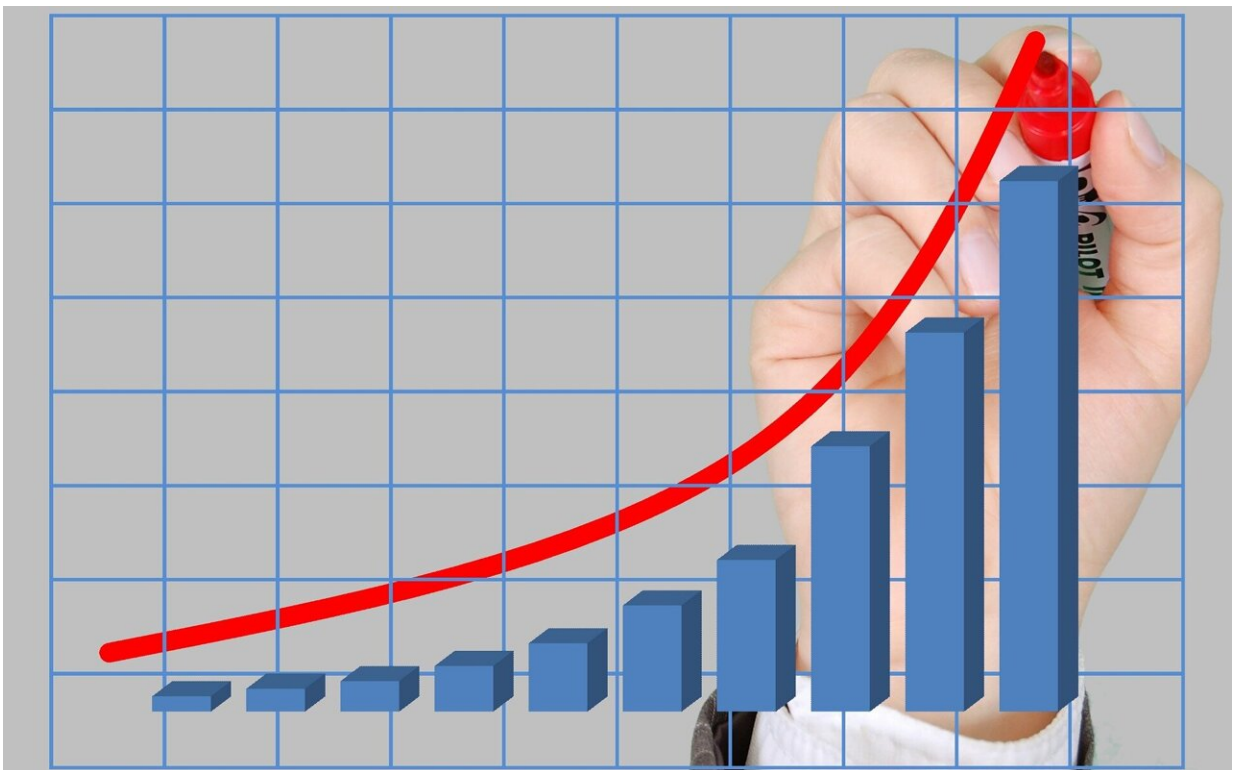


# Food prices will climb everywhere as temperatures rise due to climate change

March 25 2024, by Jessica Boxall and Michael Head

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Climate change, and specifically rising temperatures, may cause food

prices to increase by 3.2% per year, according to a [new study](#) by researchers in Germany. As climate change continues to worsen, this price inflation will mean more and more people around the world don't have a varied and healthy diet, or simply don't have enough food.

The new analysis shows that global warming could cause food price inflation to increase by between 0.9 and 3.2 percentage points per year by 2035. The same warming will cause a smaller rise in overall inflation (between 0.3 and 1.2 percentage points), so a greater proportion of household income would need to be spent on buying food.

This effect will be felt worldwide, by high and [low-income countries](#) alike, but nowhere more so than in the global south. As with various other consequences of climate change, [Africa will be worst affected](#) despite contributing little to its causes.

Our own research on [food security](#) in Ghana, west Africa, gives a sense of what price inflation might mean in practice. The Intergovernmental Panel on Climate Change describes west Africa as a ["hotspot"](#) of climate change, with models predicting [extreme rising temperatures](#) and reduced [rainfall](#). With more than half of the [population](#) being directly dependent on rain-fed agriculture, [Ghana](#) is particularly vulnerable to climate change.

We recently carried out a [study](#) in Mion, a rural district in the north of the country. We spoke to almost 400 people, and very single one of them told us they had experienced some level of food insecurity in the previous 12 months. Some 99% said climate change was at least partly to blame.

Additionally, 62% were moderately or severely food insecure, with 26%

experiencing severe food insecurity (going without food for an entire day). These percentages are much worse than Ghana's [national averages](#) (39% and 6% respectively), but similar to some of the [poorest countries](#) in west Africa such as Togo, Burkina Faso and Benin.

We also carried out a similar study among refugees from neighboring Burkina Faso who fled across the border to the upper east region of Ghana. Again, [100%](#) had experienced food insecurity.

Mion isn't suffering from a sudden famine, and nothing particularly unusual has happened to cause this food insecurity. This situation is considered to be a ["normal phenomenon"](#) due to the effects of climate change.

Climate-related food inflation can be broken down into two interlinked problems.

## **Shifting seasons, pests and diseases**

The first is that the same climate change effects that are causing the inflation are already making food harder to get hold of. For instance, higher temperatures can cause long-established and predictable farming seasons to shift and so may hinder crop production.

Other consequences can include more pest and disease outbreaks that deplete livestock and food reserves, and [heat stress](#) to already-poor roads which makes it harder to access rural communities.

All of these [factors](#) push prices higher and reduce the purchasing power of affected households. The drivers of food inflation are already worsening food insecurity.

The second part of this problem is the rise in inflation itself. A 3%

annual price increase would mean households are less able to purchase what they need.

They would likely need to compromise on quality or perhaps even culturally important foods. This in turn makes people more vulnerable to disease and other health issues. [Malnutrition](#) is the leading cause of immunodeficiency globally.

In Ghana, we found that those who reported more knowledge of climate change were more likely to be food secure. This is despite few people having any formal education. This is evidence that affected populations are very aware of the changing temperatures and unpredictability of the climate, and are perhaps engaging in proactive mitigation practices.

Those without any schooling are more likely to engage in a climate-sensitive occupations such as farming, and so would be more immediately exposed. Teaching people about climate change might provide some capacity to adapt to it, and therefore increase food security.

Alterations in the climate are a [hunger-risk multiplier](#) for those populations with entrenched vulnerability. In light of this, 134 countries at COP28 signed a [declaration](#) to incorporate food systems into their [climate action](#), to ensure everyone has enough to eat in light of [climate change](#).

The researchers behind the new study suggest that reducing [greenhouse gas emissions](#) could limit any impacts on the global economy. We also suggest that diversifying economies would serve as some protection for those communities reliant on agriculture for both their food and income.

Government intervention could also ensure financial protection and nutritional aid for those vulnerable to becoming trapped in the poverty

cycle by [inflation](#) and diminished accessibility to food.

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