 pandemic deaths as of the end of January 2021.¹ Although there may be some underreporting of cases and deaths, there is growing evidence that the low death rate is largely explained by Africa's sizable young population, along with other factors including climate, genetics, and behavioral differences.²

However, as in other regions, governments across Africa implemented a variety of lockdown policies in early 2020 to combat the spread of the virus. These policies varied in terms of their geographic coverage (many were restricted to outbreak-affected urban areas, but some applied nationwide), the types of socioeconomic activities that were restricted (based on essential versus

nonessential classifications), the start of the lockdowns (mostly in March, with Rwanda being the first, but some, including Botswana, Eritrea, and Malawi, not until April), and their duration (ranging from two to three weeks in Malawi to nearly three months in South Africa). These measures had substantial impacts on economic growth, poverty, and other key socioeconomic indicators. In general, lockdown periods coincided with the agricultural seasons in central, eastern, and western Africa, but began at the end of the season in southern Africa.

Protests over lockdowns broke out in a number of countries and hint at how the public perceived their respective governments' motivations for the lockdown policies – for example, to prolong power or quash opposition (Malawi and Ethiopia) or to target certain social groups (Uganda). Public outcry over lack of evidence to support the policies, as well as violent attacks on citizens by security forces enforcing the lockdown policies, which led to deaths in countries including Kenya and South Africa, contributed to modification or reversal of the policies in a number of countries.³

Several ex ante analyses of the short-term impacts of Africa's lockdown policies, conducted and updated throughout 2020, projected an economic recession, interrupting nearly 25 years of sustained economic growth in the region.⁴ Estimates of the contraction in 2020 GDP for Africa as a whole range from 1.7 percent under a baseline scenario (mild spread of the disease in the first half of 2020, with lockdowns ending by the middle of the year) to as much as 5.1 percent under a catastrophic scenario (severe spread of the disease with a high number of cases and lockdowns extending beyond the middle of 2020).⁵ The drop in GDP stems in part from the contraction of global demand for the primary commodities produced by African countries, as global production, travel, and trade were disrupted.⁶

Household incomes also fell as a result of reduced employment during lockdowns and reduced remittances from outside the region. Country-level economy-wide models show declines in household income in a number of countries, and GDP losses ranging from 9.7 percent in Mali to 38.0 percent in Rwanda (Figure 1).⁷ Phone surveys of households and firms in the food supply chain conducted in late 2020 in Burkina Faso, Ethiopia, and Nigeria confirm these modeled impacts and pathways, for example, showing employment and income losses as firms closed their operations.⁸

In terms of food systems, disruptions in value chains and informal urban trade caused shortages and higher food prices, as observed, for example, in Rwanda and the Democratic Republic of the Congo.⁹ Overall, food shortages were caused by closure of wet markets, restrictions on street vendors, and buying frenzies and hoarding ahead of the lockdowns. Studies from Ethiopia show there have been differences in the impacts across value chains. Although Ethiopia's food value chains in the aggregate may have been resilient to the pandemic shock,¹⁰ the dairy sector (especially raw milk vendors and small dairy shops) was hit hard as demand for its products slumped and prices of feed increased by 30 to 40 percent and those of veterinary services by 15 to 20 percent.¹¹

Lockdown measures, lost income, and perceptions of disease risk have increased poverty and altered diets. Increases in poverty rates during the lockdown range from 3.8 percent in South Sudan to 15.0 percent in Senegal (Figure 1), and for the region as a whole, extreme poverty is expected to increase by up to 2.8 percent, representing an additional 37.5 million people.¹² Phone surveys of households in Ethiopia show that consumption of raw or uncooked vegetables and dairy products declined due to fear of coronavirus transmission, but overall calorie consumption increased compared to pre-pandemic periods.¹³ Not surprisingly, the increase in calorie consumption was significantly greater among households that did not experience a loss in income than among those that did.

POLICIES AND OTHER RESPONSES

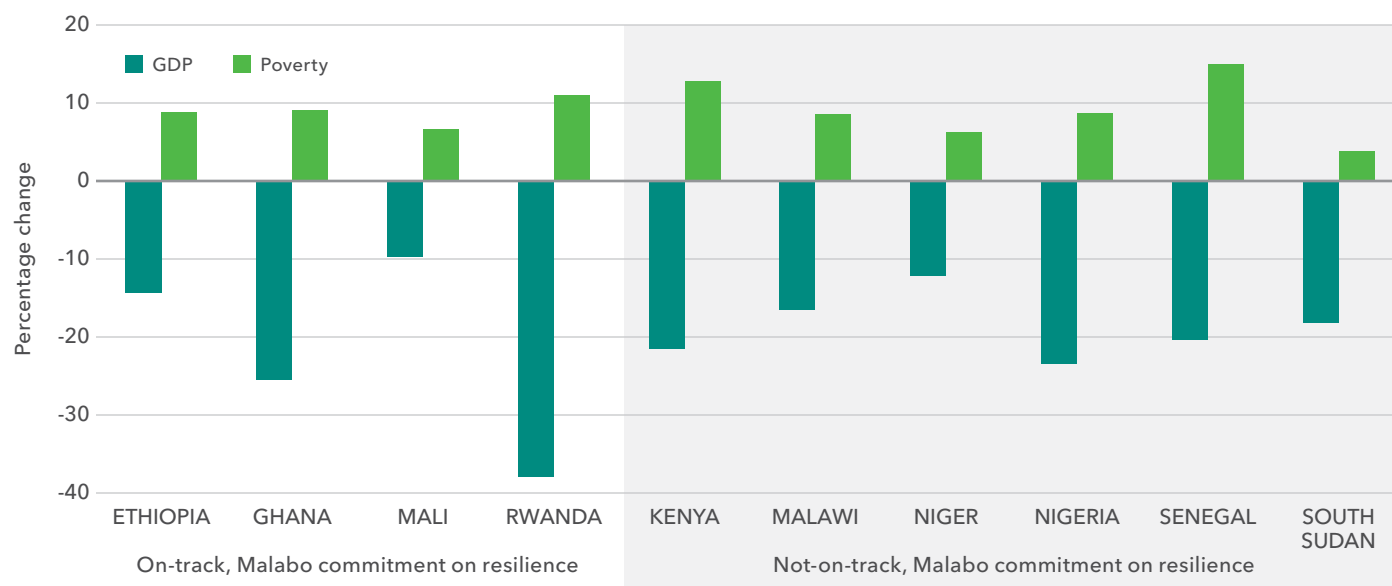
Beyond the lockdown strategies, governments across Africa also adopted macro-level policies – including

fiscal, monetary, exchange rate, and balance of payment policies – to mitigate the socioeconomic impacts of the pandemic and the health-related restrictions. For example, the West African Economic and Monetary Union (WAEMU) temporarily suspended its rule restricting countries' fiscal deficits to 3 percent of GDP in order to allow member states to increase their budget deficit ceiling.¹⁴ In addition to these macro-level instruments, there were supports targeted to specific sectors (for example, health, tourism and hotels, and agriculture), businesses (especially the informal sector), and households (especially the vulnerable and recently laid-off), including direct transfers to businesses and households. Other pandemic relief policies included reducing or fixing prices of inputs and grain as well as reducing, postponing, or canceling various tax payments, fees, and utility bills. Kenya offered complete tax relief to those earning less than 24,000 Kenyan shillings (US\$220) per month, Malawi allowed a six-month postponement of tax payments, and Rwanda fixed prices for essential pandemic-related commodities such as hand sanitizer, gloves, face masks, and fuel.¹⁵

Most notably, social protection programs were scaled up substantially. Estimates suggest cash transfer programs, for example, were reaching 11 percent of the population in African countries in July 2020, up from just 3 percent before the crisis.¹⁶ Despite this increase, the average coverage rate in Africa remains by far the lowest among developing regions, as the average coverage rate of cash transfer programs in response to COVID-19 has reached 38 percent across all developing regions. But Africa's rate of increase is the second highest, with countries including the Republic of the Congo, Guinea, Kenya, Mali, Togo, and Zimbabwe surpassing the average rate of increase for all developing countries.¹⁷

The cost of the various policies – in terms of higher government expenditure or foregone government revenue – is estimated at about \$38.5 billion or 2.4 percent of GDP for African countries.¹⁸ However, the flexibility of governments in their spending choices (termed fiscal space) appears limited, as the estimated liquidity support (equity injections, loans, asset purchase or debt assumptions) is less than 50 percent of the total cost, indicating potential for a future fiscal crisis in some countries, including Ethiopia, Ghana, Mali, and Senegal (Figure 2).¹⁹ The limited availability

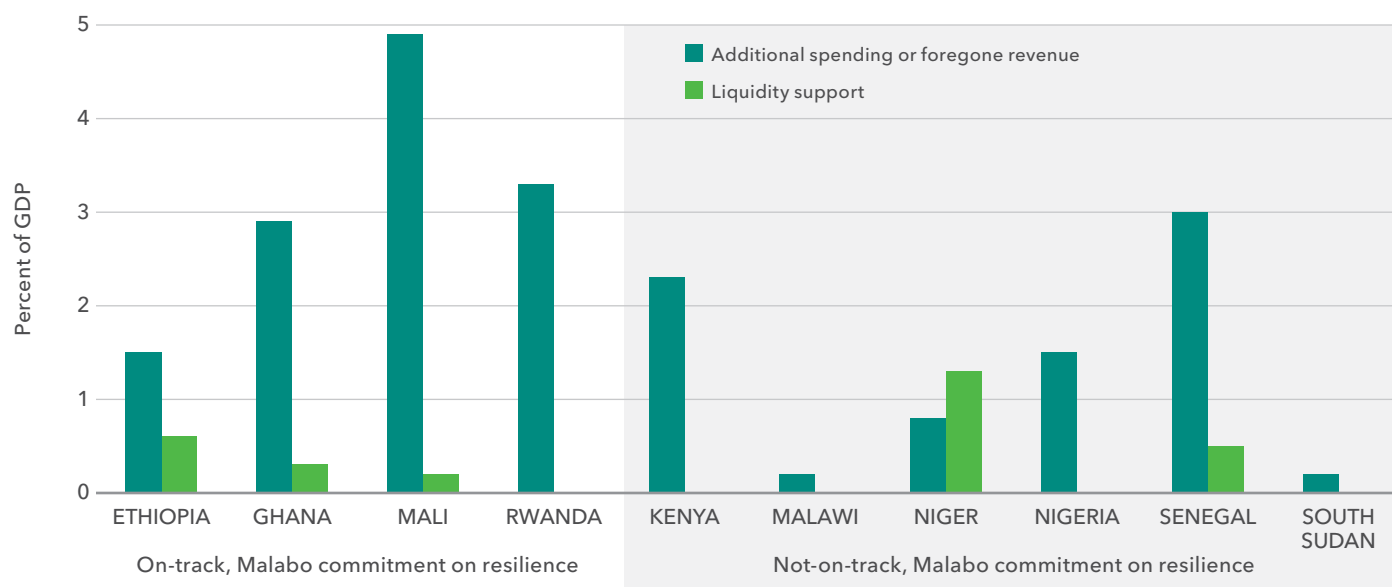
FIGURE 1 Impacts of pandemic lockdowns on poverty and GDP in selected African countries, 2020



Source: Based on S. Amewu et al., "The Economic Costs of COVID-19 in Sub-Saharan Africa: Insights from a Simulation Exercise for Ghana," *European Journal of Development Research* 32 (2020): 1353-1378; K.S. Andam et al., "Impacts of COVID-19 on Food Systems and Poverty in Nigeria," in *Advances in Food Security and Sustainability*, vol. 5, ed. Marc J. Cohen (Cambridge, MA: Elsevier, 2020); C. Arndt et al., "Covid-19 Lockdowns, Income Distribution, and Food Security: An Analysis for South Africa," *Global Food Security* 26 (2020): 100410; African Union Commission, *Second Biennial Review Report of the African Union Commission on the Implementation of the Malabo Declaration* (Addis Ababa: 2020).

Note: "Poverty" is the headcount poverty ratio. Changes in GDP (gross domestic product) and poverty are for the lockdown periods, which vary by country.

FIGURE 2 Fiscal measures in response to COVID-19 in selected African countries, 2020



Source: Based on African Union Commission, *Second Biennial Review Report of the African Union Commission on the Implementation of the Malabo Declaration* (Addis Ababa: 2020); IMF, "Fiscal Monitor Database of Country Fiscal Measures in Response to the COVID-19 Pandemic," October 2020.

Note: "Liquidity support" includes equity injections, loans, asset purchases, debt assumptions, and contingent liabilities; data are not available for Kenya, Malawi, Nigeria, Rwanda, and South Sudan.

of government fiscal resources to respond to such shocks is reflected in the region's slow progress toward achieving the Malabo Declaration commitments to enhancing resilience of livelihoods and production systems to climate variability and related risks.²⁰ Only nine countries (Burundi, Cabo Verde, Ethiopia, Ghana, Mali, Mauritania, Rwanda, Seychelles, and Uganda) are currently on-track to achieve their commitments.²¹ Governments of the on-track countries seem to have greater fiscal space to implement measures to deal with the pandemic, in terms of additional spending or foregone revenue (Figure 2).

Private sector responses to the pandemic have varied, depending on the industry or business sector, whether or not they are considered essential under the lockdown classifications, and the level of government support received. Invariably, a significant portion of firms suspended investments, laid off staff, reduced production, canceled orders, and terminated or renegotiated leases. Many adapted by changing their operational practices or their products and services. In the Democratic Republic of the Congo, for example, almost 10 percent of enterprises were forced to sell assets, close to 40 percent shifted some staff to telework, and 10 percent shifted to new business activities.²² Notable innovations in response to the pandemic are digital solutions in different sectors such as health, including rapid diagnostic testing kits, mobile testing booths, and online platforms linking patients to doctors; and trade, including mobile payment platforms for informal traders and online platforms for small and medium enterprises to sell their products.²³

TOWARD FOOD SYSTEM RESILIENCE AND TRANSFORMATION

The reach and effectiveness of these responses will determine the pace of recovery, as well as the extent to which the short-term effects persist into the medium and long term. The COVID-19 pandemic is just one of multiple shocks that have hit the continent in recent years – including the Ebola epidemic in Guinea, Liberia, and Sierra Leone in 2014; the fall armyworm invasion since 2017; and the locust infestation in eastern Africa in 2020. In addition, human population growth, growing demand for animal-sourced foods

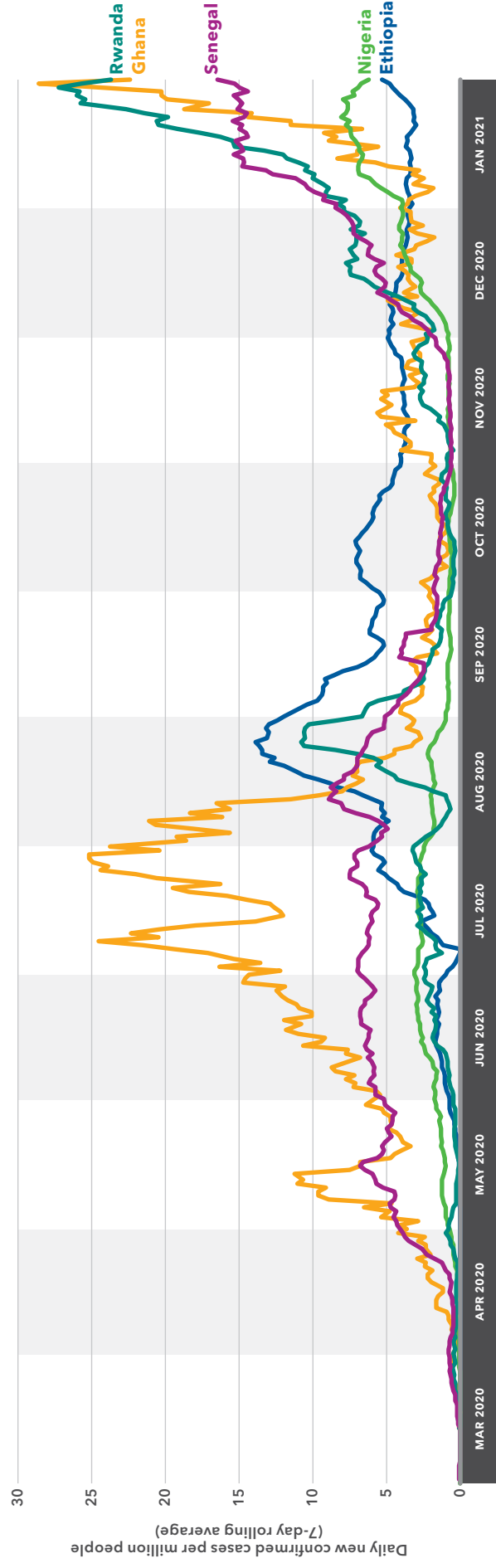
due to urbanization and rising incomes, and increasing travel connections with Asia are changing Africa in fundamental ways that also increase the risk of disease transmission from animals to people.²⁴

Given the region's vulnerability, ensuring that African countries are prepared to withstand future shocks will be central to the transformation of Africa's food systems. Accordingly, building resilience at all levels will require a food-systems approach to agrifood policy planning and implementation. Such an approach must be based on evidence from Africa's own situation and dynamics with respect to long-term issues for food system transformation such as climate and biodiversity, demography, urbanization, value chains, and trade. At the national level, this must include better anticipation of risks and preparedness for shocks, integrating budget lines for disaster preparedness and emergency response into medium-term expenditure frameworks, institutionalizing fiscal rules and stabilization funds for flexibility in managing shocks, and promoting good governance and accountability in all parts of the system.²⁵

As more frequent shocks, including those related to climate change, and subsequent emergency responses demand more of the public budget, increasing the efficiency of public spending will be critical. Investments should be ramped up in key areas for long-term productivity and growth – including investments in infrastructure, early warning and monitoring and evaluation systems, agricultural R&D and extension, education, and health. The investments must embrace inclusion, as shocks and policies for dealing with pandemics affect women, men, and children differently, particularly in rural areas.²⁶ Such investments for the long-term will help mitigate the impacts of shocks overall and facilitate more effective and efficient responses.

To increase these public investments, African governments must find sustainable ways to broaden their revenue base and increase the efficiency of revenue collection. One critical action will be supporting informal sector actors to transition into the formal sector. Enabling their access to technologies and financial facilities will help them to raise their productivity and business growth and increase employment, all of which will add to the available revenue needed for investment for the future.

AFRICA SOUTH OF THE SAHARA COVID-19 TIMELINE, MARCH 2020-JANUARY 2021



	MAR 2020	APR 2020	MAY 2020	JUN 2020	JUL 2020	AUG 2020	SEP 2020	OCT 2020	NOV 2020	DEC 2020	JAN 2021
LOCKDOWNS AND HEALTH MEASURES	- Rwanda, Kenya, Nigeria, Senegal, South Africa and others issue lockdown orders - Many countries close borders and ban flights - Ghana, Nigeria, and others ban public gatherings, close schools - South Africa's hospitals offer free testing - Ghana announces coronavirus response plan - Nigeria announces fund to upgrade healthcare infrastructure - Rwanda uses drones to deliver coronavirus information - Ghana locks down major metro areas, launches tracker app - Cameroon begins door-to-door testing - Ethiopia releases vulnerable prisoners - Zambia introduces targeted lockdown of Nakonde - Rwanda imposes targeted lockdown in Kigali - South Africa enters vaccine trial										
STIMULUS	- Ghana grants tax waiver for frontline workers - Rwanda receives IMF loan - Ghana launches support scheme for micro, small, and medium businesses - Rwanda announces Economic Recovery Fund - Zambia issues COVID-19 bond										
SOCIAL PROTECTION	- Nigeria begins cash transfers and food aid - Namibia provides cash transfer to those affected by lockdown - Ghana approves funds for social protection - Rwanda distributes food to urban poor who cannot work - Senegal provides cash transfers, food aid, and utility bill support - Ghana grants free water supply to all households, reduces electricity costs for poorest - Zambia provides cash transfers to affected urban households										
FOOD SECTOR INTERVENTIONS	- Kenya allows only takeover from restaurants - South Africa exempts supermarkets from lockdowns										

Source: For COVID-19 data, Johns Hopkins University, CSSE Database (updated March 8, 2021). For policy data, IFPRI, COVID-19 Policy Response Portal (accessed March 2021) and news reports.

Note: Countries and policies included here were selected to provide an indication of the types of actions taken in the region.



MIDDLE EAST AND NORTH AFRICA

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As in most regions, the coronavirus pandemic evolved rapidly in the Middle East and North Africa (MENA), starting as a health crisis in mid-March and later escalating into a large-scale economic crisis affecting the lives and livelihoods of millions of people. Beyond the devastating health impacts and death tolls from COVID-19, the pandemic has added to other serious challenges currently facing the region. These include low oil prices for oil-exporting countries like the Gulf countries and Libya; ongoing conflicts and political transitions in many countries; and natural disasters such as the locust swarms in Sudan and floods in Yemen. In particular, the pandemic continues to test the functioning of national food systems and expose the vulnerabilities that come with the heavy dependency of most MENA countries on food imports.

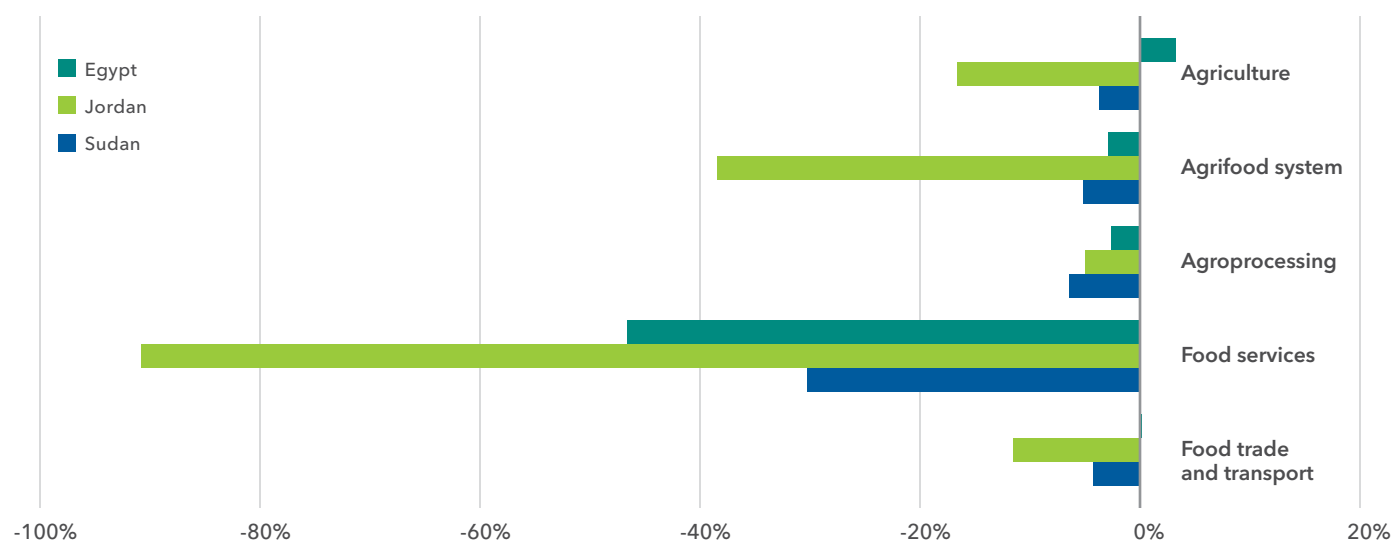
All national economies in the region have experienced severe disruptions. The impacts vary across countries and sectors, reflecting differences in both the spread of the pandemic and government responses.¹ Relative to previous quarterly output, the pandemic has caused GDP losses ranging from 1.1 percent expected in Egypt to 23.0 percent in Jordan during April–June 2020.² The fall in Egypt's GDP is relatively small in part because Egypt avoided full lockdown measures during the initial wave of the pandemic and quickly invested in a massive stimulus program. In Yemen, the fall in remittances resulting from the pandemic led to an estimated drop of more than 9 percent in food system outputs and household income reductions of 12.5 percent.³

AGRIFOOD SYSTEM RESILIENCE, BUT WITH WINNERS AND LOSERS

Agrifood systems have proven relatively resilient in the MENA region, with some value chains even benefiting from the crisis. The coronavirus outbreak coincided with some agricultural harvest seasons, including most cereal crops in Egypt and potatoes and wheat in Jordan. Reductions in agrifood GDP ranged from about 3 to 9 percent in Egypt, Yemen, and Sudan to about 38 percent in Jordan. Agriculture remains the least affected sector in the Egyptian and Sudanese economies.⁴ Nevertheless, pandemic-related lockdowns and curfews in Egypt reduced the production, distribution, and sale of perishable food products such as dairy, particularly affecting smallholders who lack adequate storage and processing facilities for these products.⁵ However, some value chains, including those for medicinal and aromatic plants, have enjoyed a substantial boost, fueled by increased demand for exports.

The large decline in the agrifood sector in Jordan reflects a significant fall in exports as well as labor restrictions affecting farming activity. Jordan's agriculture sector is dominated by fruit and vegetable production for export and relies heavily on foreign workers, who constitute most of the country's agricultural labor force – about 85 percent of livestock labor and 92 percent of crop labor in 2015.⁶ The mobility of these workers has been hampered by COVID-19-related restrictions, and many returned to their home countries when their work licenses were not renewed.

FIGURE 1 Change in agrifood system GDP, April–June 2020 (compared with April–June 2019)



Source: IFPRI social accounting matrix (SAM) multiplier models, C. Breisinger et al., [Impact of COVID-19 on the Egyptian Economy: Economic Sectors, Jobs, and Households](#), MENA Policy Note 6 (Cairo: IFPRI, 2020); M. Raouf, D. Elsabbagh, and M. Wiebelt, [Impact of COVID-19 on the Jordanian Economy: Economic Sectors, Food Systems, and Households](#), MENA Policy Note 9 (Cairo: IFPRI, 2020).

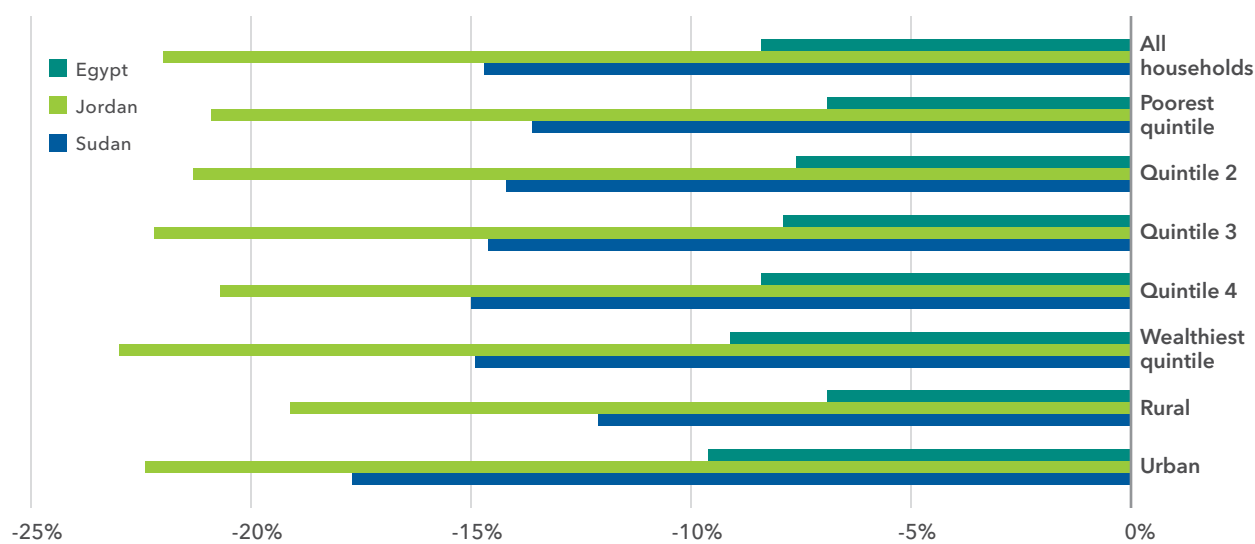
The impacts of these shocks have also varied across different actors within each value chain, mainly because of their varying capacities to respond to the pandemic and associated dynamics in demand for and supply of products.⁷ For example, in Egypt the pandemic has affected milk producers disproportionately more than milk processing factories.⁸ Recent studies show that global demand for digital tools has significantly increased during the pandemic, including in Egypt, and those sectors that are sufficiently digitalized have been less affected by the pandemic.⁹

The greatest economic damage to the region's agrifood systems has occurred in food services, including hotels and restaurants. In contrast, losses in the food-processing sector have been relatively small and largely driven by indirect effects, including the reduced demand from restaurants and hotels (Figure 1). The drop in hotel-related services was sharpest in countries that depend heavily on tourism, such as Egypt and Jordan, where international tourist arrivals dropped dramatically and have yet to recover. Because agricultural production and food systems have been relatively more resilient than other sectors in most MENA countries, the agrifood system offers a strong foundation for post-pandemic recovery and transformation.

SHARPER INCOME DROP IN WEALTHIER, URBAN HOUSEHOLDS; GREATER HARDSHIP FOR POOR

Overall, household incomes during the main lockdown period from April to June 2020 fell by 8 percent in Egypt, 22 percent in Jordan, and 15 percent in Sudan (Figure 2). Although most households were hurt by the economic slowdown and the initial fall in remittances, urban households experienced greater absolute losses than rural households. Urban dwellers are primarily employed in the industrial and service sectors – including trade, transport, hotels, and gyms and fitness services – which were disproportionately affected by lockdowns and mobility restrictions. Rural households have also lost income, though less in absolute terms than their urban counterparts. In Yemen, where the sharp fall in remittances is believed to be the main driver of impact, the poor have been hit harder than the better-off, with an estimated income loss of 21 percent, compared with 12 percent for wealthier households.¹⁰ Whether rural or urban, poor households are likely to find it harder than wealthier households to cope with income losses. These drops in household incomes as well as other direct

FIGURE 2 Change in average household incomes during main lockdown period, 2020



Source: IFPRI SAM multiplier models, C. Breisinger et al., [Impact of COVID-19 on the Egyptian Economy: Economic Sectors, Jobs, and Households](#), MENA Policy Note 6 (Cairo: IFPRI, 2020); M. Raouf, D. Elsabbagh, and M. Wiebelt, [Impact of COVID-19 on the Jordanian Economy: Economic Sectors, Food Systems, and Households](#), MENA Policy Note 9 (Cairo: IFPRI, 2020).

Note: Change is compared with same period in 2019 for each country.

public health impacts of the pandemic are also likely to adversely affect nutritional outcomes in the region.¹¹

PUBLIC INVESTMENTS, SAFETY NETS, AND FISCAL LIMITS

As MENA economies and sectors begin to show signs of economic recovery, some are reviving more quickly than others, largely because of national policy responses. Although these public investments and increases in cash transfers can help economies and households recover, their fiscal implications remain uncertain. For example, Egypt's emergency response package of EGP 100 billion (US\$6.4 billion) is estimated to have reduced the drop in GDP between April and June 2020 from 8.7 percent to just 1.1 percent. This rescue package is supporting the most affected sectors, including exports, tourism, and real estate. In addition, the government relaxed credit limits for businesses, provided tax-based incentives, and expanded cash transfer programs. Egypt is now implementing a public investment plan with funding of about EGP 280 billion (about \$18 billion). With this government support, Egypt's economic performance improved in the second half of 2020.¹² In Sudan, workers received

unemployment benefits and small businesses received three-month tax breaks. Sudan also increased spending on current social protection programs, providing SDG 12 billion (about \$32 million)¹³ in cash transfers to the poorest households over a period of three months and allocating SDG 10 billion for the country's essential commodity production support program, known as Selaaty ("my commodity"). In Jordan, allowances were increased for poor households, and a temporary cash transfer program was established for the unemployed and self-employed, with about JOD 81 million (about \$114 million) in income support designated for seasonal workers.

Three important caveats are worth highlighting regarding the impacts of these interventions. First, the effectiveness of these policy responses depends greatly on whether the programs are well-targeted and informed by evidence on the breadth of harm suffered by each sector. Second, the level of social protection required to fully offset poor households' income losses is likely to be prohibitively expensive, especially given falling revenues from reduced economic activity and declining fiscal resources. Third, the fiscal burden and sustainability of social safety nets is a particular concern

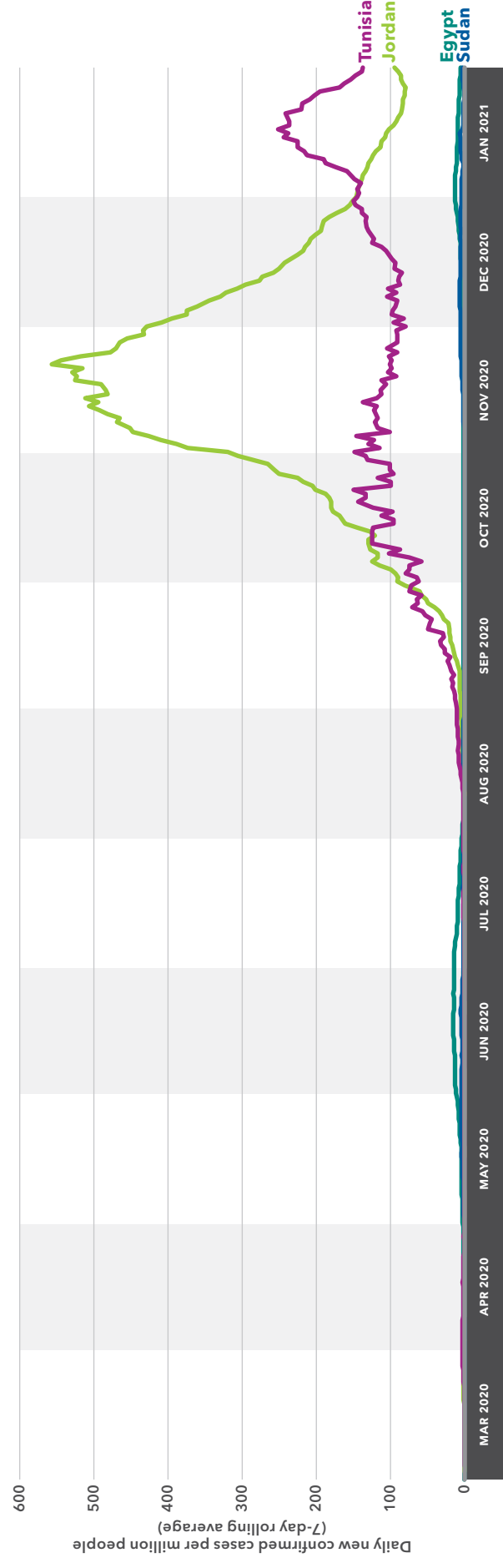
and its impact on long-term economic stability remains to be seen.

OUTLOOK FOR POST-COVID-19 RECOVERY

Agriculture and agrifood systems are playing a stabilizing role in the MENA region during the COVID-19 crisis, and these systems remain well positioned to support post-pandemic economic recovery. However, the role and post-pandemic potential of the agrifood system will depend on the successful containment of the virus in the region and globally; on government investments; and on the prevailing policy, political, and business environments. Political transitions and conflicts in some of the MENA countries, notably, Libya, Sudan, Syria, and Yemen, will likely dominate post-pandemic recovery. Similarly, smart, future-oriented public investments will be key for raising the potential of the agrifood system to support recovery and the longer-term transformation of economies. Recent and ongoing studies show

that demand for digital tools has significantly increased during the pandemic.¹⁴ Indeed, those sectors that are digitalized, like food deliveries, have been less affected by the crisis. This shift offers an opportunity to accelerate digitalization to reduce the vulnerability of the food system in the future. Increasing public and private investments in digitalization can be transformative – from providing farmers with better information through digital extension services to link smallholder farmers to markets, to better policymaking using digital tools like the recently released Agricultural Investment Data Analyzer (AIDA).¹⁵ In the process, emphasis should be placed on promoting digital inclusion for low-skilled and illiterate people in the region. The pandemic is also a strong reminder for countries to rethink their agricultural investment priorities to include (climate) resilience, nutrition, and environmental aspects; diversify food imports and exports; and improve the business climate to allow farmers, food processors, and traders to prosper and grow.

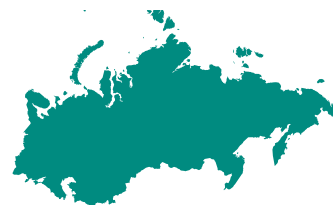
MIDDLE EAST AND NORTH AFRICA COVID-19 TIMELINE, MARCH 2020–JANUARY 2021



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CENTRAL ASIA



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Central Asia faced unprecedented challenges in 2020 as the global pandemic compounded existing problems facing the region. These included the growing effects of climate change, unstable commodity markets, and a heavy reliance on remittances and undiversified trade flows. Unlike other recent shocks, COVID-19 and the associated policy responses forced Central Asians to change daily practices and routines, many essential to their livelihoods, and disrupted connections at the local, regional, and global levels. The short-term response by governments helped to buffer the shock, while the agriculture sector proved fairly resilient. Recovery in the main destination countries for Central Asia's migrant laborers has already helped restore flows of remittances. For long-term transformation of the region's food system, however, the shock has highlighted weakness in social safety nets and digital connectivity, as well as the risk of relying heavily on remittances and a limited set of exports.

POLICY RESPONSES

The pandemic policy responses implemented by Central Asian governments appear to have been timely and appropriate. Governments pursued a mix of policies to address the health and economic needs of the population and, at the same time, to stimulate business activities in an effort to limit harm caused by pandemic restrictions. These policy responses included (1) measures to contain the spread of the virus, such as strict limits on population movement and public gatherings, restrictions on domestic and foreign travel, and lockdowns; (2) measures to mitigate impacts on household welfare and food security,

such as wage and unemployment support, tax waivers for individuals, and social protection measures; and (3) fiscal measures to revive the economy, including economic and financial stimulus and tax waivers for businesses.¹ The overall cost of these fiscal revenue and expenditure measures ranged between 3 and 5 percent of GDP across countries. Monetary authorities in Tajikistan and Uzbekistan also provided macro-level financial support, including liquidity injections into banks, reductions in reserve requirements, and direct funding for lending to the real sector (goods and services).² Several countries, among them Kazakhstan and Russia, also implemented trade restrictions and price controls, discussed below.

ECONOMIC, TRADE, AND REMITTANCE IMPACTS

Despite swift policy responses to the pandemic, Central Asian countries suffered substantial impacts on their economies, household welfare, and food and nutrition security. The pattern of impacts followed a similar course across the region. Initially, government-mandated lockdowns and other restrictions caused a contraction of economic and business activities, especially in tourism, hospitality, wholesale and retail trade, passenger and freight transportation, and other services. This reduced incomes, weakened consumer demand, and reduced household welfare and food security. In Uzbekistan, for example, around 85 percent of small and medium enterprises (SMEs) were forced to shut down by the end of March, and in the following months unemployment rose rapidly.³ The share of Uzbekistan's households with at least one

member actively working dropped from 84 percent to 43 percent. By early June, the situation had improved somewhat, with 78 percent of SMEs open for business.⁴ Similar trends were seen in other Central Asian countries.

At the macro level, Kazakhstan and Kyrgyzstan reported contractions in GDP of 2.8 percent and 8.1 percent, respectively, while Uzbekistan reported growth of only 0.4 percent.⁵ The drop in growth rates was precipitated by large declines in industrial production and international and domestic trade, as well as services. Agriculture, however, recorded relatively robust growth rates despite the limited availability of and access to imported farm inputs (feed, fertilizers, and pesticides) during the spring sowing season, which was caused by higher import prices stemming from currency devaluations, logistical difficulties at the border, and a rapid decrease of inventories.⁶ In January–September 2020, agricultural output grew by 5.1 percent in Kazakhstan, 2.7 percent in Kyrgyzstan, and 3.4 percent in Uzbekistan.⁷ Tajikistan's overall economy, in contrast, grew at a relatively robust rate of 4.2 percent in the first three quarters of 2020; this resilience is credited to timely government support to the economy and intensified land use in agriculture.⁸

The pandemic also exacerbated structural vulnerabilities in the region's economies, especially exposure to commodity price volatility (most notably in energy prices) and heavy dependence on a few commodities and trading partners. Energy exporting countries (Kazakhstan, Turkmenistan, and Uzbekistan) were hit hard by a sharp decline in oil and natural gas demand and prices. After dropping to US\$23 per barrel in April from US\$66 in December 2019, oil prices partially recovered, rising above US\$40 in June; however, at the end of 2020, oil was still trading at about 30 percent below pre-pandemic levels.⁹ As a result, Kazakhstan's oil exports declined by more than 20 percent in the first three quarters of 2020, and its total export of goods declined by more than 18 percent.¹⁰ The value of Uzbekistan's natural gas exports declined dramatically – by more than 70 percent – but its total value of exports of goods rose slightly because of higher gold prices, with increased gold exports more than compensating for the decline in energy exports.¹¹ Around the region, the negative impact on exports of services, primarily tourism and transportation,

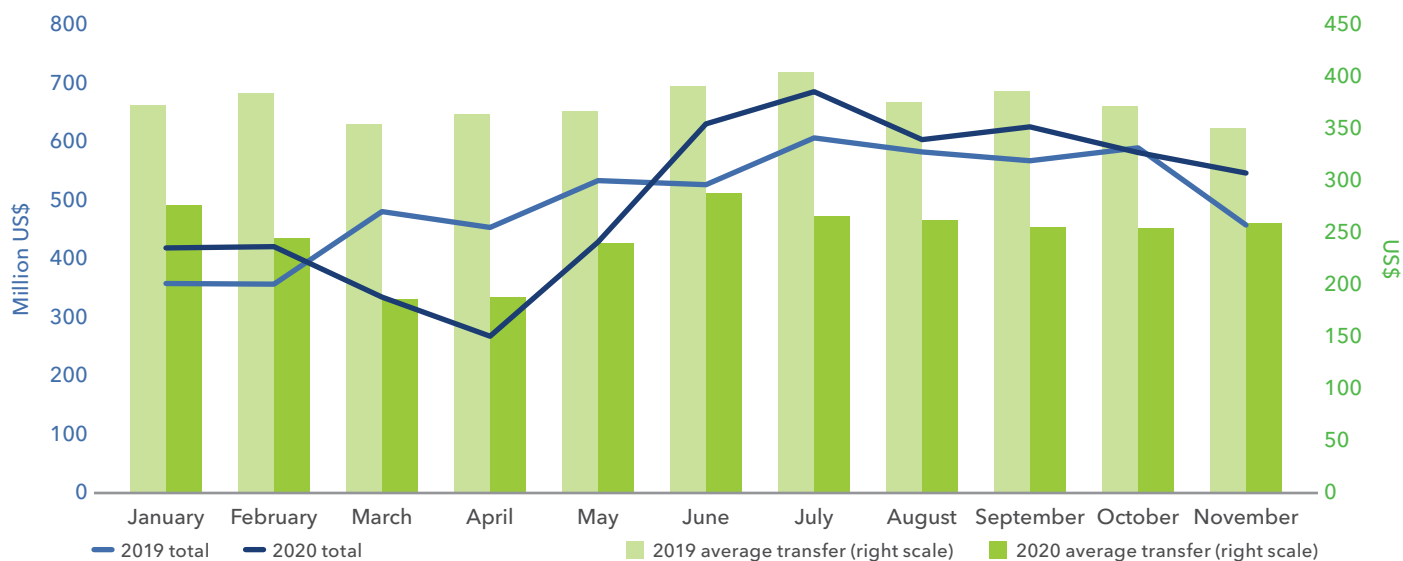
was severe – exports of services from Kazakhstan fell 34.3 percent; from Kyrgyzstan, 51.8 percent; and from Uzbekistan, 42.6 percent.¹²

Intraregional trade has contributed to mitigation of the pandemic's adverse effects on food and nutrition security in the region. For example, Kyrgyzstan increased agrifood exports by 25 percent to markets in the Commonwealth of Independent States (CIS), including Russia. However, Kazakhstan initially banned the export of wheat and wheat flour, later replacing the ban with export quotas. Kazakhstan also introduced a six-month ban on export of live animals, and Kyrgyzstan followed suit in late 2020. These restrictions raised food security concerns in food-importing Central Asian countries, some of which rely on Kazakhstan for half or more of their imported calories. In Uzbekistan, the amplified food security concerns led policymakers to put a brake on wheat market liberalization reform and to maintain the country's wheat self-sufficiency policy and price regulations. Such policies impede the allocation of additional arable land for high-value horticulture crops, like fruits and vegetables, in which Uzbekistan has a comparative advantage and which could support rural transformation.¹³

The pandemic-related disruption of remittance flows initially put additional pressure on Central Asian economies. Kyrgyzstan and Tajikistan, in particular, were hit by declining remittances from the Russian Federation. When the Russian economy suffered the double blow of the pandemic and falling oil prices, deterioration of its labor market and depreciation of the Russian ruble reduced opportunities and wages for migrant labor from Central Asia. Our analysis suggests that total monthly remittances from Russia to Central Asia dipped substantially from March to May 2020 but recovered in June. Similarly, the average amount of individual remittance transfers from Russia to Central Asian countries through the payment systems fell in March 2020 to about 50 percent of 2019 levels for that month, but by June reached nearly 70 percent of 2019 levels (Figure 1).

At the country level, remittances from the Russian Federation to Kyrgyzstan, Tajikistan, and Uzbekistan declined by 23.6 percent, 38.7 percent, and 13.1 percent, respectively, in the first half of 2020, compared with the same period in 2019. It is worth noting that the pandemic-related declines in remittances to Tajikistan

FIGURE 1 Remittance flows from the Russian Federation to CIS countries through payment systems, 2019–2020.



Source: Based on data from the Central Bank of the Russian Federation.

Note: CIS = Commonwealth of Independent States.

and Kyrgyzstan are comparable to those resulting from the 2015 Russian financial crisis (caused by sharp declines in energy prices). In contrast, remittances to Uzbekistan appear to be more resilient now compared with the previous crisis.

Evidence suggests that, globally, countries with robust digital connectivity mitigated up to half of the negative economic impacts of the pandemic by shifting education, healthcare, and public services as well as retail trade to online platforms.¹⁴ However, digital connectivity in Central Asian countries is generally poor, especially in rural areas. This isolation restricted economic and social opportunities during the lockdown. As a result, many households and individuals in the region missed out on employment opportunities and could not access quality education, healthcare, or other public services.¹⁵

IMPACT ON HOUSEHOLDS

The pandemic has had a significant negative impact on household welfare, food security, and nutrition in Central Asia. A household phone survey conducted by IFPRI in rural areas of southern Tajikistan provides evidence of these impacts, which are likely to be

similar to rural areas of other countries in the region.¹⁶ Incomes have fallen for more than 40 percent of households, including both the poor and non-poor. Job losses have affected almost 20 percent of households, and even those who still have jobs face numerous workplace challenges.

Migration for work remains central to livelihoods in this region, despite COVID-19. Nearly half of surveyed households in Tajikistan had at least one migrant laborer before the pandemic. About 8 percent of these migrants returned home because of the crisis. Of the approximately 45 percent of households that still had at least one migrant laborer abroad, nearly 80 percent reported reduced remittances.

The pandemic shock reduced household spending, especially by the poor and on food. As household incomes fell, poor households depleted their savings; and the less-poor, who generally own more, depleted their assets. These patterns played out across the region. For example, a community survey conducted by the United Nations Development Program in Uzbekistan found that the pandemic led to reduced household incomes, depleted savings, less-diversified food consumption, and job losses. These outcomes apply to both rural and urban communities.¹⁷

The IFPRI phone survey also provides evidence of the impact on diets and dietary diversity. Many households switched from growing high-value crops (vegetables) back to staple food crops (cereals, mainly wheat), most likely because of food security concerns. For example, the share of households in Tajikistan cultivating cereals increased from 2018 levels across household subsistence plots (from 8 to 24 percent), “presidential” (subsidiary) plots (from 44 to 62 percent), and *dehkan* (commercial) farm plots (from 24 to 55 percent).¹⁸

Social safety nets to address poverty and food insecurity in the region are weak, fragmented, and poorly targeted. Less than 20 percent of the population in the lowest income quintile is covered by social assistance in Kyrgyzstan and Tajikistan. In Kazakhstan, the situation is somewhat better, with about 40 percent of the poorest population receiving social support from the government.¹⁹ During the pandemic, Central Asian governments have increased social protection, primarily through a combination of direct cash transfers (mainly Kazakhstan) and in-kind support (all countries), but levels of support remain low.

LOOKING FORWARD

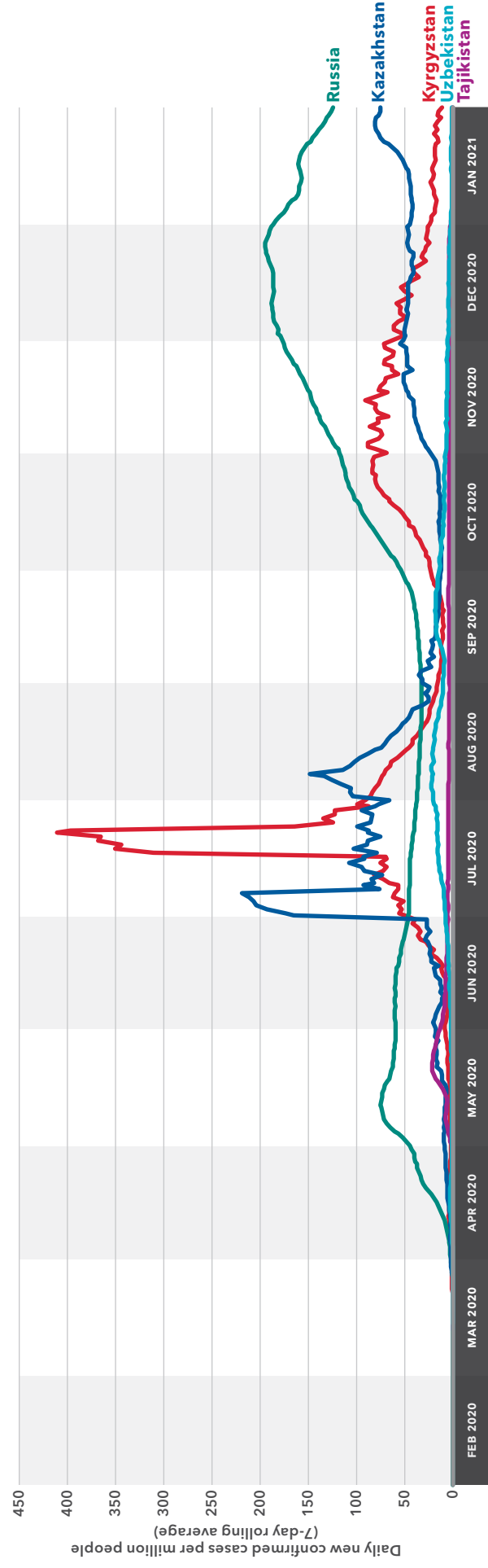
As of early 2021, Central Asia’s main trading partners, China and Russia, appear to have begun a broad economic recovery, which – barring further misfortune – will likely help the region’s other economies by reviving trade, investment, and remittances. Nevertheless, Central Asia will continue to face uncertainties and shocks. Recovery in services, particularly in the people-intensive tourism sector, will take time. Moreover, intraregional trade continues to face significant institutional and policy hurdles related to nontariff

barriers to trade, sanitary and phytosanitary regulations, and public and private food safety and quality standards. Over the past two decades, Central Asia established relatively stable regional agrifood value chains. However, the pandemic disrupted these trade relations, as export bans and quotas for agrifood products raised food security concerns in neighboring countries. Achieving long-term regional food and nutrition security will require free and stable trade in food products, especially during crises such as the current pandemic.

Central Asian countries have also reduced poverty significantly in recent years. However, the pandemic may have pushed an additional 1.5 to 1.9 million people in the region below the poverty line in 2020.²⁰ Inequality may also increase, as individuals employed in informal sectors and services and households relying on remittances continue to suffer disproportionately from the adverse effects of the pandemic. The region needs more secure, well-established social safety nets that address people’s needs without exceeding public sector resources.

The pandemic has also exposed the need for structural reforms to develop a competitive, business-friendly environment and promote labor mobility within countries and across the region as well as into more productive formal sectors. Likewise, the crisis has highlighted Central Asia’s currently low rates of digital penetration and connectivity. Investments in information and communications infrastructure and digital technologies will be integral to long-term recovery in the region and will help it to expand its digital economy and accelerate the implementation of modern technologies, such as precision agriculture and unified digital market platforms. These have the potential to provide enormous benefits for agrifood value chains and food system transformation.

CENTRAL ASIA COVID-19 TIMELINE, FEBRUARY 2020–JANUARY 2021



LOCKDOWNS AND HEALTH MEASURES	- All countries impose travel restrictions for China - Russia and Uzbekistan suspend international travel - Kazakhstan and Kyrgyzstan declare state of emergency - Partial lockdowns in most countries, strict lockdowns in some cities - Tajikistan restricts public gatherings - Uzbekistan imposes strict lockdown plus stay-at-home campaign, increases funding for healthcare and quarantines
STIMULUS	- Kazakhstan, Uzbekistan, and Kyrgyzstan offer tax waivers and extensions - Uzbekistan provides interest subsidies - Kyrgyzstan adopts fiscal package to support business recovery - Tajikistan announces fiscal measures and tax waivers to support businesses - Russia supports temporary job creation for the unemployed
SOCIAL PROTECTION	- Russia announces compensation fund for quarantined citizens and businesses - Kazakhstan provides monthly compensation to unemployed - Tajikistan institutes payments to vulnerable families, suspends utility fees - Uzbekistan increases funds to support low-income families and families with children
FOOD SECTOR INTERVENTIONS	- Most countries begin close monitoring of food prices and build emergency food supplies - Kazakhstan imposes price caps and reduces VAT on food - Most countries impose trade restrictions, including export bans, on staple crops and livestock - Russia and Kazakhstan offer concessional loans to farmers - Uzbekistan initiates a food aid campaign - Uzbekistan provides support to horticultural exports through subsidies - Russia subsidizes flour producers

Source: For COVID-19 data, Johns Hopkins University, CSSE Database (updated March 8, 2021). For policy data, IFPRI, COVID-19 Policy Response Portal (accessed March 2021) and news reports.

Note: Countries and policies included here were selected to provide an indication of the types of actions taken in the region. The Russian Federation is included because it is a crucial trade partner for Central Asian countries, and it is a major destination for regional migrant labor.

SOUTH ASIA



SHAHIDUR RASHID, AKHTER AHMED, AND ABDUL WAJID RANA

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Prior to the pandemic, South Asia enjoyed years of economic progress, with fast growth, a rapid reduction in poverty, and improvements in many social indicators.¹ Although poverty and malnutrition rates remained high across the region, evidence of economic and food system transformation – notably, the declining share of agriculture in the region’s economy, rising wages, and changes in dietary patterns – was strong.² The pandemic interrupted this long streak of impressive performance, and early predictions of its likely impact were dire. The region’s GDP growth forecast was revised downward by 14 percent and overall unemployment was projected to increase by 28 percent, with youth unemployment perhaps reaching 72 percent.³ Alarming predictions were also made regarding poverty and food insecurity, with extreme poverty expected to increase by as much as 50 percent, equivalent to an additional 72 million ultra-poor.⁴ But the actual impact thus far has been less grim. Food systems and health systems have shown remarkable resilience, economic contraction has been less severe than expected, and the overall outlook appears more positive. Yet, pandemic-related challenges remain, and the experience has highlighted vulnerabilities that the region will need to tackle to ensure a better food system for future generations.

COVID-19 SHOCKS AND POLICY RESPONSES

PREVENTIVE MEASURES

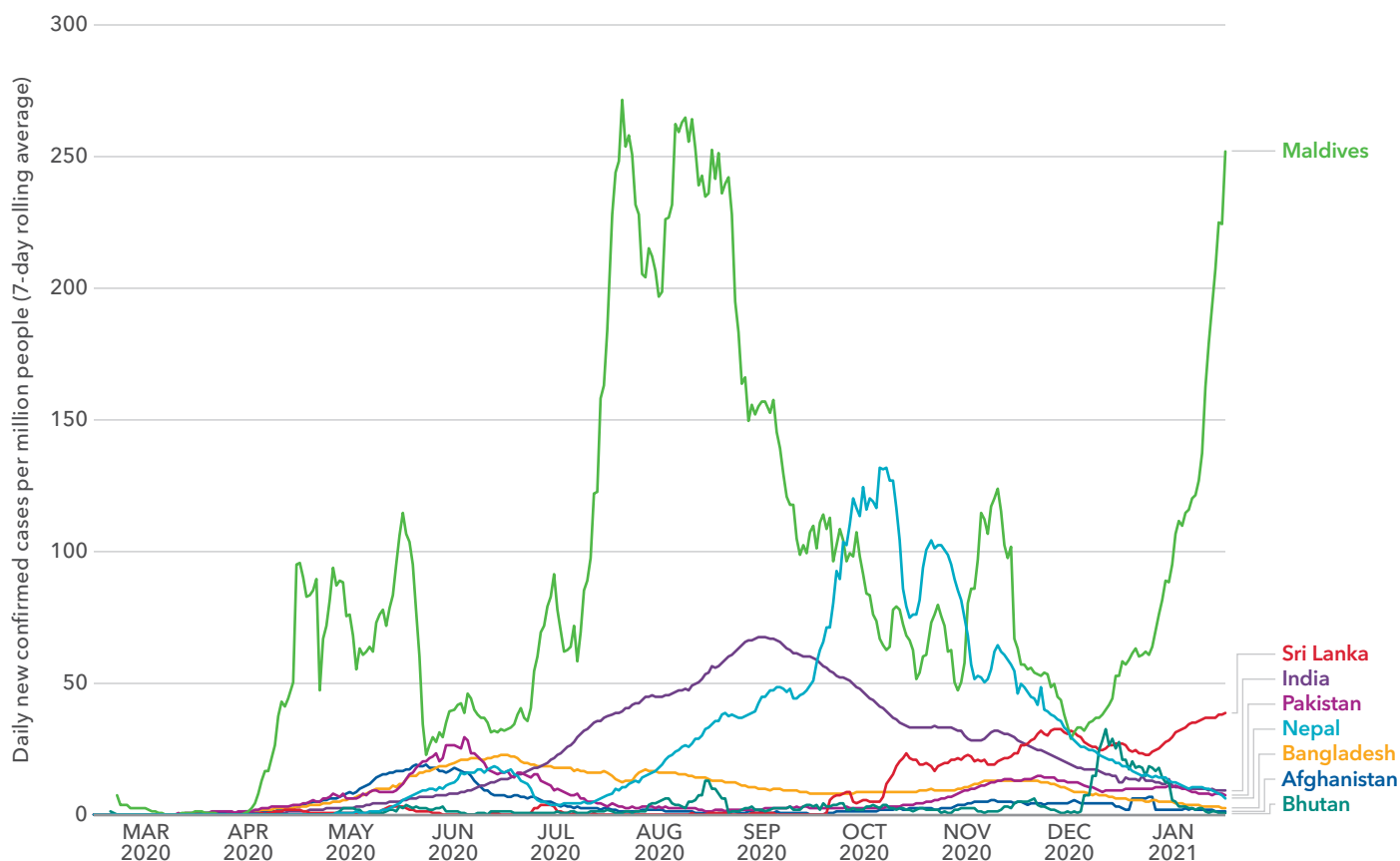
South Asian political leadership took preventive measures seriously. Lockdowns were initiated in all countries in the first days of the pandemic, when case numbers remained in the hundreds and deaths near zero. Common measures included closing academic

institutions, bans on public gatherings, suspension of sporting events, and travel bans. Initially announced for three weeks, strict lockdowns were either extended or later reimposed in almost all South Asian countries, lasting from 3 weeks in Afghanistan up to 17 weeks in Nepal.⁵ The targeted lockdowns that followed – such as quarantining specific areas or communities in cities and restricting large gatherings and restaurant occupancy – have generally been much longer. Both the planning and enforcement of initial lockdowns varied across the region. For example, India imposed a strict travel ban, leaving many migrant workers stranded; but Bangladesh declared its lockdown a “general holiday” without a travel ban, and 10 million city-dwellers were able to return to their villages. In Pakistan, however, the prime minister deemed a complete lockdown unfeasible, given the country’s level of poverty and the nature of livelihoods.

Impacts of the lockdowns in several countries appear to be reflected in infection rate trends (Figure 1). This is particularly true for the Maldives, which suffered a major spike in infections after lifting travel restrictions in July 2020 and another following the rebound in tourism during the Christmas holiday. Tourism likely played a role in Nepal as well, as its first spike correlates with the decision to reopen for trekking and other tourism.

Regionwide, the initial lockdowns kept both infections and COVID-19-related deaths low, but a spike in late summer brought the number of cases up to 1,500 per million in September. But new measures – such as targeted quarantines and strict enforcement of mask-wearing – brought the numbers down quickly. As of January 2021, cumulative cases had reached 12 million and related deaths 175,000. These are impressive numbers for the most densely populated developing region.

FIGURE 1 COVID-19 cases in South Asia



Source: Johns Hopkins University, CSSE COVID-19 Data (updated March 11, 2021).

POLICY ACTIONS TO MITIGATE IMPACTS

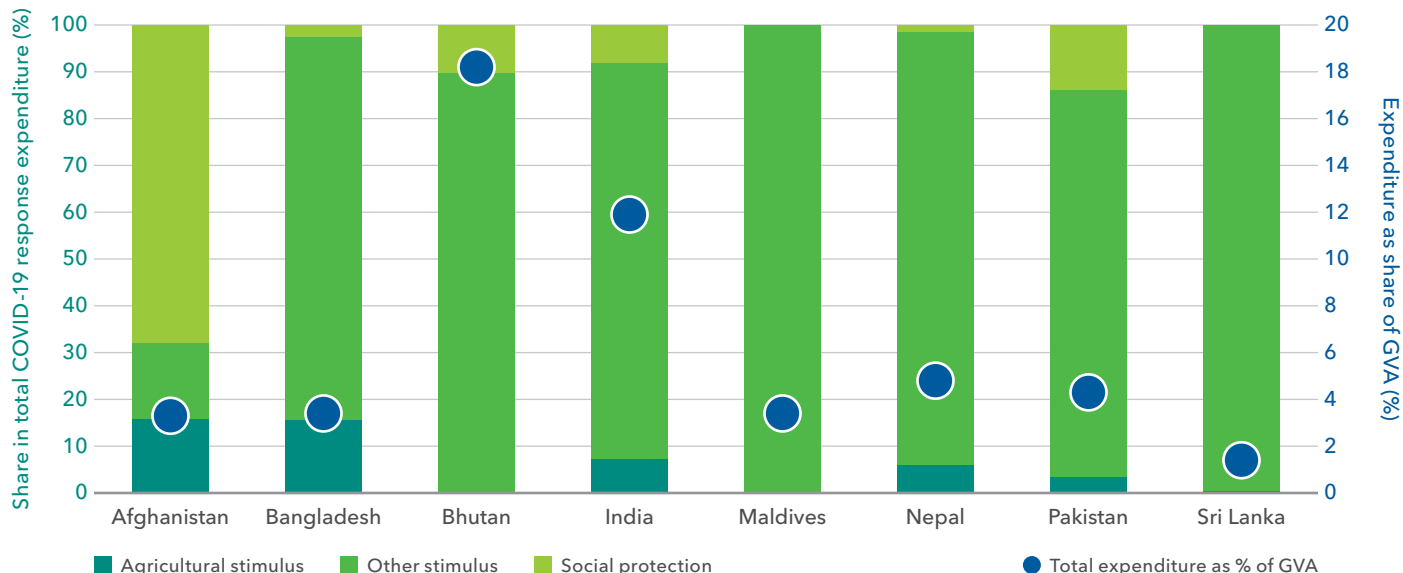
With low case numbers, many experts considered the region's initial lockdowns to be a bigger shock to the economy than the pandemic itself.⁶ Moreover, enforcement of the lockdowns was challenging in part because they coincided with the winter harvest and spring planting, and with several major religious festivals.⁷ These celebrations were overshadowed by images of the lockdowns' impacts – such as thousands of migrant workers walking on India's empty highways and normally bustling cities at a standstill. These images shaped the region's policy responses – early government actions involved a wide range of policies to save lives, protect livelihoods, and stimulate economies.

Key policy responses in the region, including macroeconomic policy responses, have been tracked by several institutions and development partners, including IFPRI, the Asian Development Bank, and the

World Bank. Here, we focus on the policies related to agriculture, social protection, agricultural pricing, and labor markets.

From the onset of the pandemic, experts agreed that the region's top policy priorities should be scaling up social protection, supporting agriculture, and maintaining food price stability. These priorities were clearly reflected in the programs initiated by Bangladesh, India, and Pakistan. Our initial estimates of the allocation of public funds point to three patterns in regional spending (Figure 2). First, spending in response to the crisis has been high, ranging from 1.4 percent of GDP (about US\$1.2 billion) in Sri Lanka to over 12 percent (about \$287 billion) in India. Second, except for Afghanistan, the overwhelming share of government expenditure was for monetary and fiscal policy measures, suggesting that while initial emphasis was on protecting the poor and stabilizing food prices, the focus later shifted to stabilizing

FIGURE 2 Budget allocation by pandemic policy response categories in South Asia



Source: Bangladesh: Bureau of Statistics; India: Press Note on First Advance Estimates of National Income 2020/21, Ministry of Statistics and Programme Implementation; Nepal: Central Bureau of Statistics; Pakistan: Bureau of Statistics and State Bank of Pakistan; Bhutan, Maldives, and Sri Lanka: World Economic Outlook, IMF, October 2020; COVID-19 Policy Response Portal, IFPRI; Policy Responses to COVID-19, IMF.

Note: GVA = gross value added. The shares of expenditure on safety nets and agriculture represent only the costs of scaling up the existing programs.

economies. Third, the cost of scaling up agriculture and social protection programs accounted for more than 15 percent of the total pandemic-response budget (as shown in Figure 2), even though the region's three largest economies (India, Pakistan, and Bangladesh) already had large safety-net and agricultural support programs.⁸

RESILIENCE AND VULNERABILITIES IN SOUTH ASIAN FOOD SYSTEMS

EVIDENCE OF RESILIENCE

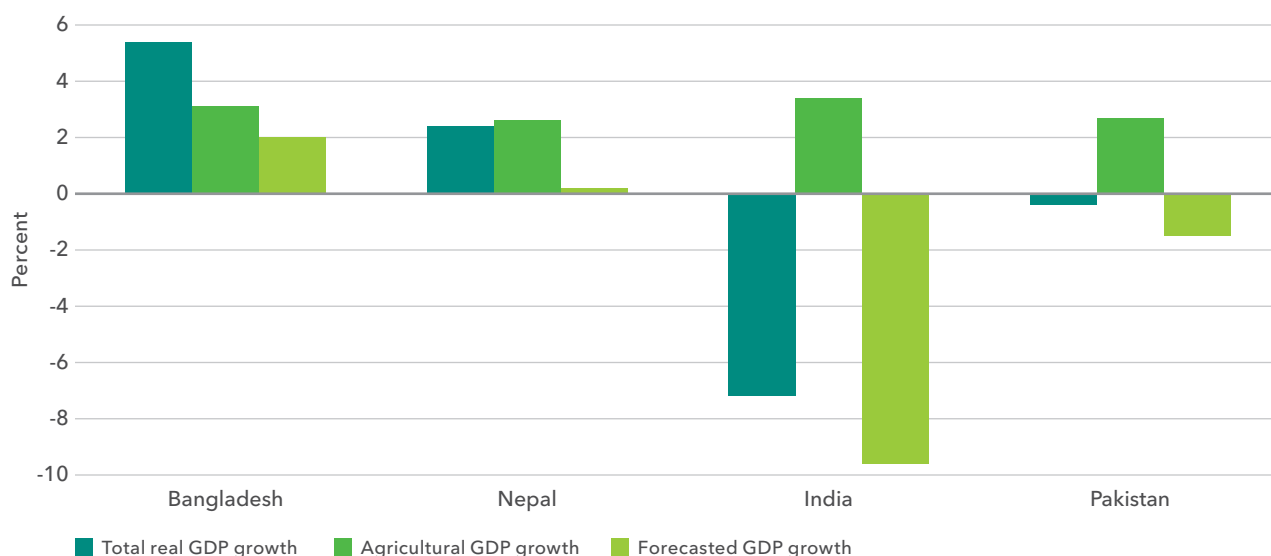
The pandemic has highlighted both resilience and vulnerabilities in the transformation of food systems in South Asia. Recent estimates of food price stability, agricultural growth, wage rates, unemployment, and poverty rates have proved most of the dire predictions wrong and suggest that the region's policy actions are paying off.⁹ Agriculture sectors have registered growth in almost all countries, in part because of the exemption of agriculture from lockdown restrictions and effective use of the existing safety-net and agricultural development infrastructure in responding to the crisis.

In terms of GDP growth, all countries performed better than the forecasts (Figure 3).¹⁰ Bangladesh

achieved 5.4 percent real GDP growth, and Nepal achieved 2.4 percent growth. But the region's two largest economies, India and Pakistan, experienced negative growth of -7.2 percent and -0.4 percent, respectively, enough to cause an overall contraction of 5.4 percent in the regional economy.

Recent surveys conducted by IFPRI and its partners suggest that public transfer systems for food security, health, and nutrition have worked well in the region's large countries. In India, two recent studies show that the initial support package, called Pradhan Mantri Garib Kalyan Yojana (PMGKY), was timely and effective in reaching smallholders.¹¹ Similarly, surveys by IFPRI and national partners in seven Indian states indicate that disrupted health services have been restored and are adapting to the new challenges. One of the key conclusions of the study is that India's rapid policy actions and effective coordination across national, state, and local institutions helped buffer the initial shocks to health and nutrition programs.¹² This success reflects India's decades of investments in social-safety-net infrastructure, particularly recent investments in direct and cash benefit transfers (see Chapter 5).¹³

FIGURE 3 Growth in real GDP in 2019 and 2020, and 2020 forecast



Source: Bangladesh: Bureau of Statistics; India: Press Note on First Advance Estimates of National Income 2020/21, Ministry of Statistics and Programme Implementation; Nepal: Central Bureau of Statistics; Pakistan: Bureau of Statistics and State Bank of Pakistan.

Note: Regarding the estimates, fiscal years for Bangladesh, Nepal, and Pakistan are July–June; April–March for India.

Pakistan’s Ehsaas program, which provides direct cash transfers, targeted 12 million households (about 80 million people) with a budget of \$900 million. Coverage was extended to an additional 6 million families during the pandemic, suggesting that almost half of Pakistan’s population was covered by these programs; such rapid expansion was possible because of the government’s earlier investments in building the necessary infrastructure.

Bangladesh also has several social protection programs that provide cash and food transfers to vulnerable populations. In response to the pandemic, the government increased the social protection budget from 2.9 percent of national GDP in 2019/20 to 3.01 percent in 2020/21 (reaching about \$11.24 billion). In addition, as an Eid-ul Fitr gift from the prime minister, the government made a one-time cash transfer of about BDT 2,500 to each of five million poor families, totaling BDT 12.5 billion (roughly \$150 million). This expansion of transfers was made possible by earlier government investments in mobile financial services, including digitalization of social transfers.¹⁴

Recent regional poverty estimates suggest that safety nets and other social transfer programs have largely performed well. In Bangladesh, over

three-quarters of the vulnerable nonpoor are estimated to have fallen below the poverty line in June–July 2020, largely because of rising unemployment.¹⁵ But the country has recovered from the initial shock, making it likely that the actual poverty rate is lower than the government’s official third-quarter estimate of 29.5 percent (still up 9 percent over 2019). Moreover, the most recent round of an IFPRI–Cornell phone survey (completed in January 2021) suggests that many food security indicators improved after drastically worsening in the pandemic’s early months (when shares of food-secure households plummeted from 53 percent to 12 percent in rural areas and 65 percent to 8 percent in urban areas), and are now stronger than they were in 2019.¹⁶

Pakistan’s poverty rate was initially projected to increase from 27 percent to 43 percent, but things gradually improved after the economy was re-opened. By the end of 2020, the estimated poverty rate was only about a percentage point higher than the pre-pandemic rate.¹⁷ Surveys conducted to assess the pandemic’s impact at the end of 2020 found that 90 to 95 percent of Pakistani workers affected by the initial shock had recovered; and 36 percent of households felt the pandemic had had a serious financial impact.¹⁸

RISKS AND VULNERABILITIES

The pandemic has highlighted several vulnerabilities of South Asian food systems. Perhaps most important is the vulnerability of South Asian labor markets, especially in the nonfarm and informal sectors, which are central to economic and food systems transformation. These sectors were decimated by the strict lockdowns. Unable to work, migrant workers returned to their home villages, creating labor scarcities in regions with agricultural surpluses that depend on these informal workers. In agricultural deficit regions, food insecurity increased for wage workers due to low wages, job losses, and reduced incomes. While there are encouraging signs of recovery, some impacts may linger in the long run.

The pandemic-related short-term shocks to labor markets may also have long-term consequences in terms of nutrition, poverty, and overall wellbeing, particularly for many South Asian children.¹⁹ As in other developing regions, nutritious diets are not affordable for the poor in South Asia.²⁰ In India, for example, almost half of all poor people cannot afford a nutritious diet.²¹ With massive unemployment in informal sectors, poor households have suffered a reduction in diet quality that will likely have long-term impacts on productivity.²² In addition, the majority of children were deprived of formal schooling during the pandemic because they did not have Internet access. Unless appropriate policy actions are taken, the pandemic's lasting impacts will exacerbate inequality, reduce lifetime earnings, and limit the ability of these children to escape poverty in the future.

South Asia's international remittance inflows also proved to be vulnerable. More than 11.5 million South Asians, mostly unskilled laborers, work abroad and in 2019 remitted an estimated \$108 billion.²³ As of December 2020, remittance flows had declined by about \$10 billion for the region.²⁴ For South Asia's immigrant workers, who are generally poor and are often the main breadwinners for their families, this has meant a significant loss of income. The drop in remittances also has macroeconomic implications, as these flows are an important source of foreign exchange for some countries, accounting for as much as 28 percent of GDP in Nepal and 8 percent in Pakistan.

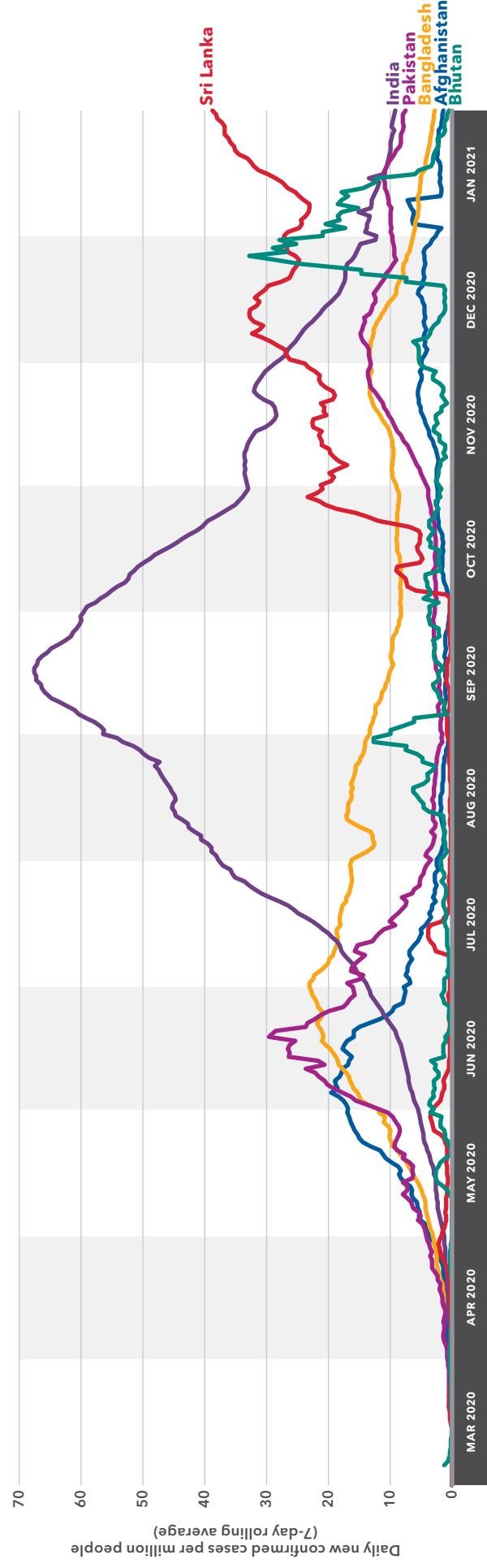
While these new challenges must be tackled, policymakers should not lose sight of the old

challenges as the region seeks to promote an inclusive and sustainable food system transformation. South Asia faces continuing and, in some cases, intensifying problems related to climate change, natural disasters, poor food safety, and distortionary policies. The fall armyworm devastated Afghanistan, Pakistan, and parts of India and Nepal in 2020; Bangladesh struggled with flooding during the pandemic; and in India, bird flu caused a nationwide food-safety scare. Distortionary policies, and increasing costs of implementing them, remain despite overwhelming evidence of their negative impacts and of the potential to repurpose these much-needed resources for climate-smart investments or to build robust food-safety institutions. For example, public food transfer programs linked with agricultural price policies are fraught with leakage and inefficiencies.²⁵ But reforming such longstanding agricultural policies will be difficult for South Asia, as the recent farmer protests in India have shown.²⁶

LOOKING FORWARD

Agriculture and food systems in South Asia have demonstrated unexpected resilience in the face of the pandemic. However, while there are success stories that can inform future policy, there is no room for complacency. Growth in the nonfarm and service sectors is an essential precondition for economic and food system transformation, and COVID-19 has reminded South Asia how vulnerable these sectors are. During the years of rapid growth, the share of populations engaged in these sectors grew rapidly, but infrastructure and institutions to protect the vulnerable against large-scale shocks did not. This was particularly evident from the plight of migrant workers and the sharp increase of food insecurity in major urban centers following the lockdowns. These vulnerabilities must be addressed. At the same time, the region must not lose sight of the structural challenges to transforming economic and food systems. Tackling those challenges will require long-term commitment. There is reason to hope that the pandemic experiences will help to catalyze a shift in policy priorities. The recently announced Indian budget – with significant increases for addressing climate change, health and nutrition, and enhanced biosecurity preparedness – suggests that change is on its way.

SOUTH ASIA COVID-19 TIMELINE, MARCH 2020–JANUARY 2021



	MAR 2020	APR 2020	MAY 2020	JUN 2020	JUL 2020	AUG 2020	SEP 2020	OCT 2020	NOV 2020	DEC 2020	JAN 2021
LOCKDOWNS AND HEALTH MEASURES	■ Bangladesh announces "general holiday" ■ India and Nepal begin lockdown ■ Pakistan begins lockdown, exempting farm sector, groceries ■ Afghanistan begins lockdown, in place until August ■ Bangladesh imposes curfew, bans flights ■ Pakistan sets up national coordination committee ■ Sri Lanka extends work-from-home period ■ Bangladesh, India extend lockdown	■ Bangladesh ends general holiday, focuses on health precautions ■ Pakistan announces "smart lockdown" ■ Nepal ends lockdown ■ Pakistan begins reopening ■ India removes curfew, allows small gatherings ■ Bangladesh removes all movement restrictions ■ Pakistan reimposes smart lockdown ■ India largely open									
	■ Bangladesh announces stimulus for exports ■ Pakistan fiscal package supports SMEs, industry ■ Bangladesh prepares large stimulus package ■ Pakistan eases loan payments ■ Bangladesh receives concessional loans for pandemic recovery ■ India approves stimulus funds for SMEs, infrastructure										
	■ Pakistan expands Ehsaas cash transfers ■ India approves funds for social protection, employment generation ■ Bangladesh extends FFP ■ Pakistan disburses cash to 12 million daily laborers										
	■ Bangladesh waives taxes on animal and fish feed ■ Pakistan supports wheat procurement, farm inputs ■ Bangladesh subsidizes fertilizer sector ■ India approves funds for agriculture ■ Pakistan launches support for farm inputs										
FOOD SECTOR INTERVENTIONS											
SOCIAL PROTECTION											
STIMULUS											

Source: For COVID-19 data, Johns Hopkins University, CSSE Database (updated March 8, 2021). For policy data, IFPRI, COVID-19 Policy Response Portal (accessed March 2021) and news reports.

Note: Countries and policies included here were selected to provide an indication of the types of actions taken in the region.

EAST AND SOUTHEAST ASIA

KEVIN CHEN AND YUE ZHAN

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COVID-19 is having an unprecedented impact on people's livelihoods worldwide and has triggered a severe global economic downturn. In East and Southeast Asia, however, successful containment in most countries is allowing for relatively rapid economic reopening and recovery. East Asia's continued upturn, especially China's, will be critical for recovery in the rest of the world. Despite the remarkable resilience of food systems, the effects of the pandemic on jobs and incomes in the agrifood sector have been severe and demand broad social protection programs. In addition, interregional trade and cooperation can contribute to the region's recovery. COVID-19 has been a resounding wake-up call to better prepare our food systems for future pandemics and other disasters. East and Southeast Asian countries can use the recovery as an opportunity to increase investments in reorienting food systems toward more sustainable and resilient trajectories, while simultaneously addressing inequality and accelerating productivity through the development of digitalization in the agrifood sector on a much greater scale.

LOCKDOWNS AND ECONOMIC LOSSES

In response to the COVID-19 outbreak that emerged in East Asia in late 2019, countries in the region employed more stringent containment measures than elsewhere, including mandatory lockdowns, closing of schools and government offices, and restrictions on travel, public gatherings, and religious activities.¹ On average, countries in the region declared lockdowns or a state of emergency about 17 days after confirmation of 50 cases.² As of late 2020, East and Southeast Asia had, by and large, outpaced other developing regions in containing the pandemic. Some

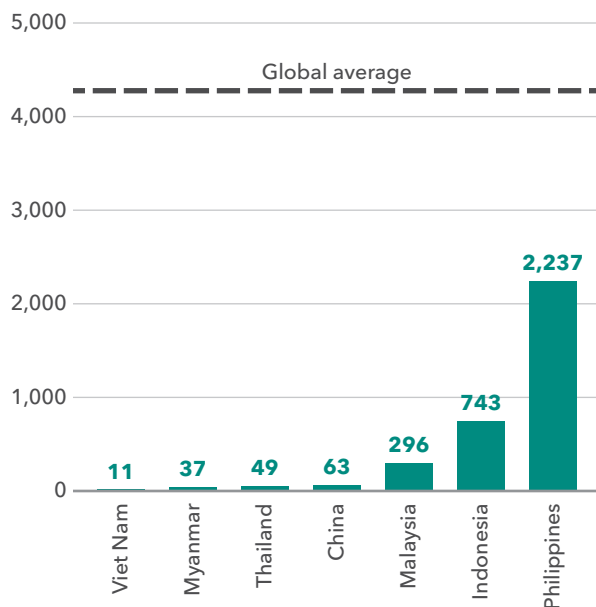
countries, like China and Viet Nam, were already enjoying a revival of economic activity as of early 2021, with restrictions on mobility to stem the pandemic largely eased. Others, including Indonesia, the Philippines, and Myanmar, are still struggling to curb the virus's spread (Figure 1) and have therefore kept in place or reintroduced restrictions, which are having severe economic consequences.

Economic growth in East and Southeast Asia as a whole slowed significantly in 2020. Estimates suggest that the region's total GDP grew by just 0.9 percent³ – with 2 percent growth in China offsetting the 3.5 percent contraction in the rest of the region (Figure 2). In 2021, regional growth is projected to accelerate to 7.4 percent.⁴ East Asia's recovery, especially China's strong performance, should help fuel a global rebound.

Remittances from outside the region are estimated to have declined by 13 percent in 2020 as a result of the pandemic;⁵ but the pandemic's effect on domestic remittances from urban to rural areas is less clear. With many urban workers losing jobs and moving back to rural areas, the likely decrease in domestic remittances will hurt many rural households. In Myanmar, for example, the sharp decline in both domestic and international remittances is likely to continue for at least a year, pushing many households into poverty and food insecurity.⁶

The most serious impact of the pandemic in the region has been the devastating loss of jobs and livelihoods. Poverty in developing East and Southeast Asian countries could increase for the first time in 20 years – and with it, food insecurity.⁷ Poor households facing income losses will be forced to reduce food expenditures and replace expensive foods like meat and vegetables with less nutritious options.⁸ Estimates from the World Food Programme suggest

FIGURE 1 Total COVID-19 cases per million people



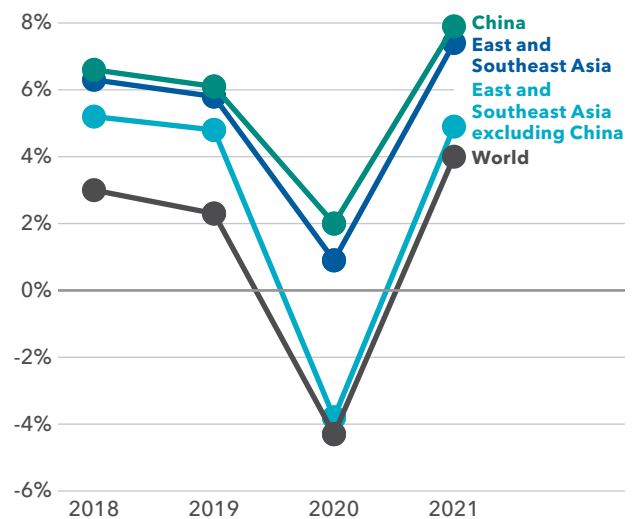
Source: Johns Hopkins University, CSSE COVID-19 Data, February 2021 update.

Note: COVID-19 cases are cumulative through early September.

that the number of food insecure people in the region (excluding China) rose from roughly 93 million in February 2020 to about 112 million in June.⁹ While this figure has since declined slightly – to about 108 million as of mid-September 2020 – the crisis may have lasting effects on diets and incidence of undernutrition among the poor.

To help ease these economic burdens, almost every country in the region has implemented social protection and food assistance programs, which are essential for addressing rising food insecurity.¹⁰ Measures include food aid, cash transfer programs, support to small and medium enterprises, easier access to loans, tax breaks, subsidies, and in-kind transfers including food or food vouchers and school feeding programs. Cambodia, China, Indonesia, Mongolia, and Viet Nam have all enacted some form of exemption, reduction, or deferral of social security contributions. Several countries have also increased unemployment benefits and eased requirements for receiving these benefits. A remaining challenge is to reach the urban poor, particularly those in the informal sector who are not covered by existing social protection systems or cannot access

FIGURE 2 GDP growth projections



Source: World Bank, *World Bank Global Economic Prospects*, January 2021.

public services. Inequality needs to be addressed in both short-term stimulus measures and long-term policy changes for food system transformation.

DISRUPTIONS TO THE FOOD SYSTEM

Agricultural production has been less affected than other sectors by the global economic downturn. Globally, food supplies remained ample in 2020.¹¹ Pandemic restrictions did temporarily disrupt agricultural production in some areas through labor supply shortages and farmers' reduced access to inputs, but a major impact on agricultural production is now unlikely in the region, as East Asian countries have already begun to ease movement restrictions. However, natural disasters, such as Typhoon Vongfong, which destroyed thousands of hectares of agricultural land and displaced 200,000 people in the Philippines, may affect overall crop yields.¹²

Beyond the farm, COVID-19 has affected all segments of the food system, including processing, retailers, and markets. East Asian governments have prioritized keeping food supply chains functioning

and getting food to consumers. China was able to reduce food system disruptions by opening a “green channel” for agricultural inputs and food products, as well as exempting movement of food-system workers from COVID-19 lockdowns.¹³ Thailand created “war rooms” – joint working groups between government departments and relevant industries – to ensure supply of specific food products such as rice, livestock, fruits and vegetables, and processed foods.¹⁴ Delivery services for groceries and restaurant meals have expanded around the region, and in China, e-commerce companies added in-app features for contactless food delivery.¹⁵ These delivery platforms have helped minimize the risk of infection from crowded food markets.

Evidence from China shows that, while agricultural activities are often excluded from the disease-control policies that shut down many nonfarm activities, the indirect effects of restrictions are significant because the agriculture sector has become closely integrated with the rest of the economy, especially through agri-food processing industries. Many of these have been shuttered by lockdown policies, which affects agricultural production and other food system components.¹⁶

Local markets throughout the region have seen price increases and volatility resulting from supply chain disruptions. For instance, retail rice prices in Lao PDR and Thailand rose about 20 percent on average in January–April 2020 compared with the same months of 2019, but rice prices fell when harvests began later in 2020. On the whole, however, food supply chains have been remarkably resilient, and domestic food prices in the region have been largely stable.¹⁷ The significance of the pandemic for East and Southeast Asian food systems thus comes less from its impact on primary production and disruptions along supply chains than from the devastating effects on jobs and livelihoods.

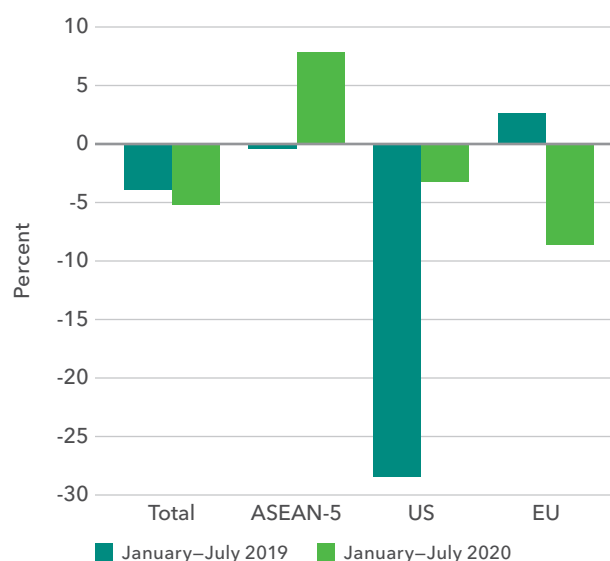
REGIONAL COOPERATION AND INTRAREGIONAL TRADE

Loss of income combined with uncertainty in 2020 have drastically reduced global demand for goods and services. As East Asian economies begin to recover, intraregional trade – particularly exports to China – has increased to replace trade lost with other regions.¹⁸ While data from China’s customs

agency suggest a decline in China’s imports from the European Union and United States (despite the ambitious targets set by the China-US Trade Agreement signed in early 2020), there was a 7.8 percent increase in imports from the ASEAN-5 countries in the first half of 2020. Since 2019, implementation of the upgraded China-ASEAN Free Trade Area protocol has further boosted China-ASEAN trade, including agricultural trade, and ASEAN became China’s largest trading partner for the first time in early 2020 (Figure 3). Recovery of food demand from China has been a boon for farmers in ASEAN countries, boosting their incomes during the economic recovery period. For example, Chinese imports of durian from both Thailand and Malaysia increased in 2020.¹⁹

In their initial responses to the pandemic, several East Asian countries implemented temporary export restrictions to protect domestic food supplies. For example, Viet Nam (the world’s third-largest rice exporter) imposed an export ban on rice, though later replaced the ban with a less restrictive export quota. Cambodia also imposed a rice export ban from early April to late May. Myanmar temporarily suspended

FIGURE 3 Change in China’s imports from the ASEAN-5, US, and EU, 2019 and 2020



Source: World Bank, *From Containment to Recovery*, East Asia and Pacific Economic Update, October (Washington, DC: 2020).

Note: ASEAN-5 countries are Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

the issuance of new export licenses from mid-March through April. Such restrictions can raise consumer prices and add to food insecurity, especially for import-dependent countries. For example, the price of Thai 5% broken rice, a benchmark global market indicator, immediately increased by about \$100 per ton (more than 20 percent) when Viet Nam imposed its export ban. Other trade barriers were imposed to prevent cross-border transmission of the pandemic. For example, Indonesia and the Republic of Korea initially prohibited imports of animals and animal products from China in January and February. Such measures may remain in place for some time, with serious impacts on the global food system.²⁰

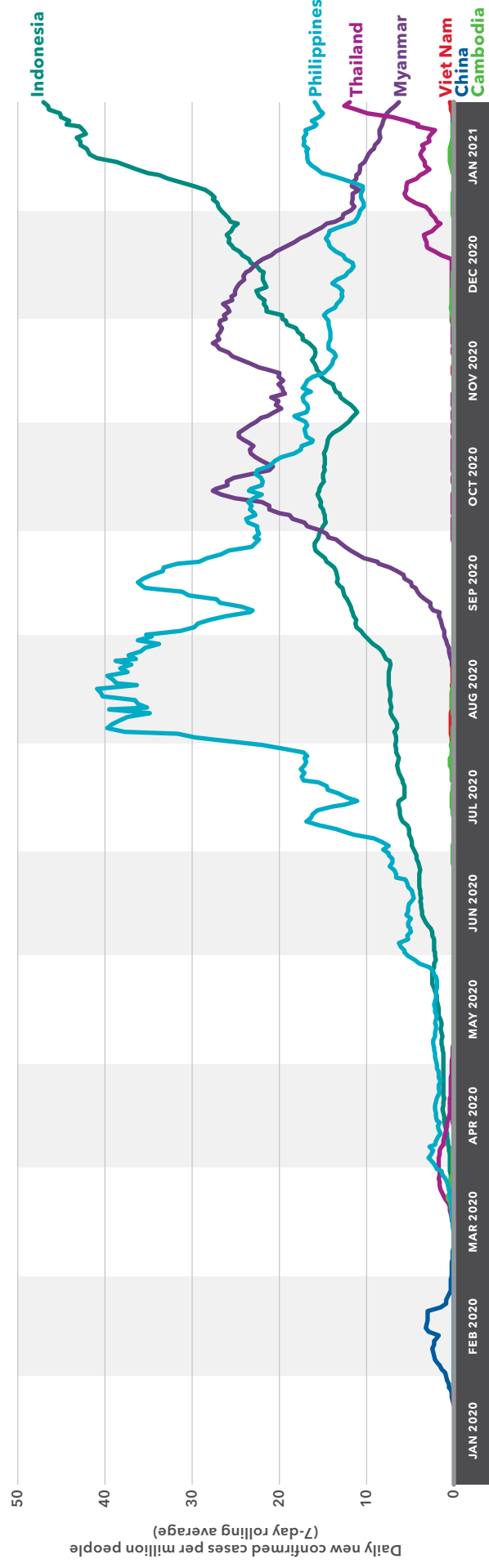
Fortunately, East and Southeast Asian countries have recognized the problematic nature of food export restrictions, and most have been lifted. The ASEAN Ministers of Agriculture and Forestry released a joint statement on suitable measures to overcome pandemic-related challenges and ensure the sustainable supply of sufficient, affordable, safe, and nutritious foods that meet the dietary requirements of ASEAN populations.²¹

The signing of the Regional Comprehensive Economic Partnership (RCEP) Agreement between ASEAN countries and partners – China, Japan, Republic of Korea, Australia, and New Zealand – in November 2020 provided crucial momentum to its members' strong commitment to pursuing free trade and strengthening regional supply chains for post-pandemic economic recovery and stronger food systems.²² The growth of regional cooperation can also provide additional food supply safety nets to address the negative impacts of the pandemic. For example, the ASEAN Plus Three Emergency Rice Reserve (APTERR) has stockpiled 787,000 tons of rice, with 87,000 tons contributed by ASEAN member countries and 700,000 tons from China, Japan, and Korea, which can effectively address short-term emergencies.²³ There are strong linkages within the region, and interdependencies among countries and food systems are no exception. Working together allows these countries to exchange lessons learned, address food system issues at the regional level, and build more resilient food systems for the future.

TOWARD AN INCLUSIVE, SUSTAINABLE, AND RESILIENT TRANSFORMATION

Even before the pandemic, there was a need for food system transformation that enhances nutrient-rich diets and public health, sustainable natural resource management, and resilience to climate change. The recovery phase offers an opportunity to address inequalities and gaps in social safety nets to ensure food security and nutrition for all. With social distancing and quarantine measures unlikely to disappear any time soon, given the potential for new outbreaks, food supply chains will require expanded use of digital innovations such as online platforms to optimize logistics and services. Longer-term responses should accelerate wider adoption of agricultural technologies such as remote sensing and geographic information systems (GIS) to address the impacts of climate change and environmental and natural resource degradation. To enhance prevention and preparedness for the multitude of shocks that can affect food systems, sustained financing is also needed – guided by data and analysis – to support improvement of risk management systems, diversification of income sources, more sustainable farming practices, and a shift away from those agricultural systems that are most vulnerable to shocks.

EAST AND SOUTHEAST ASIA COVID-19 TIMELINE, JANUARY 2020–JANUARY 2021



	JAN 2020	FEB 2020	MAR 2020	APR 2020	MAY 2020	JUN 2020	JUL 2020	AUG 2020	SEP 2020	OCT 2020	NOV 2020	DEC 2020	JAN 2021
LOCKDOWNS AND HEALTH MEASURES	■ China closes Wuhan market, possible source of outbreak ■ China imposes travel restrictions and partial movement restrictions in Wuhan and other cities ■ Viet Nam declares a state of emergency and bans all flights to and from China ■ Joint statement from ASEAN Defense Ministers on COVID-19 ■ Thailand closes all borders and bans foreign visitors ■ Indonesia declares a public health emergency												
	■ China encourages lending to SMEs and supports delay of loan payments ■ Indonesia announces a stimulus package (US\$725 million) ■ Thailand plans for a new stimulus package worth 10% of GDP ■ Myanmar announces IMF- and JICA-funded stimulus programs												
SOCIAL PROTECTION	■ Philippines approves program for low-income families and health workers ■ Thailand announces payments to 8.4 million farming households ■ Cambodia launches a cash relief program for 600,000 vulnerable families ■ Myanmar provides cash handouts to affected households												
FOOD SECTOR INTERVENTIONS	■ Indonesia and Rep. of Korea prohibit animal and animal-product imports ■ China opens "green channel" for the movement of agrifood products ■ Viet Nam and Cambodia impose rice export bans ■ Myanmar provides in-kind food transfers to vulnerable households ■ Most countries exempt food from movement restrictions ■ Thailand creates "war rooms" for specific food products												
	■ Asian countries sign Regional Comprehensive Economic Partnership Agreement (RCEP)												

Source: For COVID-19 data, Johns Hopkins University, CSSE Database (updated March 8, 2021). For policy data, IFPRI, COVID-19 Policy Response Portal (accessed March 2021) and new reports.

Note: Countries and policies included here were selected to provide an indication of the types of actions taken in the region.

LATIN AMERICA AND THE CARIBBEAN

EUGENIO DÍAZ-BONILLA AND VALERIA PIÑEIRO

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Countries in Latin America and the Caribbean (LAC) have been hit hard by the COVID-19 pandemic. In terms of death rates per 100,000 people, 8 LAC countries, as of this writing, are among the top 20 countries in the world.¹ Since late February and early March 2020, when most of the first cases were registered, LAC governments have reacted with diverse policies, from strong lockdowns in countries such as Argentina, Chile, and Peru, to allowing economic activities to continue largely uninterrupted, as in Brazil and Mexico. However, despite substantial commitments to health interventions, social protection, and employment support, the region's GDP likely declined by about 8 percent in 2020, compared to a decline of less than 4 percent for all emerging and developing countries.² As a result, the pandemic will have long-term economic and nutritional impacts.

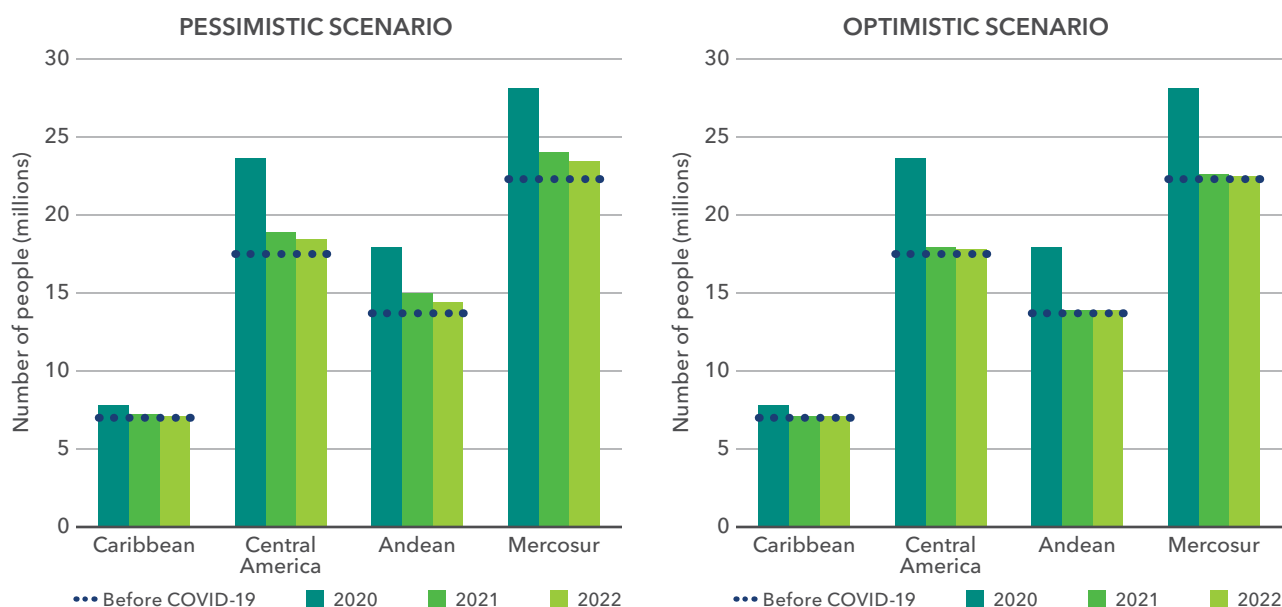
Post-pandemic, the region will need to expand support for long-term transformation of LAC food systems and redesign safety nets to address both the lingering impacts of the crisis and the vulnerabilities that underlie these impacts. Agricultural R&D systems will need to focus not only on the challenges of productivity and climate change adaptation and mitigation, but also on making food systems resilient to pandemics and other health shocks. Given the key role that LAC, the world's leading net food exporting region, plays in global food supply and global environmental sustainability and biodiversity, the region's management of the current pandemic and its aftermath will have planetary repercussions.

A combination of characteristics that distinguish the LAC region makes LAC countries particularly vulnerable to the pandemic. First, living and working conditions facilitate the spread of the virus. LAC is more urbanized than other developing regions, with

about 80 percent of the population living in urban areas. This leads to more person-to-person contact. In addition, roughly half of employment is in informal activities, a proportion that is even larger for low-income groups. These activities often require in-person presence and provide no unemployment insurance. Second, already existing health conditions aggravate the impact of the virus. The rates of overweight and obesity in LAC are among the highest in the world. These conditions make people more vulnerable to the virus, both directly and through the associated noncommunicable diseases. At the same time, health systems have suffered because of the region's economic stagnation in recent years. These economic problems have also affected the vitality of LAC's democracies, reducing people's confidence in their governments, which may weaken political support for enforcement of, and compliance with, pandemic-related restrictions.³

Latin America's governments have implemented a variety of health measures to control the coronavirus (mostly lockdowns and closing of borders, and to a far smaller degree testing and contact tracing), while stepping up treatment efforts. Lockdowns and concerns about contagion among the population led to significant declines in mobility and economic activity. Therefore, governments also rolled out economic and social policy initiatives designed to mitigate the loss of income and employment that is affecting families and firms. To pursue these policies, countries have increased their public expenditures and injected additional liquidity into their economies through monetary policies. Yet, the size of the COVID-19 packages has differed significantly.⁴ Brazil, Peru, and Chile have spent well over 5 percent of GDP through fiscal measures, plus similarly large injections of liquidity, while

FIGURE 1 Number of people who cannot afford a nutrient-adequate diet



Source: E. Díaz-Bonilla, D. Laborde, and V. Piñeiro, *Covid-19: The Impact on Food Security in Latin America and the Caribbean* (Washington, DC: InterAmerican Development Bank, forthcoming).

Mexico and Colombia have spent the equivalent of 1 percent or less of GDP. Spending and monetary interventions in other countries, such as Argentina and Honduras, fall in between.

LONG-TERM IMPACTS

To explore the likely consequences of the pandemic and the policy responses over the longer term, we used IFPRI's MIRAGRODEP model to analyze some scenarios for 2021 and 2022 in LAC, focusing on poverty and nutrition.⁵ Regional GDP is expected to recover from its low point during the pandemic, but will still be lower in 2022 than it would have been if the pandemic had not occurred. As a result, the number of extreme poor (those living on US\$1.90 PPP per day or less) is estimated to have increased by about 11.7 million people in 2020, and will remain above 2019 levels – by somewhere between 500,000 (optimistic scenario) and 1.7 million (pessimistic scenario) people – in 2021 and 2022.

The simulations also considered the impacts on nutrition, mostly driven by incomes and wages, using different types of diets.⁶ Here, we report the results for

a “nutrient-adequate diet” – that is, a diet providing adequate calories plus minimum levels of all essential nutrients (Figure 1). Before the pandemic, about 60.5 million people in the region were unable to afford a nutrient-adequate diet. This number is expected to have increased by 17 million in 2020, reaching over 77 million. As the economy recovers, more people will be able to afford this diet again, but in 2022 there will still be between 800,000 and 2.8 million *more* people unable to afford an adequate diet than before the pandemic.

POLICIES FOR THE LONG-TERM TRANSFORMATION OF FOOD SYSTEMS

The long-term transformation of Latin America's food systems will need to address the vulnerabilities that have been highlighted by the pandemic, while also dealing with the structural problems existing before COVID-19. Because of the sustained negative impacts on poverty and nutrition, LAC's social safety nets and nutrition programs will need to be reevaluated. Before the pandemic, the region was spending about 1.5 percent of GDP on social protection (including

a variety of safety-net and food programs), but with large differences across countries.⁷ Additional expenditure on social protection will be needed, as well as adjustments in design and coverage, to address not only the poverty and food insecurity that predate the pandemic but also to reach the “new poor” affected by pandemic-induced economic disruptions.

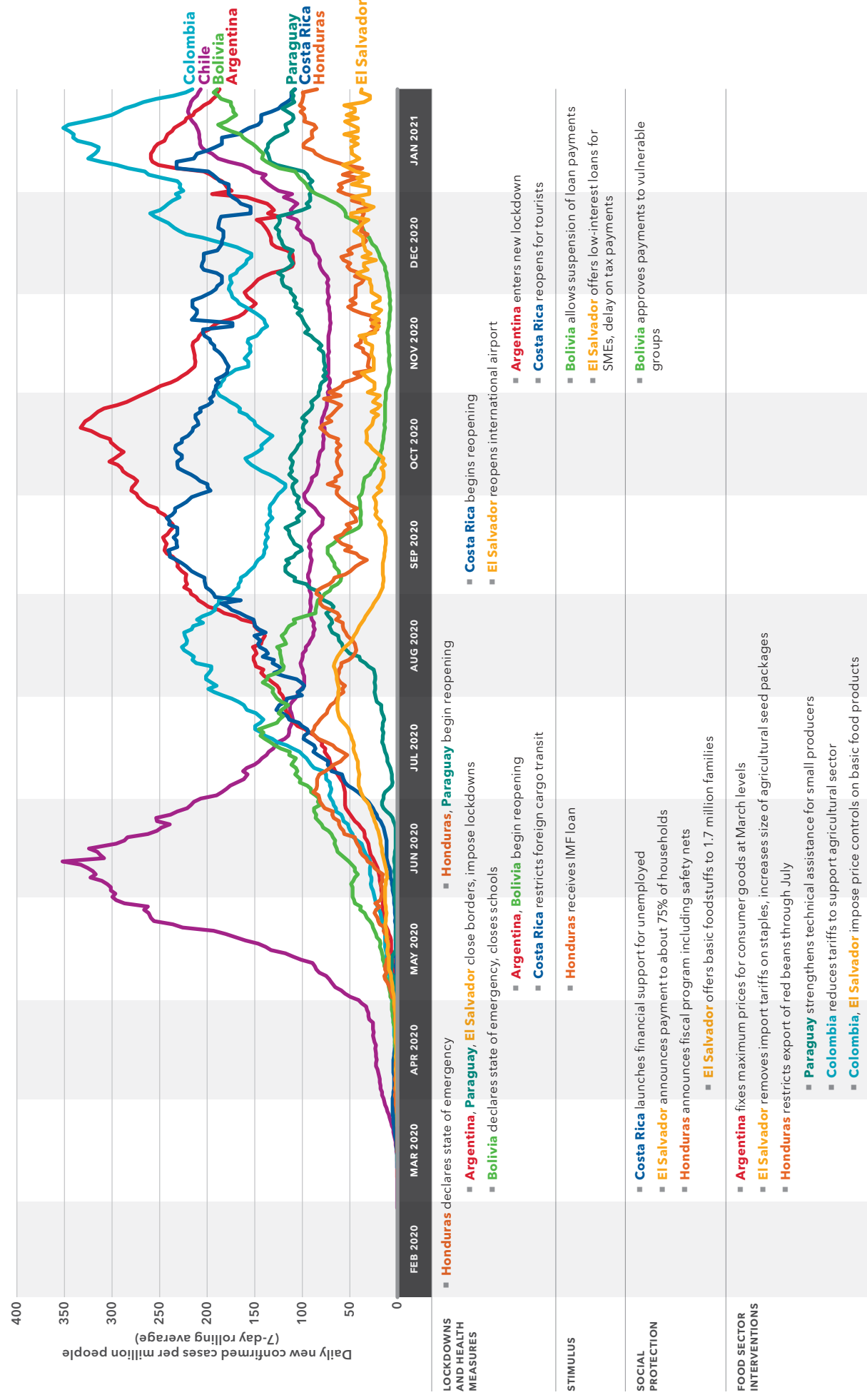
In addition to policies aimed at sustaining incomes and food access (that is, the demand-side interventions discussed above), government policies and interventions must keep food value chains operating (that is, the supply side). As yet, food value chain operations have not suffered significant disruptions, although there were localized problems in some countries leading to temporary price increases and availability concerns. Also, hurricanes in Central America and droughts in South America in 2020, combined with the lagged effect of the pandemic, may generate some supply problems in 2021. All such developments will need to be monitored. More generally, governments should aim to make food value chains more resilient to current and future shocks. Continued support will be needed for small and medium enterprises in food systems and for small farmers through both fiscal and monetary instruments, such as tax relief and soft loans.⁸

Most LAC countries will also need to invest more in agricultural R&D, not only to improve productivity and to adapt to and mitigate climate change, but also to make food value chains more resilient to health shocks. The current pandemic, like its precursors such as SARS and avian flu, have shown the complex interactions within food chains between animal health and human health.

Management of the additional debt and monetary expansion entailed by the pandemic response will also be a challenge for several countries in the region. Those with dollarized economies will confront even tighter constraints to financing an adequate long-term response in the critical areas of health interventions, expansion of safety nets, and production and employment support.

The long-term impact of the pandemic in LAC has important implications not only for the people of the region, but also for the Sustainable Development Goals and for the planet. LAC plays a central role in terms of global food supply and environmental sustainability.⁹ How the region manages the pandemic in 2020 and moves toward a sustainable transformation of the region’s food systems will have global implications.

LATIN AMERICA AND THE CARIBBEAN COVID-19 TIMELINE, FEBRUARY 2020–JANUARY 2021



Source: For COVID-19 data, Johns Hopkins University, CSSE Database (updated March 8, 2021). For policy data, IFPRI, COVID-19 Policy Response Portal (accessed March 2021) and news reports.

Note: Countries and policies included here were selected to provide an indication of the types of actions taken in the region.