SAVING LIVES
CHANGING LIVES

COVID-19: Potential impact on the world's poorest people

A WFP analysis of the economic and food security implications of the pandemic[1]

WFP
World Food Programme

April 2020

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WFP is on the frontlines tackling the **COVID-19 pandemic** - working to maintain its **food assistance** that provides a critical lifeline to **87 million vulnerable people** across the world, while providing expert logistics support to the multi-agency international response. WFP analysts constantly monitor markets, food prices and trends to provide actionable food security information.

Introduction

Today, more than 821 million people regularly go to bed hungry, of whom 100-plus million suffer from acute hunger, largely due to man-made conflicts, climate change and economic downturns.

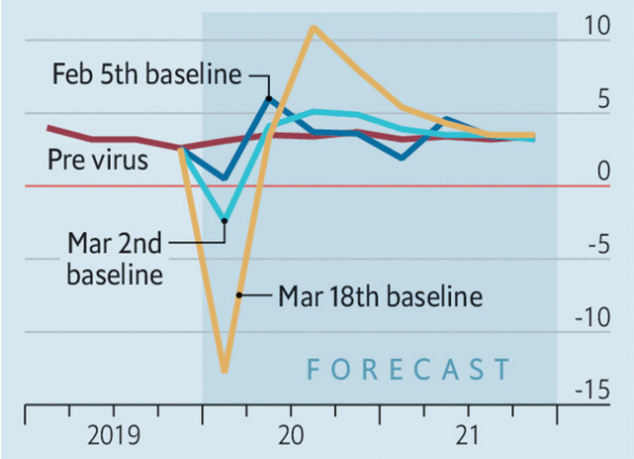
These are the people who will experience the unthinkable due to the economic or logistical consequences of the COVID-19 pandemic. Moreover, the depth and breadth of hunger will increase worldwide.

COVID-19 in rich and poor countries are two starkly different realities but connected by the thread of globalization and humanity. The only real hope for many is availability of affordable testing and treatment. But until then, just like in the rich countries where governments are undertaking extraordinary measure to protect their citizens, we must make sure that tens of millions of people already on the verge of starvation do not succumb to this virus or to its economic consequences.

The outlook for the world economy

Projections from the Economic Intelligence Unit (17 March) expect global growth of one percent this year, the slowest rate since the global financial crisis. Oxford Economics projects zero growth, while Deutsche Bank foresees quarterly declines in GDP growth to "substantially exceed anything previously recorded going back to at least World War II".

FIGURE 1: Percentage change of world GDP on previous quarter (annualised)



Notes: World GDP is computed as a weighted average of Euro are, US, China and Japan

Source: The Economist (based on data from Deutsche Bank)

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Global cereal markets show some fragility

While global markets for basic cereals are well supplied and prices generally low, commodities need to move from the world's 'breadbaskets' to where they are consumed. COVID-19-related containment measures have started to make this more challenging. A major grain-export port in Argentina blocked trucks,[2] and Brazilian workers are considering a strike over safety concerns at Latin America's biggest port for exports of corn and soybeans.[3] Numerous ports have begun health inspections[4] and could require more procedures such as a disinfection of vessels.

Meanwhile, the French grain industry struggles with shortages of staff and lorries amidst rising export demands and panic-buying.[5] These factors have contributed to an uptick in global benchmark prices for cereals. Big importers or governments may lose confidence in the reliable flow of basic food commodities around the globe. Resulting panic purchases would drive prices up. "It is not a supply issue, but it is a behavioural change over food security. What if bulk buyers think they can't get wheat or rice shipments in May or June? That is what could lead to a global food supply crisis," says a seasoned grain market analyst at FAO.[6]

2 https://www.reuters.com/article/us-argentina-grains-port/argentine-grain-port-blocking-trucks-from-entering-shipments-unaffected-export-chamber-idUSKBN2173OY

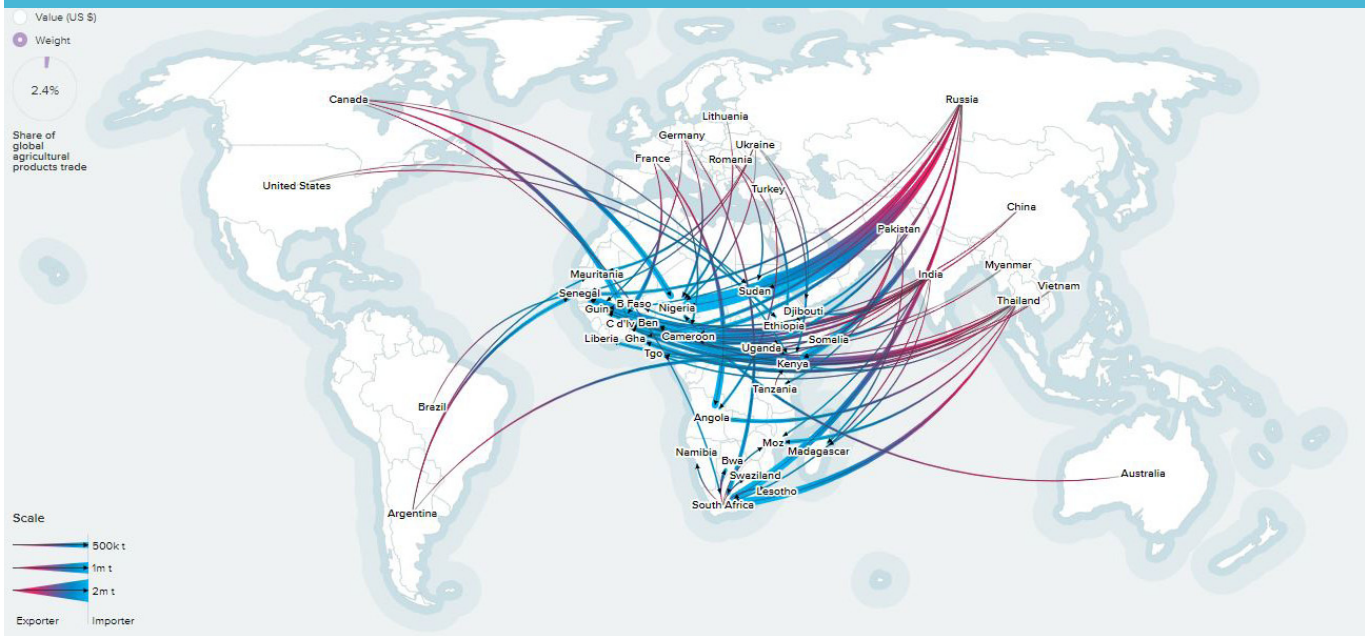
3 https://www.reuters.com/article/us-health-coronavirus-brazil-ports/brazil-dock-workers-mull-strike-at-key-port-due-to-coronavirus-idUSKBN2173LZ

4 https://www.nepia.com/industry-news/coronavirus-outbreak-impact-on-shipping/

5 https://www.reuters.com/article/us-health-coronavirus-france-grains/french-grain-industry-in-logistics-scramble-as-shoppers-bulk-buy-idUSKBN21736C

6 https://www.reuters.com/article/us-health-coronavirus-food-security/panic-buying-lockdowns-may-drive-world-food-inflation-fao-analysts-idUSKBN21808G

FIGURE 2: Sub-Saharan African cereal imports in 2018



Source: https://resourcetrade.earth/

What global economic turmoil means for trade-dependent countries

Trade underpins food security in food-deficit countries, filling gaps left by local production shortfalls. Each year, the world's transport system moves enough maize, wheat, rice and soybean to feed 2.8 billion people.[7] Sub-Saharan African countries imported more than 40 million tons of cereals from around the world in 2018 (Figure 2). However, cereal trade also exposes food-importing countries to systemic risks such as price swings in international markets.

The same dynamics play out on the export side. Lower middle-income countries such as Nigeria and Angola will be deprived of a large share of export revenues, predominantly fuel for both. Various poor economies have already begun to see their currencies lose value. Countries who depend on both food imports and exports of, for example, oil or copper, will get two hits simultaneously (Figure 3). Judging by their trade patterns, Angola, Mozambique, Nigeria and Congo are among the most vulnerable. Cameroon, Ghana and Zimbabwe are further likely to feel a relatively strong impact.

Countries with significant levels of public debt will struggle to mobilize enough resources to respond to this crisis. Public debt exceeds 80 percent of GDP in Egypt, Mozambique, Pakistan, Sudan and Zambia. Meanwhile, countries with low foreign currency reserves will struggle to finance imports as they struggle to replenish revenues. Burundi, Palestine, South Sudan and Zimbabwe each have less than one-month worth of imports as foreign exchange reserves.

In addition to trade patterns, countries highly dependent on revenues from international tourism are likely to face challenges. This is particularly true for some Caribbean[8] and African countries. Tourism employs millions of people in Ethiopia, Kenya and Tanzania, while it accounts for more than 20 percent of employment in Seychelles, Cape Verde, São Tomé and Príncipe, and Mauritius.[9] Meanwhile, deteriorating economies will impede people's ability to send remittances back home, affecting livelihood support to millions of households.[10]

7 Rob Bailey and Laura Wellesley. 2017. Chokepoints and Vulnerabilities in Global Food Trade. Chatham House Report

8 *https://www.cepal.org/en/pressreleases/covid-19-will-have-grave-effects-global-economy-and-will-impact-countries-latin*

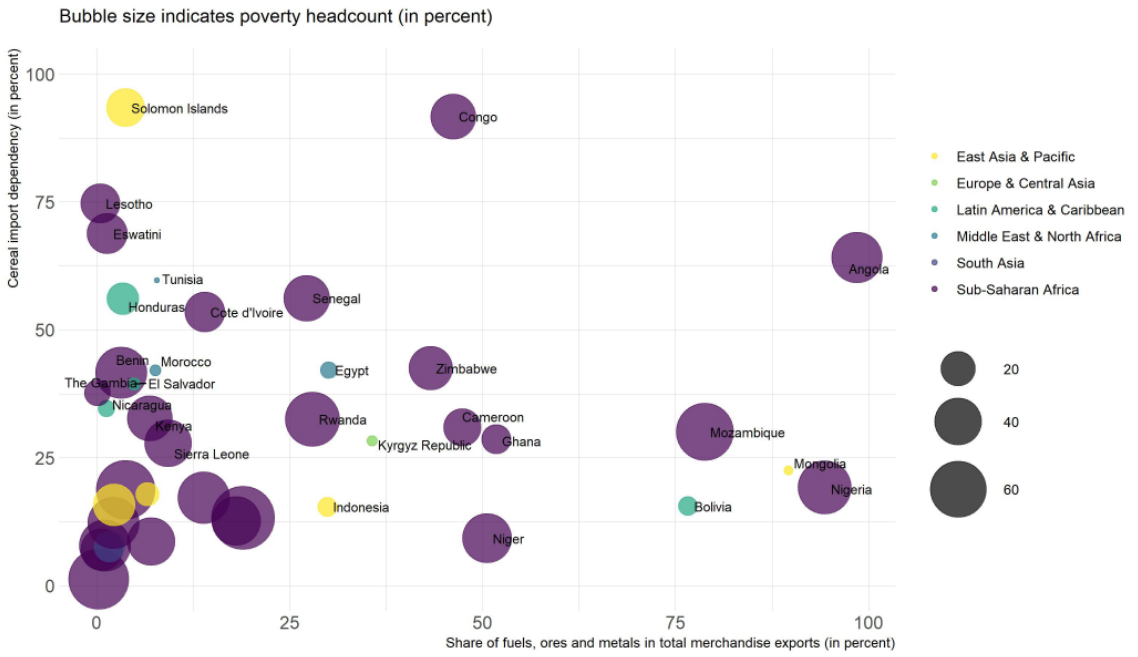
9 *https://www.brookings.edu/blog/africa-in-focus/2020/03/18/strategies-for-coping-with-the-health-and-economic-effects-of-the-covid-19-pandemic-in-africa/*

10 *https://www.brookings.edu/blog/africa-in-focus/2020/03/18/strategies-for-coping-with-the-health-and-economic-effects-of-the-covid-19-pandemic-in-africa/*

Countries with forthcoming key agricultural seasons – for example in the Horn of Africa, Central America and Caribbean, Western Africa and parts of Asia – may be affected by reduced agricultural labour due to containment, or lack of access to agricultural inputs due to supply chain disruptions.

Recent International Food Policy Research Institute simulations show that a 1 percent fall in growth of the world economy would push more than 14 million additional people into extreme poverty, if driven by paralyzed business and productivity. That number would rise to 22 million if the fall was caused by trade disruptions.[11]

FIGURE 3: Primary commodity exports and cereal import dependency



Notes: Cereal import dependency is calculated as the three-year average of (cereal imports – cereal exports)/ (cereal production + cereal imports – cereal exports). Latest available data is for 2011 to 2013.

Source: World Bank, FAOSTAT

The consequences of food-price spikes in low-income countries can be devastating and have long-term repercussions. The 2008 food-price crisis shows that poorest households, often female-headed and with a high dependency ratio, as well as casual labourers and petty traders, suffered disproportionately. They tend to spend the largest share of income on food, but typically don't have savings or access to credit. Rising food prices, thus, often resulted in an increase in the depth of poverty rather than pushing more people into poverty.[12] Food-security implications were dire.[12] Urban households were generally hit harder than rural ones – possibly because of a heavier reliance on markets to buy food, and a more direct link between urban-area traders and importers leading to higher price increases.

Assessments have shown that a loss of income through lost employment or remittances was the most prevalent impact on export-dependent countries in 2008. Households involved in export-related activities, such as cash-crop farmers or mine workers (that is, households in the upper lower-income range), were the most affected. Large numbers of migrant workers returned to their home countries, a phenomenon observed in Bangladesh, Armenia and Tajikistan.[14]

Coping strategies, due to higher food prices or lost income, came at the expense of services such as health or education.

11 *https://www.ifpri.org/blog/how-much-will-global-poverty-increase-because-covid-19*

12 Julia Compton, Steve Wiggins and Sharada Keats. 2010. Impact of the global food crisis on the poor: what is the evidence?

12 Issa Sanogo and Joyce K. Luma. Assessments of the impacts of global economic crises on household food security: innovative approaches, lessons and challenges. Issa Sanogo. The global food price crisis and household hunger: a review of recent food security assessments.

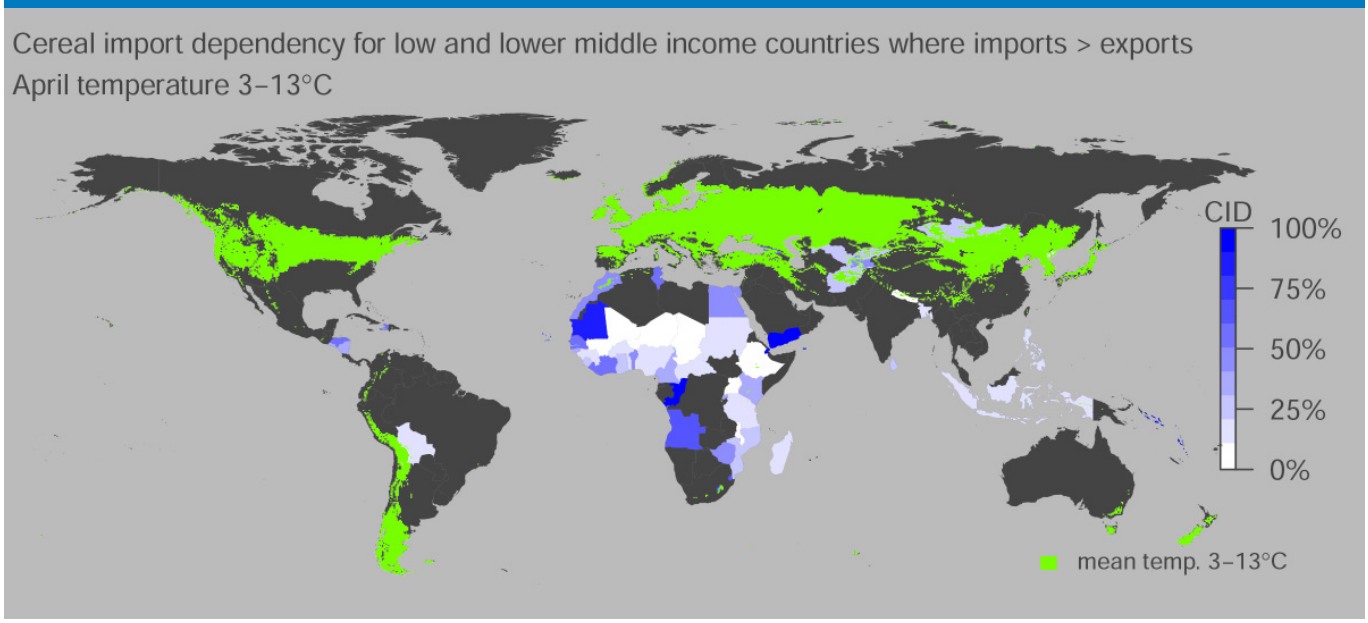
13 Qasim Bukhari and Yusuf Jameel. 2020. Will Coronavirus Pandemic Diminish by Summer?

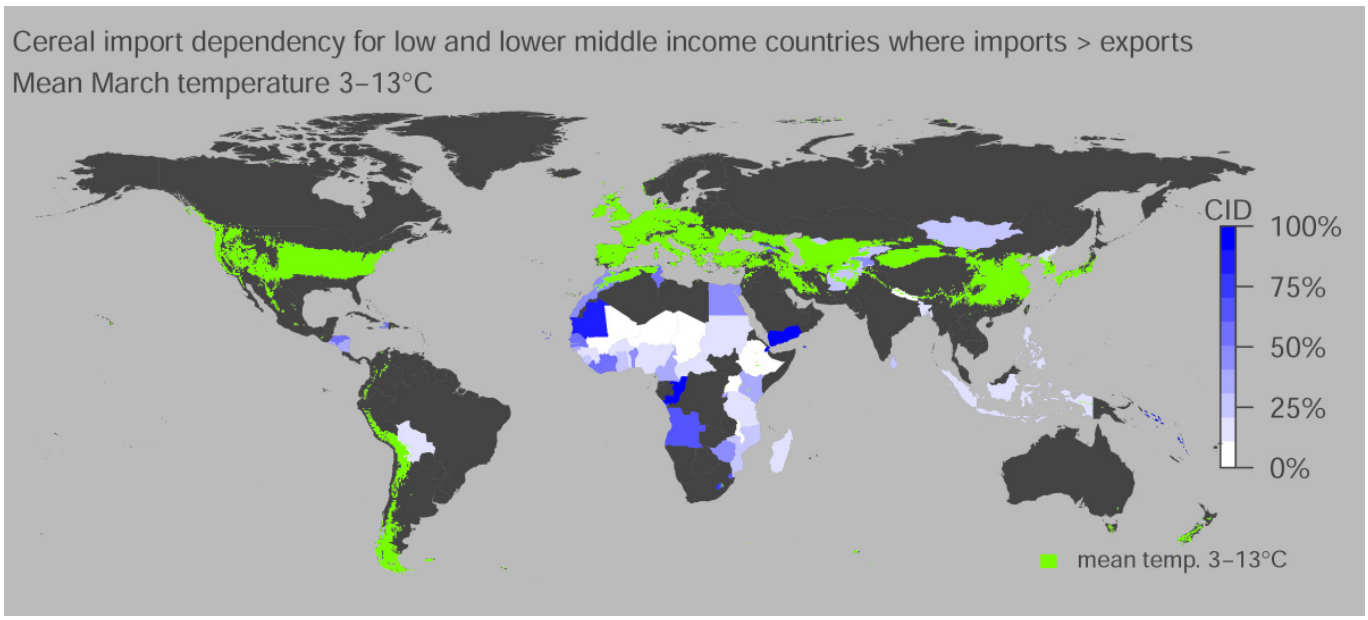
14 Miguel Araujo and Babak Naimi. Spread of SARS-CoV-2 Coronavirus likely to be constrained by climate

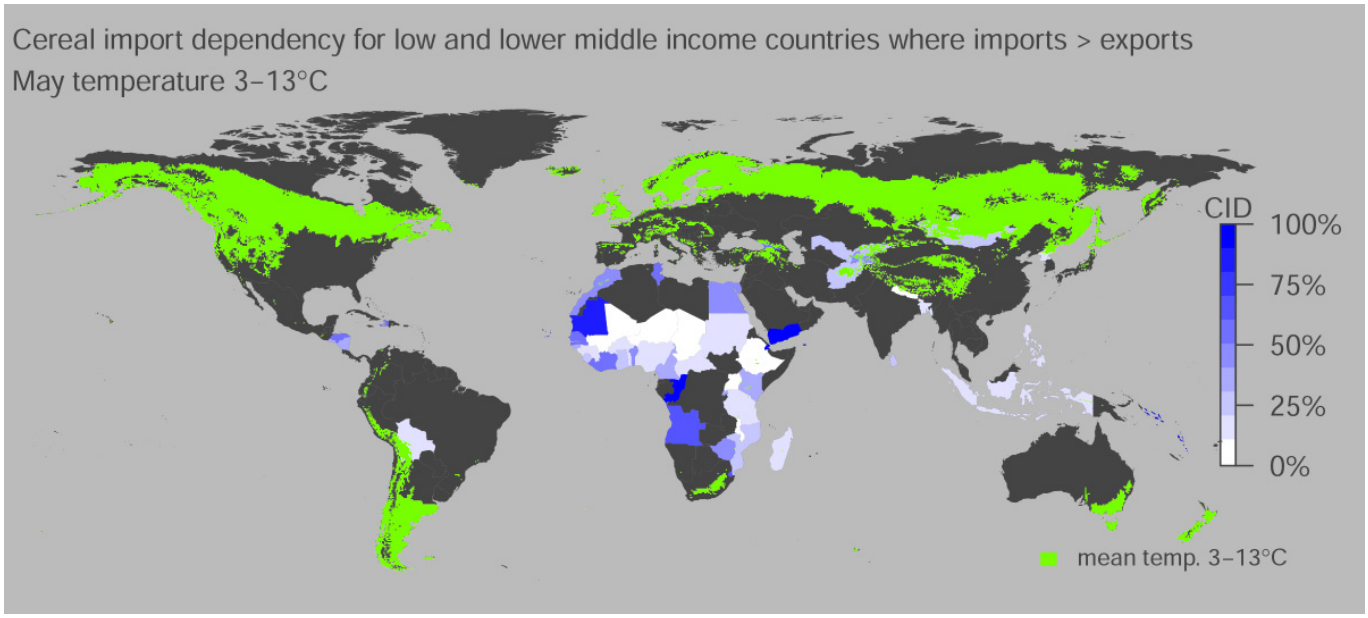
Findings on spread of COVID-19 bring good and bad news

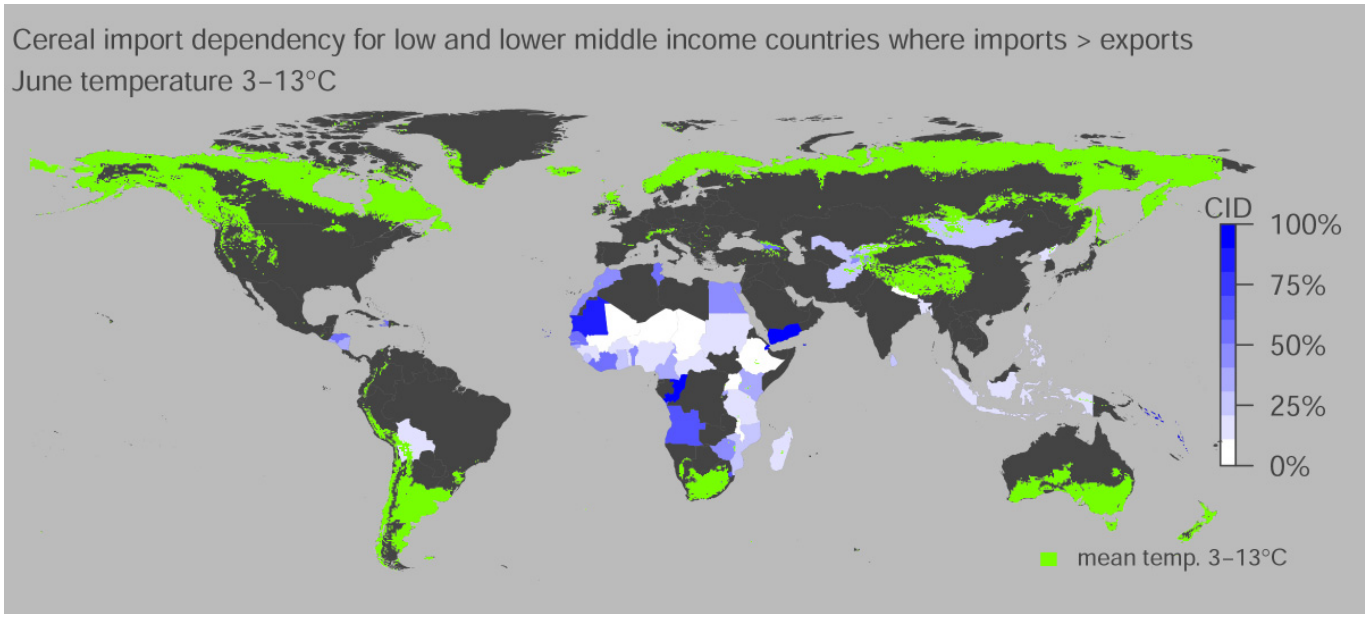
Research shows higher temperatures and humidity may correlate to a lower rate of transmission, as with influenza virus and SARS coronavirus. Researchers at MIT[13] report the maximum number of transmissions in regions with temperatures between 3 and 13 °C. In contrast, countries with mean temperatures above 18 °C have seen fewer than 5 percent of total cases. Another study[14] suggests 95 percent of positive cases occurring at temperatures between -2 and 10 °C. Their findings render a worst-case scenario of a simultaneous global pandemic improbable, should the spread of COVID-19 continue to follow current trends. More probable are asynchronous seasonal global outbreaks much like other respiratory diseases. People in temperate warm and cold climates are more vulnerable to COVID-19, followed by those in arid climates, while the disease will likely marginally affect the tropics.

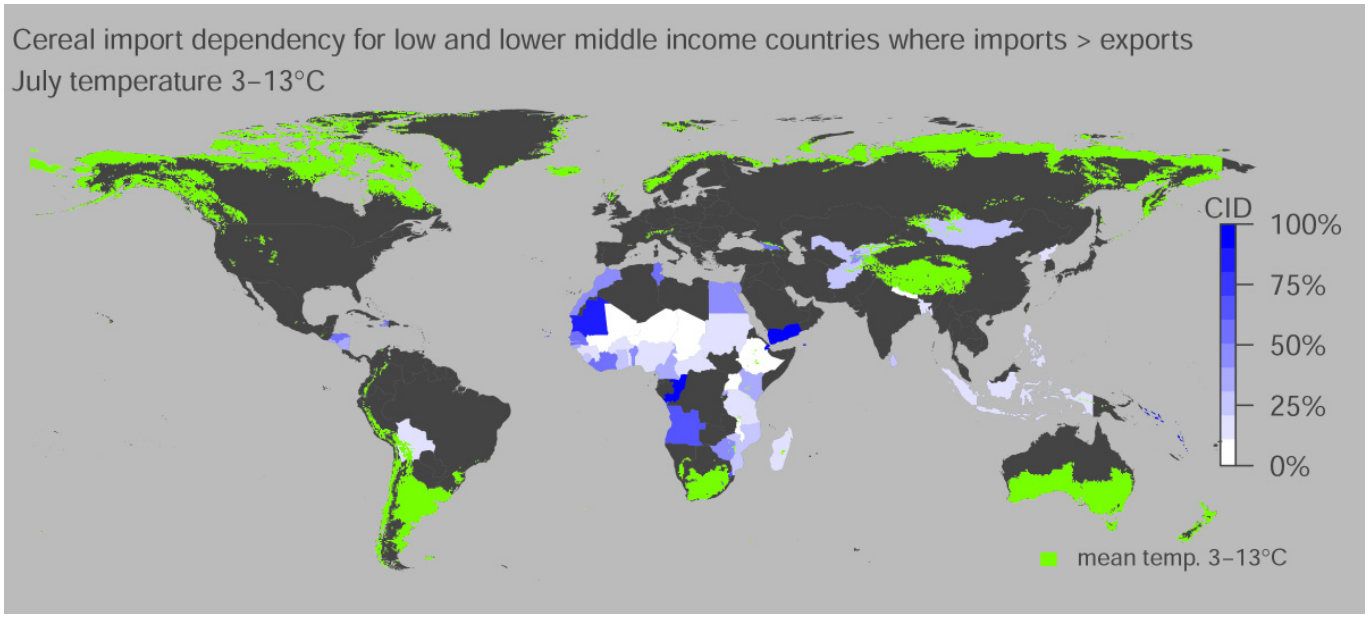
FIGURE 4: Temperature band (3 to 13 °C) conducive to the rapid spread of COVID-19 from March to July







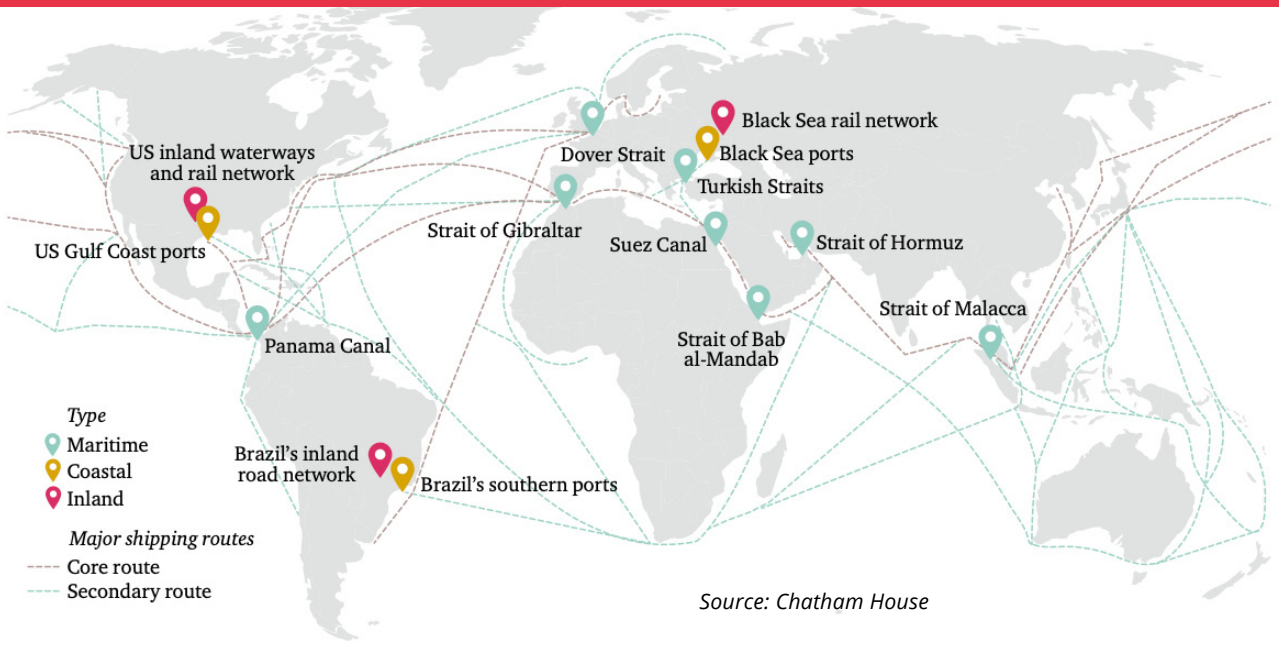




Source: CRU-TS 4.03 weather observations, downscaled with WorldClim 2.1

Downscaled, interpolated weather observations[15] have been used to map mean temperatures of 3 to 13 °C during 2010 to 2018, and where they might therefore be expected to occur again in coming months (Figure 4). Countries heavily dependent on cereal imports appear less prone to intensive local outbreaks. However, some major wheat exporters seem more prone to a rapid spread from May. More worryingly – given that logistical challenges are more likely to unsettle global markets for basic staples than a shortage of supplies – the same increased vulnerability holds for some critical junctures on transport routes (such as Black Sea ports, Figure 5). Chatham House analysis[16] warns that "a serious interruption at one or more of these chokepoints could conceivably lead to supply shortfalls and prices spikes". It adds that "more commonplace disruptions…can add to delays, spoilage and transport costs, constraining market responsiveness and contributing to higher prices and increased volatility". A severe outbreak of COVID-19 could disrupt the normal functioning of crucial ports, light instances of which have already been observed.

FIGURE 5: Maritime, coastal and inland chokepoints and major shipping routes



Source: Chatham House

These findings must be considered with utmost caution. Population density, age structure, quality of medical care, and government responses also affect transmission, probably even more than weather. In addition, there is fear that many COVID-19 cases go undetected – both because they are asymptomatic or due to limited testing capacity, especially in countries with weak public health systems and surveillance.

WFP is working to maintain its food assistance that provides a critical lifeline to 87 million vulnerable people.

15 Harris, I., P.D. Jones, T.J. Osborn, and D.H. Lister (2014), Updated high-resolution grids of monthly climatic observations - the CRU TS3.10 Dataset. International Journal of Climatology 34, 623-642.
Fick, S.E. and R.J. Hijmans, 2017. WorldClim 2: new 1km spatial resolution climate surfaces for global land areas. International Journal of Climatology 37 (12): 4302-4315.

16 Rob Bailey and Laura Wellesley. 2017. Chokepoints and Vulnerabilities in Global Food Trade. Chatham House Report

Which countries are at risk?

This analysis suggests that, for many poor countries, the economic consequences will be more devastating than the disease itself. Thus, to identify those at risk (Table 1), we use the economic pillar of the Proteus food security index combined with export dependency for primary commodities (fuels, ores and metals). There are almost 212 million chronically food-insecure and 95 million acutely food-insecure people in these countries. The large majority of these countries are in Africa, including highly export-dependent Angola, Nigeria and Chad, and highly import-dependent Somalia and South Sudan. Another region of concern is the Middle East, with countries such as Yemen, Iran, Iraq, Lebanon and Syria all facing severe economic problems.

Implications for humanitarian action

COVID-19 is unfolding from a global health into an economic emergency – and could further unravel into a food security emergency if supply chain disruptions lead to panic buying and anxiety starts to rule global food trade. Implications for humanitarian actors:

1. It is essential to monitor food prices and markets, and to transparently disseminate information. This will help to both strengthen government policies and avert public panic. WFP uses real-time, remote food-security monitoring in several countries. As the epidemic is increasing in severity in low-income countries, WFP's systems are being expanded to monitor effects on households, specifically access to and availability of health care, and the health of supply chains. Expanded monitoring systems will be in place in 15 countries within a week, to capture problems in real time and provide the information for early action and mitigation.
2. Where food insecurity is caused by restricted access rather than lack of availability, cash-based transfers (CBT) should be considered as a standard response. CBT can mostly be safely distributed via contactless solutions. They can help to stabilize markets affected by containment measures. WFP can play a key role here, as the largest cash provider in the humanitarian community. One of WFP's ongoing priorities has been to work with national governments to strengthen their own social-protection systems. Cash assistance is likely to be the default response of government-led shock-responsive safety nets in the face of COVID-19 – this approach will be crucial in helping societies and households to recover after the epidemic.
3. Planning in-kind food assistance is essential. The disruption of supply channels is expected to affect primarily higher-value items first, as they involve more tiers of suppliers, human interaction and dependency on few suppliers. This puts commodities such as specialized nutritious food more at risk than staple commodities. Global reserves of non-perishable grains such as wheat and rice should meet any surge in demand in the short term. Preparedness for transport disruptions should include: (i) seeking sourcing alternatives from different countries; (ii) procuring and pre-positioning inventory, in case of disruption due to border closures, quarantine or unavailability of supplies; (iii) securing sea and land transportation of humanitarian cargos ahead of time; and (iv) preparing for an increase of cost and lead-time throughout the supply chain. Building on its global network of strategically-placed Humanitarian Response Depots, WFP will establish international and regional staging areas to facilitate the dispatch of essential cargo on the behalf of partners; set up air transport links and contract charter vessels where shipping has been disrupted; and provide passenger air and Medevac services for humanitarian staff.

TABLE 1: Countries at risk

REGION	COUNTRY	CHRONICALLY FOOD INSECURE (undernourished)	ACUTELY FOOD INSECURE (IPC phase 3 or above)
CENTRAL AFRICA	Cameroon	2.4	0.5
	Central African Republic	2.8	1.9
	Chad	5.6	1
	Congo	2.1	
	DRC		13.1
	Sao Tome and Principe	0.0	
EAST AFRICA	Burundi		1.7
	Ethiopia	21.6	8.1
	Somalia		2.7
	South Sudan		6.1
	Sudan	8.2	6.2
SOUTHERN AFRICA	Angola	7.4	
	Mozambique	8.3	1.8
	Zambia	8.0	1.2
	Zimbabwe	8.5	1.9
WEST AFRICA	Benin	1.1	
	Gambia	0.2	0.1
	Ghana	1.6	
	Guinea	2.1	0.1
	Liberia	1.8	0.04
	Mauritania	0.5	0.5
	Niger	3.6	0.8
	Nigeria	25.6	5.3
	Sierra Leone	1.9	0.1
MIDDLE EAST & NORTH AFRICA	Algeria	1.6	
	Djibouti	0.2	0.15
	Iran	4.0	
	Iraq	11.1	2.5
	Lebanon	0.7	0.5

	Libya		0.3
	Palestine		1.7
	Syrian Arab Republic		6.5
	Yemen	11.0	15.9
EUROPE & CENTRAL ASIA	Armenia	0.1	
	Tajikistan		
EAST ASIA & PACIFIC	DPR Korea	12.2	
	Papua New Guinea		
	Timor-Leste	0.3	
	Vanuatu	0.1	
SOUTH ASIA	Afghanistan	10.6	10.6
	Bangladesh	24.2	1.3
	Bhutan		
	Nepal	2.5	
LATIN AMERICA & CARIBBEAN	Bolivia	1.9	
	Colombia	2.4	0.3
	Ecuador	1.3	0.02
	Haiti	5.4	2.3
	Peru	3.1	0.04
	Venezuela	6.8	

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