Projected increase in acute food insecurity due to the Middle East conflict

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Summary

The World Food Programme (WFP) estimates the increase in acute hunger following the Middle East conflict, modelling the pass-through of the price surge in global energy markets to domestic prices. The price increases reduce access to food among households that could barely afford a minimal diet before the conflict. For the 53 countries with available data, the number of people facing acute hunger is projected to increase by 45 million—from a pre conflict baseline of 318 million—if the conflict continues through the second quarter of this year. Altogether, this means that up to 363 million people could become acutely food insecure in 2026.

Introduction

The Middle East conflict began at a time when the global economy continued to show notable resilience despite successive crises. Global growth was nonetheless projected to slow from 2.7 percent in 2025 to 2.6 percent in 2026, a pace the World Bank deems insufficient to reduce extreme poverty. Moreover, the post-COVID recovery has been sharply uneven across country groups. While advanced economies have recovered well, more than one-quarter of emerging market and developing economies —particularly low-income countries and those affected by fragility and conflict—still have per capita incomes below 2019 levels.[1] In many low-income countries, this weak recovery has coincided with tight public finances; around half are in or near debt distress, limiting governments' scope to cushion additional shocks.[2]

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[1] World Bank. 2026. Global Economic Prospects, January 2026.
[2] World Bank. 2025. International Debt Report 2025.

Since the last global price spike in 2022, international food prices have eased. In February 2026, the FAO Food Price Index edged up slightly to 125.3, remaining 24 percent above its pre-pandemic level but 22 percent below its peak in March 2022 (Figure 1).[3] Domestically, however, food price trends were uneven over the past year—declining in some major food-crisis contexts (including Gaza, Myanmar, Syria and the Democratic Republic of the Congo) but rising by more than 15 percent in a dozen countries and by 50 percent or more in Venezuela, Iran and Sudan.[4]

Figure 1: FAO Food Price Index

Source: https://tradingeconomics.com/world/food-price-index
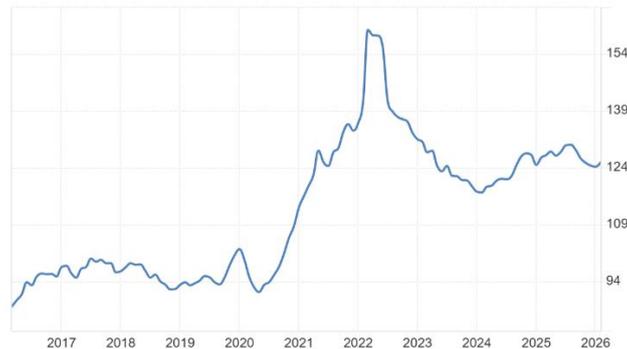
Global acute food insecurity has remained stubbornly high and far above pre-pandemic levels (Figure 2). In 2025, an estimated 318 million people were acutely food insecure across 68 countries with WFP operational presence and available data—around 170 million above pre-pandemic levels.[5] The lower published figure compared with 2024 (343 million across 74 countries) mainly reflects missing updated data for six countries and does not indicate an actual reduction in hunger.

Figure 2: Global acute food insecurity

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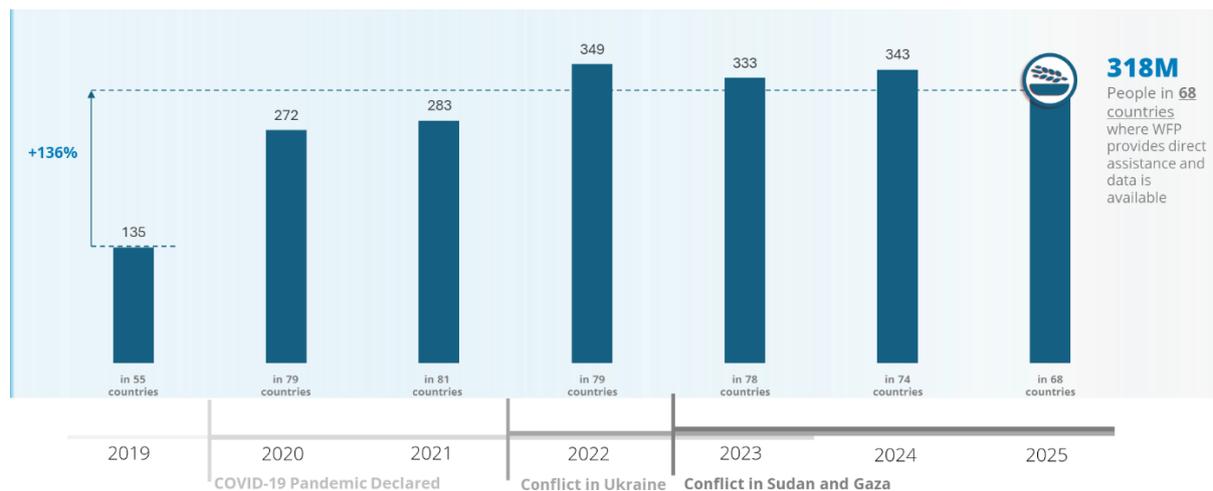
[3] FAO. 2026. World Food Situation
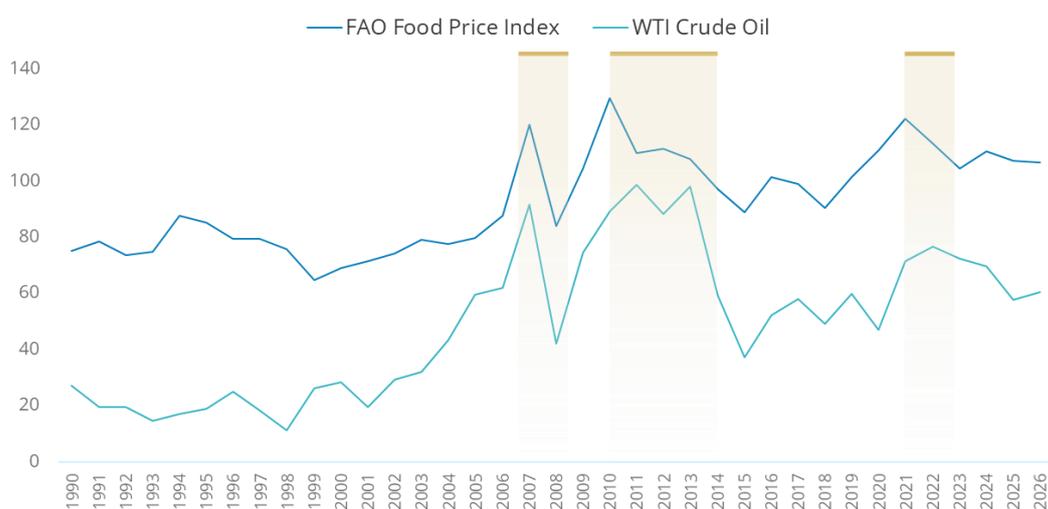[4] WFP. 2026. March 2026 Prices & Currencies Brief.
[5] WFP. 2025. WFP Global Outlook November 2025.

Arguably, the most important impact pathway from the conflict in the Middle East to world hunger runs through the conflict's impact on global energy markets. The Middle East remains the backbone of the global energy system because it accounts for a dominant share of the world's oil and gas supply. The region produces over 30 percent of global oil and holds around 20 percent of global gas reserves. As the energy price increases transmit to local markets in poor countries, food becomes less affordable. Energy is a direct input into agriculture through fuel, fertilizer and transport. Oil shocks transmit quickly into food prices, particularly in import-dependent economies.

Crude oil prices have risen sharply, reaching US$97 per barrel (WTI) on 19 March. Prices have already surpassed the threshold of US$100 per barrel several times since the onset of the crisis. Oil exceeded US$100 in recent decades only in 2007–08, 2011–13, and 2022. Each episode coincided with major pressures on global food prices (Figure 3).

Figure 3 Increases in oil prices > increases in food prices

Compared to the Ukraine conflict, the current conflict in the Middle East is generating a shock of similar, but potentially greater, magnitude to energy and fertilizer markets. However, the implications for food markets differ substantially.[6] While the Black Sea region is a major exporter of grains and oilseeds, the Middle East is largely food import-dependent, which limits the scope for an immediate, direct supply shock to global grain markets. Nonetheless, as Figure 3 shows, food prices may still be affected indirectly through an oil price link.

To quantify how such global price shocks translate into acute hunger outcomes, WFP previously developed a model for the Ukraine conflict capturing two transmission

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[6] FAO.2026. Global Agrifood Implications of the 2026 Conflict in the Middle East.

channels: shocks to global food markets and shocks to global oil markets.[7] Under a scenario of a prolonged conflict, the model projected an increase of 47 million people facing acute food insecurity. In reality, the number of people facing acute food insecurity increased by 62 million between November 2021 and 2022.[8] While this increase reflects the influence of multiple drivers beyond the conflict itself, the model projections proved to be broadly accurate, albeit conservative. A similar pattern emerges at the regional level. As shown in Table 1, estimates for most regions were closely aligned with observed outcomes. For the Latin America and the Caribbean and the Middle East, North Africa and Eastern Europe regions, however, the model substantially underestimated the increase in acute food insecurity, likely reflecting the role of additional region-specific factors affecting food security in 2022.

Table 1: Actual and modelled increase in food insecurity by WFP Regional Office in 2022

	Actual		Model		Difference	
	Absolute change (million)	Relative change (percent)	Absolute change (million)	Relative change (percent)	Absolute change (million)	Relative change (percent)
Asia and the Pacific	7	11	7	12	0	+1
East and Southern Africa	19	17	20	19	+1	+2
Latin America and the Caribbean	11	41	4	13	-7	-28
Middle East, North Afr., East. Eur.	14	32	6	15	-8	-17
Western and Central Africa	12	26	10	24	-2	-2
Total	62		47		-15	

Given the similarities in impact pathways with the Ukraine conflict, we adapt the previously mentioned model to estimate the impacts of the Middle East Escalation on acute hunger.[9] The next section lays out our methodology, followed by sections describing the data we use and the results we obtain, before concluding with a discussion of the findings.

Methods

We estimate the global increase in acute hunger, via loss of access to food because of higher oil prices, in four steps. We first count the people who do not earn enough to pay for a basic diet in 2025 – that is, before the onset of the Middle East conflict. Secondly, we estimate the conflict-related increases in the cost of a basic food basket. We then, in a third step, count the people who do not have access to a basic diet at this higher cost. Lastly, we take the difference between the pre- and post-conflict headcounts, computed in the first and third step, to estimate the number of people who were pushed into acute hunger by the conflict.

We use the cost of a basic food basket that reflects a predefined, calorie-consistent bundle of commonly available food items in each country. The basket provides 2,100 kcal

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[7] WFP.2022.<u>Projected increase in acute food insecurity due to the war in Ukraine.</u>
[8] WFP. 2022. <u>WFP Global Operational Response Plan 2022 - Update #6</u>.
[9] WFP.2022.<u>Projected increase in acute food insecurity due to the war in Ukraine.</u>

per person per day and includes eight food groups: staples (cereals, roots and tubers), pulses, animal protein foods, dairy, fruits, vegetables, fats and oils, and sugar. Caloric shares across food groups are fixed ex-ante and used to construct a consistent and comparable reference basket across countries, rather than an empirically observed or nutritionally constrained diet.

The cost of the basket is computed by converting caloric requirements into quantities using fixed calorie-to-weight factors and applying observed retail prices. For each food group, prices are based on a representative commodity identified as the item most frequently observed in the price monitoring data, ensuring consistency and comparability over time.

To count the people who do not earn enough to pay for such a diet before the conflict pushed up prices, we take the income distribution, total population and cost of a basic diet for each country. The income distributions are nowcasted to 2025 levels.

In line with the computation of the economic access indicator in FAO's SOFA 2021 report, we consider a diet unaffordable when its cost exceeds 63 percent – the share that the poorest people in low-income countries, on average, spend on food – of people's income.[10]

To gauge the changes in the cost of the basic food basket due to the conflict, we model the transmission of assumed increases in international prices for oil to domestic prices. The diet cost estimates are based on retail prices, which include expenses for transport to the retail outlet. Therefore, we first estimate the share of transport or fuel costs in the overall cost of the diet. We then separately consider the impact of global oil price increases on global food prices increase on the remainder of the diet costs.

Based on WFP's annual food procurement costs of US$1.7 billion (or US$141 million/month on average) for 2019 and estimated fuel costs for the same year, we estimate that transportation or fuel accounts for 12 percent of the cost of diet.[11]

For crude oil, we assume 80 percent pass-through to domestic fuel prices. Behind this coefficient are estimates by WFP's Supply Chain Division of the link between the global crude oil price and changes in fuel costs for WFP operations as well as IMF estimates.[12] To preserve global consistency while allowing for country-level variation, we assume that price transmission differs across countries in proportion to their oil import dependency. This simplified approach does not capture other important drivers of domestic fuel prices, including exchange rate movements.

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[10] FAO. 2021. The State of Food and Agriculture 2021. Making agri-food systems more resilient to shocks and stresses. Rome, FAO.

[11] WFP. Annual Performance Report for 2019; and WFP's Supply Chain Division for estimated average fuel costs for WFP in 2019.

[12] Kpodar, K., & Abdallah, C. 2016. Dynamic fuel price pass-through: Evidence from a new global retail fuel price database (IMF Working Paper No. WP/16/254)

$$PT_{Oil} = 0.8 * \frac{Oil\ import\ dependency}{Mean(Oil\ import\ dependency)}$$

with

$$Oil\ import\ dependency = \frac{Imports - Exports}{(Production + Imports - Exports + Stock\ Changes)}$$

Imports, exports and stock changes are aggregated across all oil products, while production refers to crude oil production only. The denominator approximates the total oil supply available for domestic use.

Estimates of the pass-through from global oil prices to domestic fuel prices indicate that the impact builds rapidly and reaches its peak after around four months.[13] Importantly, this peak timing is observed not only in a global sample of countries but also in low-income countries, indicating that the bulk of the transmission materializes within this timeframe.

Following World Bank research, we use long-run price transmission coefficients of 0.75 for key cereals as a proxy for food, on average across countries, for price transmission from international to domestic markets.[14] Again, we assume that price transmission for cereals is proportional to their respective shares of net imports in total domestic supply, that is,

$$PT_{Food} = 0.75 * \frac{Cereal\ import\ dependency}{Mean(Cereal\ import\ dependency)}$$

We take global oil price hikes, through price transmission, to affect 12 percent of diet costs and a food price hike trickling down from global to local markets affecting 88 percent of the diet costs that are not transportation costs. Taken together, this results in diet costs accounting for the effect of the Middle East Escalation of

$$COD_{ME} = COD_{2025} * (1 + 0.88 * GP_{Food} * PT_{Food} + 0.12 * GP_{Oil} * PT_{Oil})$$

with GP_i denoting the global price for commodity i (food or oil), PT_i price transmission for commodity i.

The number of people who can still afford a basic diet after factoring in the cost increases driven by the conflict are those with an income X_2025 for which

$$0.63 * X_{2025} \geq COD_{ME}$$

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[13] Kpodar, K., & Abdallah, C. 2016. Dynamic fuel price pass-through: Evidence from a new global retail fuel price database (IMF Working Paper No. WP/16/254)

[14] Table 3.4 (mean of GIEWS data- and literature-based estimates) in Gillson, Ian, and Amir Fouad, eds. 2015. Trade Policy and Food Security: Improving Access to Food in Developing Countries in the Wake of High World Prices. Directions in Development. Washington, DC. World Bank.

Scenario

We assume the conflict continues beyond June 2026 and that oil prices remain at or above US$100 per barrel throughout the period. In the model, we therefore apply an oil-price shock of US$100 per barrel in 2026, which is 54 percent higher than the US$65 per barrel average observed in February 2026. This assumption is plausible given the scale of supply at risk: the Strait of Hormuz is effectively closed, and around 20 million barrels per day—roughly one in five barrels consumed globally—normally transit this chokepoint. The scenario assumes a four-month-lasting oil price shock, consistent with the estimated transmission lag through fuel markets.

Higher oil prices are expected to raise global food prices as well. IMF staff estimates indicate that a 10 percent negative oil supply shock that increases oil prices is associated with about a 2 percent increase in international cereal prices.[15] Again, we use cereals as a proxy for food. Oil prices affect food prices because oil is an input into agriculture through fuel for farm equipment and transportation, and because some agricultural products are used as biofuel.

Data

Table 2 summarizes the main data sources for the variables we use to estimate the impact of the Middle East conflict on food security.

Table 2: Summary of the main data

Variable	Source	Reference year
Cost of basic food basket	WFP	2025
Income distribution	World Bank – Poverty and Inequality Platform	2025
Population	UN DESA	2025
Exchange rate	Trading Economics	February 2026
Cereal Import Dependency	FAOSTAT – Suite of Food Security Indicators	2021-2023
Oil production, imports, exports, stock changes	UNData	2023

Results

We estimate the food security implications of the Middle East conflict for the set of 53 countries for which we have data. The total number of acutely food insecure is expected to rise by 45 million people, which is equivalent to an 18 percent increase relative to acute food insecurity before the onset of the crisis. Globally, 318 million people were acutely

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[15] International Monetary Fund. 2022. *Special feature: Market developments and food price inflation drivers*. In *World Economic Outlook, October 2022: Countering the cost-of-living crisis.*

food insecure before the Middle East conflict. Altogether, this means that up to 363 million people could become acutely food insecure in 2026.

The crisis is expected to affect regions differently (see table 3). While Asia is most affected in relative terms with a projected 24 percent increase in food insecurity, Sub-Saharan Africa is most affected in absolute terms relative to the baseline. The absolute increase is about 28 million people for Eastern and Southern Africa and West and Central Africa combined. Table 2 summarizes the results disaggregated by WFP's Regional Offices.

Table 3: Projected Increase in food insecurity 2026 by WFP Regional Office

Regional Office	Number of countries	Absolute change (million)	Relative change (percent)
Asia and the Pacific	10	9.1	24
East and Southern Africa	16	17.7	17
Latin America and the Caribbean	3	2.2	16
Middle East, North Afr., East. Eur.	12	5.2	14
Western and Central Africa	12	10.4	21
Total	**53**	**44.7**	**18**

Discussion

The model results suggest that the Middle East conflict could translate into very large increases in acute food insecurity. This would be potentially similar in magnitude to the global food crisis caused by the war in Ukraine. Severe outcomes are plausible in the current global context, because many vulnerable economies entered this shock with limited buffers after successive crises. The global economic recovery from the COVID-19 shock has been highly uneven, and multiple developing countries—particularly low-income countries and those affected by fragility and conflict—still have per capita incomes below 2019 levels. At the same time, global growth is projected to remain too weak to reduce extreme poverty, while many low-income countries are in or near debt distress—constraining governments' ability to cushion new shocks through fiscal policy.

At the household level, the situation is similarly dramatic in many countries. Evidence synthesized in the latest The State of Food Security and Nutrition in the World shows that the recent episode of food price inflation has undermined purchasing power, especially among low-income populations and in conflict-affected countries, where purchasing power has remained well below pre-crisis levels.[16] Rising food prices disproportionately affect low-income households because they spend a large share of their income on food. In this context, where budgets are already stretched and coping capacity has been weakened by repeated crises, an additional increase in food costs can push more households below the affordability threshold for a basic diet.

Nevertheless, these are only initial estimates of the global food security fallout from the Middle East conflict. The model is relatively simple and omits several pathways—both those that could worsen hunger and those that could soften the impact in some settings.

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[16] FAO, IFAD, UNICEF, WFP and WHO. 2025. The State of Food Security and Nutrition in the World 2025

On the downside, the model does not incorporate drivers such as a fertilizer market shock, conflict-driven displacement, specific trading ties with affected countries, or the broader macroeconomic and political dynamics that can intensify food insecurity in crisis contexts. On the upside, it also does not capture policy and market responses that can dampen transmission, such as countries drawing down grain reserves instead of purchasing at peak prices, or deploying food subsidies and social safety nets where fiscal space allows.

These omissions matter because countries' ability to cope with higher international staple prices varies widely—and so do the domestic food security implications of identical external shocks. Countries with stronger macro fundamentals and greater fiscal space may be able to smoothen pass-through to poor consumers, while countries already facing debt distress and high inflation often cannot. As a result, the model's projections are best read as an indicative signal of potential scale and direction, rather than a point prediction for each country. In some contexts—especially those experiencing conflict, displacement, weak currencies, or constrained humanitarian coverage—the model may be conservative because it does not capture compounding pressures on incomes and access. In other contexts, impacts could be smaller if the shock is short-lived, stocks are sufficient, or policy responses are effective.