WFP
World Food Programme

Food insecurity projections

COVID-19 could push at least an additional 130 million people into food insecurity in low and middle income countries over the course of 2020 (Table 1). The economic implications of the pandemic will likely result in a massive reduction of vulnerable households' purchasing power, compromising their access to food.

Since the situation is fluid, these estimates will be updated regularly as more evidence becomes available. The next update is planned for July 1, 2020.

Table 1: Food insecurity projections for year 2020

Country group	IPC3+ in 2019 (baseline)	Additional food insecure due to COVID-19	Projected number of food insecure, end-2020
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Low income (31 countries)	86	30	116
Lower middle income (47 countries)	32	86	118
Upper middle income (60 countries)	17	13	30
Total	135	130	265
East Asia & Pacific (24 countries)	1	18	19
Europe & Central Asia (21 countries)	1	9	10
Latin America & Caribbean (25 countries)	19	9	28
Middle East & North Africa (13 countries)	27	12	39
South Asia (8 countries)	16	49	65
Sub-Saharan Africa (47 countries)	72	33	105

Methodology

We estimate the impact of the COVID-19 pandemic on the number of food insecure through its effect on income via two distinct channels:

1. working poor people suffering **job loss**
2. people suffering **loss of remittance income**

We start by estimating the immediate effect on food insecurity in Q2 2020 and then project how the number of food insecure will develop until Q4 2020.

Job loss channel

- We use the estimated Q2 regional job loss figures (more precisely, the equivalent job loss of the reduction in hours worked in Q2) published by ILO on 7th April.

- Using countries' shares in regional employment, we break the figures down into estimates of lost jobs by country.
- Each country-level job loss figure is then multiplied by the share of 'working poor' in the country, that is, the share of people in employment living below the international poverty line of 1.90 USD/person/day.
- This gives us the number of people estimated to suffer job loss who are already in an economically vulnerable situation and whose access to food would, hence, be compromised.

Remittance loss channel

- We consider remittances as a form of income. We approach loss of remittance income in an analogous to labour income loss. Therefore, we start by estimating how many people 'earn income' from remittances.
- We use country-level data on labour income as a share of GDP and remittances as a share of GDP to calculate the relative importance of remittance income to labour income.
- Together with the total number of employed people in a country, this gives us the total number of people 'earning income from remittances' in the country.
- We multiply the resulting number of people with the expected percentage decrease in remittances. This way we arrive at an estimated number of people losing their income from remittances.

Combining the channels: Total food insecurity estimation for Q2 2020

- For each country, we add the estimated number of working poor losing their jobs to the estimated number of people losing their remittance income to arrive at the total estimate of people who are vulnerable earners suffering a critical income loss.
- We compute a 'labour and remittances dependency ratio' as the total country population divided by those earning income (from either employment or remittances).
- We then multiply the total number of vulnerable earners suffering income loss with this ratio to arrive at the final total estimate of people falling into food insecurity in Q2.

Projection of food insecurity numbers until Q4 2020

The projection of the number of food insecure in the coming quarters rests on the following assumptions:

Job loss

- Poor people, once unemployed, stay unemployed over the course of 2020.
- There are further job losses in Q3 2020. 81% of the world's employed are currently (Q2 2020) under some form of lockdown. If COVID-19 continues its spread around the world, the remaining 19% of the global workforce could come under lockdown. Based on this, we estimate additional lost jobs for Q3 2020 as the proportional share of ILO's figure for Q2 2020.
- Unemployment changes at the same rate across the world and for poor or non-poor workers, that is, the share of the newly globally unemployed that lives in a certain country and is classified as working poor remains the same over time.
- There are no additional job losses in Q4 2020.

Remittance loss

- Remittances decrease by 15% in Q2 2020 (i.e. 15% of remittance earners to lose their income).
- An additional 5% of remittances stop in each of Q3 and Q4 2020.
- Like lost labour income, lost remittance income changes at the same rate across the world.

Limitations

Given the complexity of the issue which we set out to quantify via a simple model, our current approach has some limitations. These relate both to data we have used; and pathways beyond income loss through which the COVID-19 pandemic impacts food security.

Our starting point for income loss through unemployment is ILO's estimate that working hours decline by almost 7 percent during Q2 2020. We have worked off the equivalent full-time jobs, lacking a direct estimate of lost jobs. ILO estimates the reduction in working hours through a nowcasting model, which should result in a figure that captures formal and informal labour alike. However, the estimate could be biased towards formal labour. Similarly, the working poverty rate could be underreported, resulting in an estimate which is too optimistic.

While lost income and the ensuing reduced access to food is an important route through which pandemic's impact on food security unfolds, it is by no means the only one. The global economic recession triggered by the outbreak critically affects poor countries' export earnings (via plummeting prices for primary commodities and a drastic fall in tourism), which can lead to difficulties for countries dependent on food imports. Resulting currency depreciation can, moreover, put upward pressure on domestic food prices, further reducing poor households' purchasing power. Containment measures have the potential to hamper farmers' access to markets, disrupting food supply chains. To make matters worse, lower government revenues due to the global economic downturn have implications for government's capacity to respond to the crisis and extend – or simply maintain – safety nets, again with a potential impact on food security. While our model might implicitly account for some of these effects, we do not explicitly capture any of these transmission channels.