World Food Programme

Economic and food security implications of the COVID-19 outbreak

An update, based on the evolving economic outlook

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Introduction

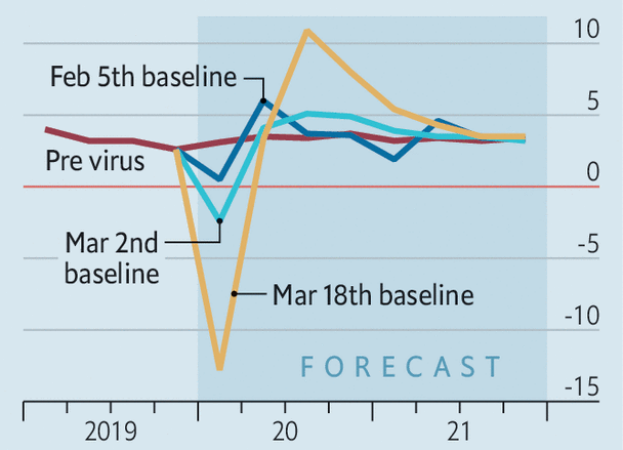
The number of hungry and malnourished people in the world has been gradually rising over the last three years largely due to man-made conflicts, climate change and economic downturns. Today, more than 821 million people regularly go to bed hungry and another 135 million people suffer from acute hunger. This was the situation before Covid-19 made its appearance in December 2019. These are the people who will experience the unthinkable if they cannot be reached due to the economic or logistical consequences of the disease. Elsewhere, it is clear that both the depth and breadth of hunger will increase world-wide.

Majority of poor countries have not yet experienced the brunt of this disease. But that must be viewed as a short window of opportunity to help pre-empt the worst of its effects on the most vulnerable people. People in high-risk poorest countries with weak healthcare and social protection systems are at stake and they must be prioritized for immediate assistance. People are not only at risk from the disease but also from the economic consequences which for some will be more devastating than the disease itself.

The outlook for the world economy has worsened over the past two weeks

With the extensive spread of COVID-19 across the world – by now, there are more than four times as many confirmed cases outside China as in the country with the initial large outbreak – and the increasing availability of economic data for China outlining the scale of the damage, the prospects for the global economy have deteriorated over the past two weeks (Figure 1). The most recent projections from the Economic Intelligence Unit, dated March 17, expect global growth of one percent this year, the slowest rate since the global financial crisis. Forecasts from Oxford Economics are even bleaker with a zero-growth projection for 2020, the second-weakest year for the global economy in almost 50 years of comparable data. More so, Deutsche Bank foresees quarterly declines in GDP growth "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)

However, as the current situation is unprecedented, all forecasts remain highly speculative. Uncertainty in markets is exceptional, reflected by the VIX index, which is based on stock market volatility and known as the "fear gauge", surpassing its record set during the financial crisis. Governments and central banks have sprung into action – and their decisive and bold actions could avert some of the grim outlook from turning reality.

Global markets for basic cereals hold stable, but 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. In an attempt to prevent the spread of the disease, a major grain export port in Argentina blocked trucks from entering last week[1]; and Brazilian dock workers are considering a strike at Latin America's biggest port for exports of corn and soybeans over safety concerns connected to the virus[2]. Numerous ports have further started to put health inspections in place[3] and could proceed to require more cumbersome procedures such as a disinfection of vessels, causing delays and potentially supply chain hiccups.

Meanwhile, the French grain industry struggles with shortages of staff and lorries amidst rising demand from exports – and from panic buying.[4] Such change in behaviour combined with logistical challenges contributed to an uptick in global benchmark prices for cereals last week with wheat futures in Chicago seeing their biggest weekly increase in nine months. This raises the question if also big importers or governments could lose confidence in the reliable and timely flow of basic food commodities around the globe and resort to panic purchases, driving 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.[5] A spread of anxiety in the market could the prompt

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

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

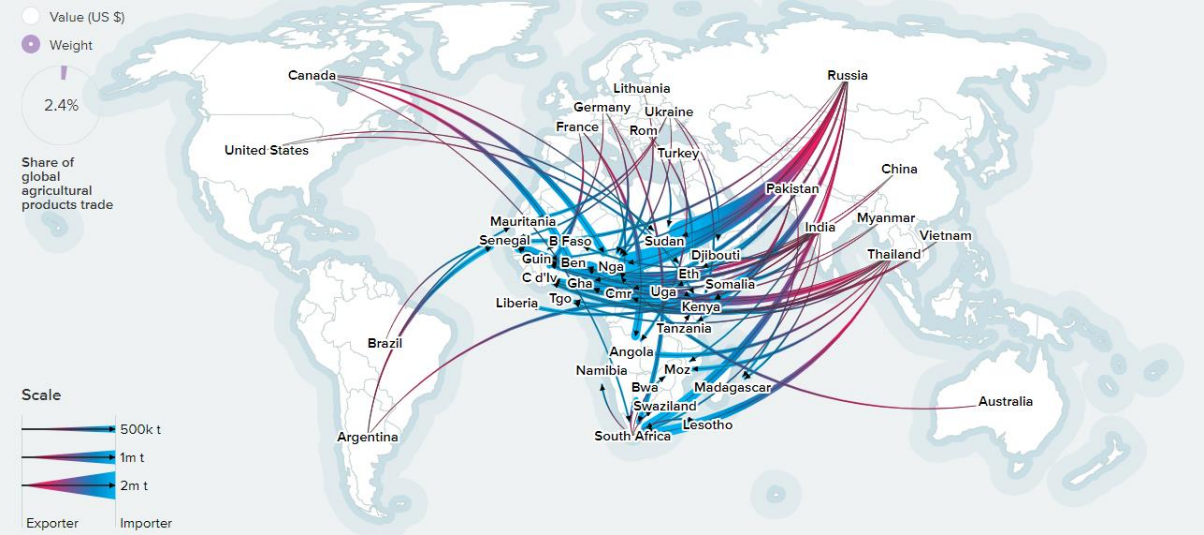
[3] https://www.nepia.com/industry-news/coronavirus-outbreak-impact-on-shipping/

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

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

government policies exacerbating price hikes – protective trade restrictions contributed to 2008's spikes in prices for basic food stuffs.

Figure 2: Sub-Saharan African cereal imports in 2018



Source: https://resourcetrade.earth/

Global economic turmoil can have severe implications for trade-dependent countries

Trade underpins food security by allowing food-deficit countries to compensate for local production shortfalls. Each year, the world's transport system moves enough maize, wheat, rice and soybean to feed approximately 2.8 billion people.[6] Sub-Saharan African countries alone imported more than 40 million tons of cereals from around the world in 2018, headed by Russian exports to Sudan (2.1 million tonnes) and Nigeria (1.5 million tonnes) (Figure 2). However, international cereal trade also exposes food importing countries to global systemic risks such as price swings in international markets. During the 2008 food price crisis countries dependent on global markets to buy basic cereals experienced the highest degree of transmission of from international to domestic prices, that is, saw the steepest increases in local prices.

However, poor countries' interlinkages with a contracting globalized economy do not only play out on the import, but also on the export side. Fuel accounts for more than 90 percent of merchandise exports for both Nigeria and Angola. With international prices for primary commodities in free fall, these lower middle-income countries will be deprived of a large share of their export revenues. Various export dependent poor economies have already begun to see their currencies lose value over the past week. Clearly, countries who both depend on food imports and exports of, e.g. oil or copper, will get hit at two fronts simultaneously (Figure 3). Judging by their trade patterns, Angola, Mozambique, Nigeria and Congo are among the most vulnerable countries. Cameroon, Ghana and Zimbabwe are further likely to feel a relatively strong impact from both the import and the export side.

Vulnerabilities through trade dependencies will unfold even more brutally when a country's macro-economic fundamentals are weak. This includes, for example, a high public debt burden and low foreign currency reserves. Countries with significant levels of public debt will struggle to mobilise enough resources to respond to this crisis as meeting current debt obligations takes away critical resources, exacerbating the loss of revenues for those dependent on commodity exports. Public debt exceeds 80 percent of GDP for Egypt, Mozambique, Pakistan, Sudan and Zambia. Meanwhile, countries with low foreign currency reserves will struggle to finance imports as they see possibilities

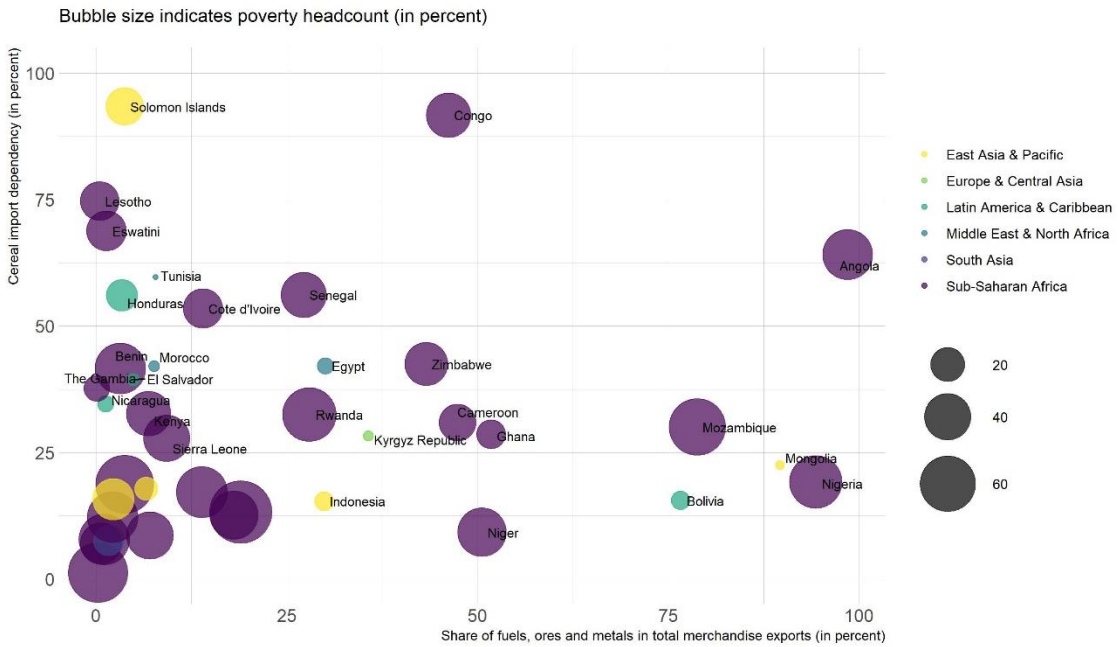
[6] Rob Bailey and Laura Wellesley. 2017. Chokepoints and Vulnerabilities in Global Food Trade. Chatham House Report

of replenishing state revenues dwindling amidst a shutdown of whole economies for several weeks to contain the spread of COVID-19. 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[7] and African countries such as Ethiopia, Kenya, and Tanzania where tourism employs millions of people, and Seychelles, Cape Verde, São Tomé and Príncipe, and Mauritius where tourism employment comprises more than 20 percent of total employment.[8] Countries which receive large amounts of remittances providing critical livelihood support to millions of households will be negatively impacted as economies around the world get hit impacting people's ability to send resources back home.[9] Countries with forthcoming key agricultural seasons (e.g. Horn of Africa, Central America and Caribbean, Western Africa and parts of Asia) may be impacted by reduction of agricultural labour due to containment measures or lack of access to agricultural inputs due to supply chain disruptions.

Recent IFPRI simulations of the impact of COVID-19 on global extreme poverty show that lowering growth in the world economy by one percent would push more than 14 million additional people into extreme poverty, in case the slowdown is driven by paralyzed business activity from COVID-19 containment measures. Even worse, if caused by trade disruptions, the number of newly extremely poor would rise to 22 million.[10]

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 domestic food price spikes in low income countries, even if short in duration, can be devastating and have long-term repercussions. Evidence from the 2008 food price crisis shows

[7] https://www.cepal.org/en/pressreleases/covid-19-will-have-grave-effects-global-economy-and-will-impact-countries-latin
[8] 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/
[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.ifpri.org/blog/how-much-will-global-poverty-increase-because-covid-19

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 their 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.[11] Food security implications were dire.[12] Urban households were generally hit harder than those in rural areas – possibly because of a heavier reliance on markets to buy food; and a more direct link between traders in urban areas and importers leading to higher price increases. Assessments found that, for example, in Greater Monrovia, Liberia, the share of households with an adequate diet tumbled from 64 to 40 percent. In some cases, households who had not previously suffered from hunger, were the most affected, such as low-paid government workers in Tajikistan. Moreover, there is evidence of adverse impacts of food prices on dietary quality, especially for children and mothers.

While the current unravelling crisis of the world economy is unprecedented, evidence from the 2008 financial crisis can provide insights of what it might hold for poor export dependent countries. Assessments have shown that a loss of income following lost employment or remittances was the most prevalent impact a decade ago. 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 number of migrant workers, now jobless, returned to their home countries, a phenomenon observed in Bangladesh, Armenia and Tajikistan.[9]

Strategies to cope with the loss of purchasing power due to higher food prices or lost income came at an expense, often for health or education. In Pakistan, the proportion of households unable to afford medical care rose from 6 percent in 2005/06 to 30 percent in 2008. In Zambia, mine workers often lost access to good health services with their jobs, which had serious implications for HIV/AIDS- and TB-affected households. Assessments in Lesotho, Liberia, Nepal, Pakistan, Tajikistan and Yemen found school drop-outs, increased migration, child labour and the sale of productive assets in response to higher food expenditures. Offering momentary access to food, these coping strategies can reinforce poverty, lead into poverty traps and, thus, have long-term consequences. The poorest households often resorted to food-related coping strategies, compromising quality and quantity of food, and, consequently, directly impacting on food security.[9]

Recent findings on the spread of COVID-19 bring both good and bad news

Given the grave effects that the spread of COVID-19 elsewhere in the world can have on food importing countries – and poor economies more generally – the extent of the disease's spread and the intensity of local outbreaks will be central to the epidemic's repercussion for the poor. Coronavirus is likely to spread much more widely than at present, but it is unlikely to do so with the same intensity everywhere and at the same time. Latest research shows that just like influenza virus and SARS coronavirus it is plausible that higher temperatures and humidity are correlated with a lower rate of the novel coronavirus transmission.

Researchers at MIT[13] found that the maximum number of coronavirus transmissions has occurred in regions that had temperatures between 3 and 13 °C during the outbreak. In contrast, countries with mean temperatures above 18 °C have seen fewer than 5% of total cases. Another recent study[14] suggests that 95% of positive cases globally so far have occurred 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 is the emergence of asynchronous seasonal global outbreaks much like other respiratory diseases. People in temperate

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

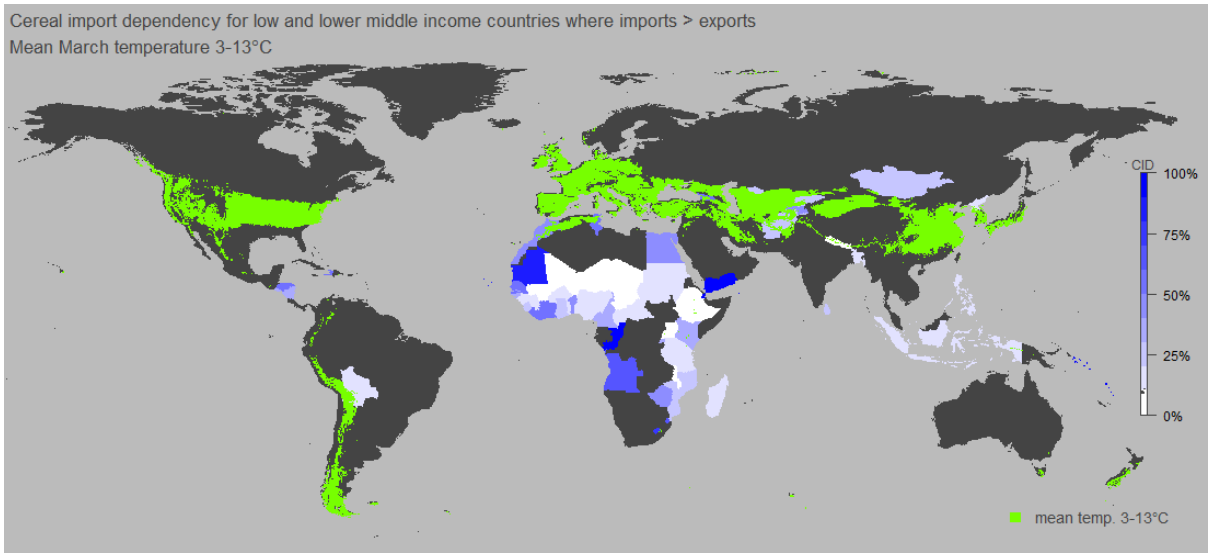
[12] Issa Sanogo and Joyce K. Luma. Assessments of the impacts of global economic crises on household food security: innovative approaches, lessons and challenges.
Issa Sanogo. The global food price crisis and household hunger: a review of recent food security assessments.

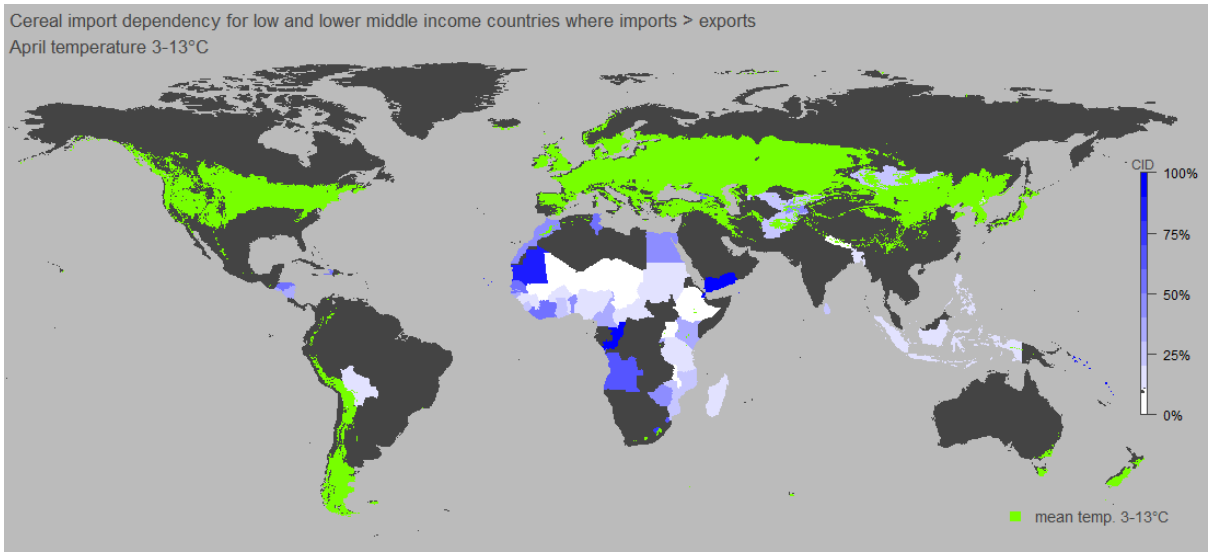
[13] Qasim Bukhari and Yusuf Jameel. 2020. Will Coronavirus Pandemic Diminish by Summer?

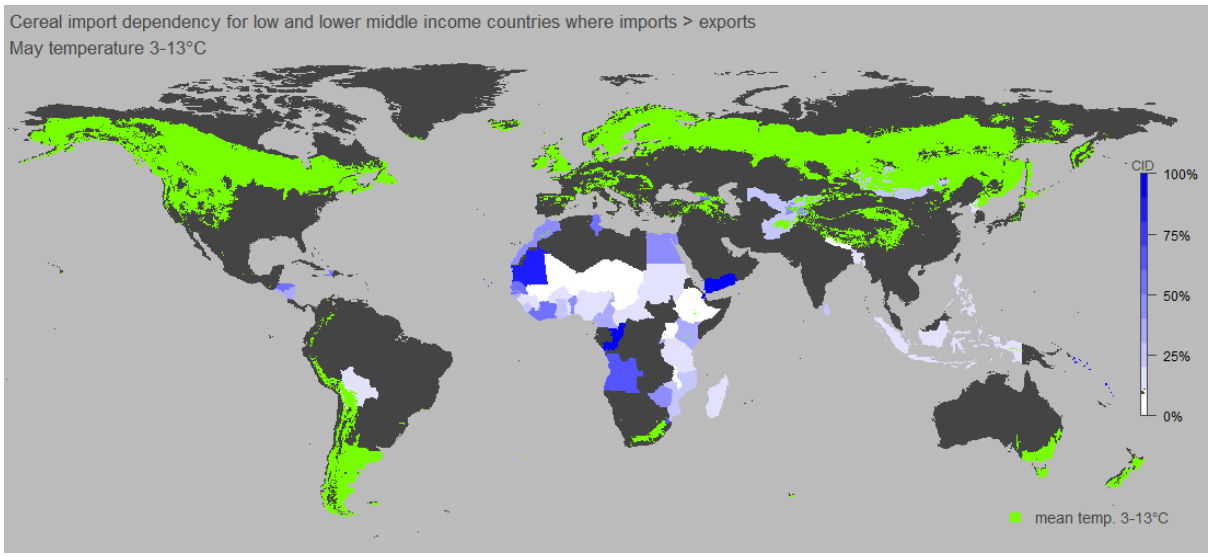
[14] Miguel Araujo and Babak Naimi. Spread of SARS-CoV-2 Coronavirus likely to be constrained by climate

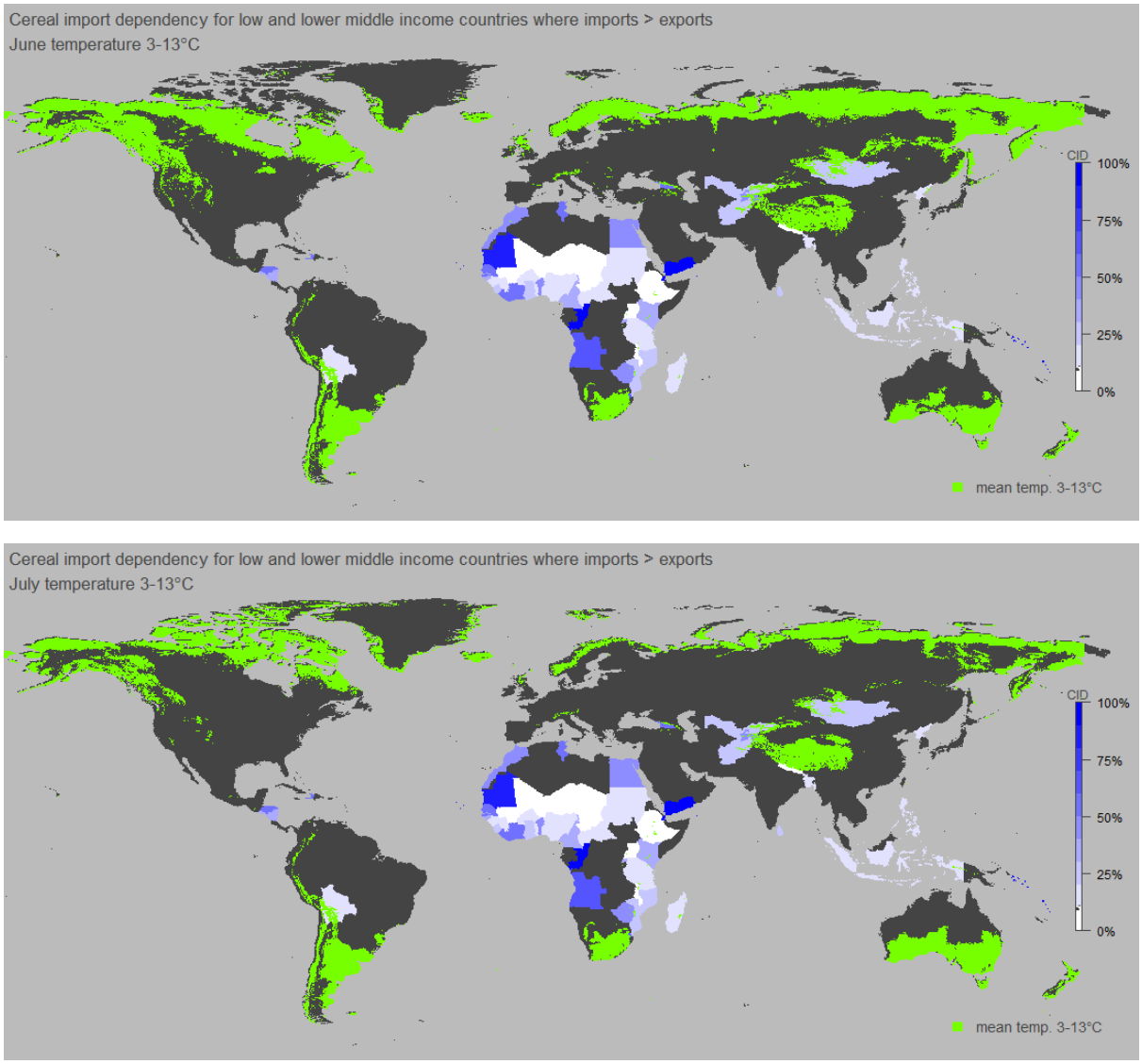
warm and cold climates are more vulnerable. Those in arid climates follow next in vulnerability, while the disease will likely marginally affect the tropics.

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

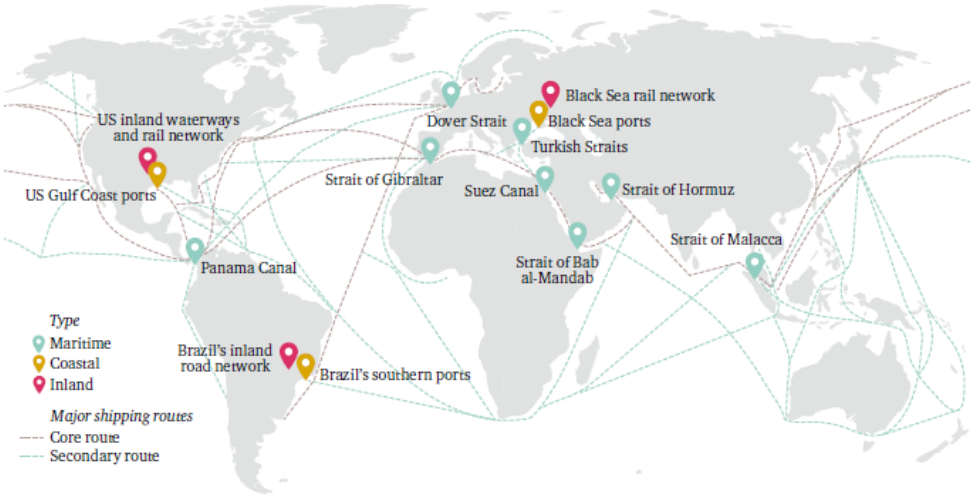
We use downscaled interpolated weather observations[15] to map where mean temperatures of 3 to 13 °C have occurred during the years 2010 to 2018; and so where they might be expected to occur again this year in the months to come (Figure 4). We find that countries which heavily depend on cereal imports appear to be generally less prone to experience intensive local outbreaks. However, some of the major wheat exporters seem to have more conducive conditions for a rapid spread of the virus from May onwards. More worryingly, given that logistical challenges are more likely than a shortage of supplies to unsettle global markets for basic staples, the same holds for some critical junctures on transport routes through which outstanding volumes of trade pass (such as Black Sea ports, Figure 5). Chatham House analysis[16] identifies a small number of these 'chokepoints' and warns that "a serious interruption at one or more of these chokepoints could conceivably lead to supply shortfalls and prices spikes" while "more commonplace disruptions may not in themselves trigger crisis, but can add to delays, spoilage and transport costs, constraining market responsiveness and contributing to higher prices and increased volatility". Rather than maritime chokepoints, a severe

[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

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

While providing some clue on a possible continuation of the virus' proliferation around the world, clearly, these findings must be considered with utmost caution. Climate variabilities are just one factor among many to influence the spread of Coronavirus. Population density, age structure, quality of medical care, and government responses also affect transmission, probably even more so than the 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.

Which countries are at risk?

While it is difficult to predict the spread of the virus, the analysis above suggests that for many poor countries, the economic consequences are likely to be more devastating than the disease itself. Thus, to identify the countries at risk (Table 1), we use the economic pillar of the Proteus food insecurity index combined with export dependency for primary commodities (fuels, ores and metals). The economic pillar of Proteus captures the import dependency of countries and their macro-economic capacity to meet those imports (see Appendix table for details). Collectively, there are almost 212 million chronically food insecure and 95 million acutely food insecure people in the countries of concern. 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 key 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. Some of the implications for humanitarian actors are listed below.

(1) It is essential to monitor food prices and markets and make sure that information is transparently disseminated to all actors. This will help strengthen government policies and prevent people from panicking. WFP maintains real time food security monitoring systems utilizing remote monitoring technologies in a number of countries throughout the world. As the epidemic is evolving and increasing in severity in low income countries, WFP's systems are being expanded to monitor COVID-19 impacts on households, specifically looking at changes

in the access and availability of health care and the impact of increasing caseloads on the health of supply chains, ensuring continuity of existing humanitarian assistance as well as normal market activity. Expanded monitoring systems will be in place in 15 countries within a week, with a goal of beginning monitoring in many places prior to large scale outbreaks of COVID-19, with the goal being to capture problems in real time if there is an outbreak and provide the necessary information for early action and mitigation.

(2) The analysis above suggests that substantial impact might be felt in urban areas where people are net buyers of food. Where food insecurity is caused by restricted access rather than insufficient availability, cash-based transfers (CBT) should be considered a standard mechanism for humanitarian response. CBT can mostly be safely and discreetly distributed as they can be adjusted to allow for almost contactless solutions. They can help stabilizing markets due to containment measures. Moreover, CBT provide a gateway for a wider range of assistance outcomes, should there be a need to provide transfers to respond to a wider range of essential needs. Cash assistance is likely to be the default response of government-led shock-responsive safety nets and hence facilitates alignment with government systems. Safety-nets will be crucial to help societies and households recover after the epidemic.

(3) Preparedness for in-kind food assistance is essential in case availability is compromised through containment measures. The disruption of supply channels is expected to affect primarily higher value items first as there are more tiers of suppliers, more human-human interaction and more dependency on few suppliers. This also means that commodities such as specialized nutritious food are more at risk than staple commodities. Global reserves of non-perishable grains such as wheat and rice should be sufficient to meet any surge in demand in the short term. In terms of transportation, disruptions can be expected in terms of availability, lead times and cost as current disruptions in containerized shipping is creating uncertainty on international sea transportation availability and surge in costs, and border closures might impact overland cargo transportation. Preparedness measures to mitigate some of these risks include (i) prepare for different sourcing alternatives from different geographical areas, (ii) procure and position inventory ahead of time, especially for and from affected areas to have a buffer in place in case of disruption of the supply chain / lead times, for instance due to government measures such as border closures and quarantine or unavailability of supplies in the mid-term (iii) securing sea and land transportation of humanitarian cargos ahead of time, in particular through borders with governments potentially subject to border closing (iv) preparing for an increase of cost and lead-time throughout the supply chain, procurement, handling and transportation will all be affected.

Table 1: Countries at risk

Region	Country	Chronically food insecure (undernourished) millions	Acutely food insecure (IPC phase 3 or above) millions
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	
		212.8	**95.3**

Appendix: Risk indicators by country

Region	Country	Economic Stability	Economic Stability sub-indicators				Fuels, ores and metals exports (% of total merchandise exports)	Chronically food insecure (undernourished) millions	Acutely food insecure (IPC phase 3 or above) millions
			Cereal stocks-to-use ratio	Current account balance (% of GDP)	Real effective exchange rate	Food imports (% of total merchandise exports)			
Central Africa	Cameroon	0.38	0.11	-3.38	100.26	20.18	47.4	2.4	0.5
	Central African Republic	0.49	0.00	-3.44	133.86	32.29	3.8	2.8	1.9
	Chad	0.38	0.07	-2.92	107.60	4.89	93	5.6	1
	Congo	0.45	0.00	-17.86	103.28	8.20	46.2	2.1	
	DRC	0.46	0.02	-3.79	145.96	12.62	83.1		13.1
	Sao Tome and Principe	0.88	0.10	-18.71	170.27	234.42	1.7	0.0	
East Africa	Burundi	0.68	0.00	-11.89	162.13	96.47	12.8		1.7
	Ethiopia	0.55	0.09	-11.52	147.45	53.27	0.7	21.6	8.1
	Kenya	0.46	0.10	-6.35	139.45	23.32	6.9	14.6	2.6
	Rwanda	0.45	0.09	-6.87	104.19	41.40	28	4.5	
	Somalia	0.67	0.00	-12.93	120.37	125.43	30.56		2.7
	South Sudan	0.65	0.02	-27.77	121.94	83.08	98.77		6.1
	Sudan	0.52	0.07	-4.28	170.27	30.74	45.39	8.2	6.2
	Tanzania	0.40	0.11	-4.22	121.07	15.28	2.2	17.6	
	Uganda	0.41	0.08	-4.36	91.52	34.13	7.1	17.6	1.1
Southern Africa	Angola	0.38	0.32	-3.17	170.27	3.48	98.5	7.4	
	Eswatini	0.35	0.00	12.58	101.67	10.14	1.4	0.3	0.2
	Lesotho	0.39	0.00	-6.28	80.31	17.69	0.5	0.3	0.3
	Madagascar	0.46	0.00	-0.59	126.85	27.56	19	11.4	1.5
	Malawi	0.43	0.02	-16.20	80.31	22.42	0.3	3.3	3.3
	Mozambique	0.43	0.07	-20.74	85.20	19.18	78.8	8.3	1.8
	Namibia	0.36	0.09	-2.23	97.89	8.56	31	0.7	
	Zambia	0.23	0.48	-3.90	104.70	4.53	78.4	8.0	1.2
	Zimbabwe	0.40	0.19	-6.01	117.79	28.17	43.3	8.5	1.9

West Africa	Benin	0.48	0.05	-8.72	88.67	63.41	3.2	1.1	
	Burkina Faso	0.38	0.07	-6.55	81.88	19.14	18.1	3.8	1
	Cote d'Ivoire	0.34	0.16	-1.76	96.63	11.51	14	4.6	0.04
	Gambia	0.57	0.07	-9.83	84.24	196.98	0.1	0.2	0.1
	Ghana	0.32	0.12	-4.23	70.09	12.74	51.8	1.6	
	Guinea	0.53	0.10	-22.60	137.81	34.61	61.3	2.1	0.1
	Guinea-Bissau	0.44	0.03	0.77	93.26	49.81		0.5	0.01
	Liberia	0.62	0.09	-27.77	132.22	75.65		1.8	0.04
	Mali	0.36	0.16	-4.01	100.61	17.56	1.1	1.2	0.9
	Mauritania	0.38	0.15	-14.11	96.29	12.01	48.7	0.5	0.5
	Niger	0.46	0.03	-15.63	95.73	27.16	50.6	3.6	0.8
	Nigeria	0.37	0.06	2.76	112.87	6.06	94.3	25.6	5.3
	Senegal	0.46	0.09	-8.82	88.86	57.07	27.2	1.8	0.8
	Sierra Leone	0.51	0.00	-4.47	116.44	50.91	9.3	1.9	0.1
	Togo	0.41	0.07	-11.61	98.13	16.87	13.9	1.3	
Middle East & North Africa	Algeria	0.31	0.33	-8.28	102.07	11.22	94.7	1.6	
	Djibouti	0.79	0.00	-8.99	123.72	256.00	0.73	0.2	0.15
	Egypt	0.38	0.19	-3.97	93.23	38.95	30.1	4.4	
	Iran, Islamic Rep.	0.29	0.23	12.15	122.16	5.78	74	4.0	
	Iraq	0.35	0.13	2.36	121.75	3.42	100	11.1	2.5
	Jordan	0.43	0.23	-10.61	127.46	35.14	8.3	1.2	0.1
	Lebanon	0.55	0.09	-21.33	131.43	47.41	12.5	0.7	0.5
	Libya	0.50	0.04	-10.40	170.27	6.19	88.6		0.3
	Palestine	0.55	0.16	-10.79	158.78	61.32	6.4		1.7
	Syrian Arab Republic	0.47	0.26	-0.08	170.27	45.63	5.1		6.5
	Tunisia	0.32	0.20	-8.91	82.30	11.14	7.8	0.5	
	Yemen	0.56	0.04	-8.57	170.27	38.27	0.5	11.0	15.9
Europe & Central Asia	Armenia	0.43	0.10	-3.47	101.44	41.95	40.9	0.1	
	Kyrgyzstan	0.41	0.13	-4.59	112.56	28.24	35.7	0.4	
	Tajikistan	0.32	0.28	-0.49	88.34	41.18	52		
	Turkey	0.30	0.18	-5.57	78.84	2.00	6.7		0.2
East Asia & Pacific	Cambodia	0.42	0.13	-8.61	142.29	5.17	0.1	2.6	
	DPR Korea	0.49	0.00	-8.47	150.05	13.68	32	12.2	
	Indonesia	0.37	0.10	-1.70	105.75	10.18	29.9	22.0	
	Lao PDR	0.43	0.18	-7.82	153.94	8.92	38.9	1.1	

	Myanmar	0.43	0.09	-5.69	136.84	11.31	27.1	5.7	0.8
	Papua New Guinea	0.37	0.16	12.52	150.60	9.47	54.9		
	Philippines	0.36	0.16	-0.80	118.98	9.25	6.6	13.9	
	Timor-Leste	0.74	0.12	-11.48	121.95	256.00	2.3	0.3	
	Vanuatu	0.54	0.13	-11.11	106.52	90.74	1.6	0.1	
South Asia	Afghanistan	0.77	0.05	-22.50	116.65	227.92	11.7	10.6	10.6
	Bangladesh	0.47	0.07	-2.55	155.13	20.04	1.2	24.2	1.3
	Bhutan	0.48	0.00	-21.74	101.39	18.45	44.5		
	India	0.36	0.16	-1.50	122.96	5.10	18.2	194.4	
	Nepal	0.54	0.03	-3.33	126.63	70.79	1.7	2.5	
	Pakistan	0.39	0.20	-5.19	128.23	15.99	4.2	40.0	2
	Sri Lanka	0.38	0.16	-2.65	114.20	19.64	3.4	1.9	
Latin America & Caribbean	Bolivia	0.47	0.06	-6.34	170.27	3.75	76.6	1.9	
	Colombia	0.28	0.16	-3.35	60.53	7.71	61.2	2.4	0.3
	Cuba	0.45	0.03	-3.33	104.14	36.05			
	Dominican Republic	0.32	0.21	-0.22	94.12	18.82	2.2	1.0	
	Ecuador	0.35	0.13	-0.25	108.70	5.49	42.4	1.3	0.02
	El Salvador	0.39	0.10	-2.02	102.77	21.78	4.9	0.6	0.2
	Guatemala	0.41	0.15	1.50	143.25	17.43	7.1	2.6	0.8
	Haiti	0.57	0.04	-0.70	106.60	122.42	1.2	5.4	2.3
	Honduras	0.38	0.12	-1.65	118.14	12.17	3.4	1.2	0.5
	Nicaragua	0.39	0.17	-5.02	101.15	30.35	1.3	1.1	0.02
	Peru	0.36	0.10	-1.29	108.84	6.41	63.9	3.1	0.04
	Venezuela	0.43	0.07	9.18	170.27	8.79	88	6.8	