



Sources	Met Office, World Food Programme	Date	2021		
Potential scale of impact	★★★★★	Certainty of outcome	★★★★★		
		Impact horizon	H1	H2	H3

Experts from the World Food Programme have worked in collaboration with Met Office climate scientists to devise a measurement of food vulnerability to climate change. The [Food Insecurity and Climate Change index](#) is a measure of how vulnerable to disruption a country's food security system is as a result of flood and drought events. The results of this research have been incorporated into an interactive online index, that allows users to explore the impact of adaptation and mitigation efforts in tackling the effects of climate change on vulnerability to food insecurity.

The index measures how vulnerable a country's food security system is to the negative impacts of weather and climate. With present day values as a baseline, it uses climate model projections and scenarios of socio-economic improvements to compare the benefits of mitigation and adaptation on the scale and geography of food insecurity. Vulnerability is computed at a country level and is broken down into three components: exposure to climate-related hazards, sensitivity of the food system to climate-related hazards and adaptive capacity or the ability to adapt to climate-related hazards.

Key Findings of the Food Insecurity and Climate Change Index include

- More people will face food insecurity by the 2050s irrespective of greenhouse gas emissions. This is because 'inertia in the climate system' (a delayed response of warming from previous emissions) means that we are committed to some level of climate change in the next few decades. However, it also shows that much of the associated increase in vulnerability to food insecurity can be offset by adaptation.
- If there is a rapid and sustained reduction in future emissions, then vulnerability to food insecurity remains steady after the 2050s through to the 2080s; and with adaptation, improvements can be made on the present day situation.
- If there are considerable future increases in emissions, then vulnerability to food insecurity will continue to increase from the 2050s. Although adaptation measures can limit this deterioration, the situation by the 2080s could still be worse than the present day, with many more hungry and vulnerable people.

