

Climate Change and Food Security



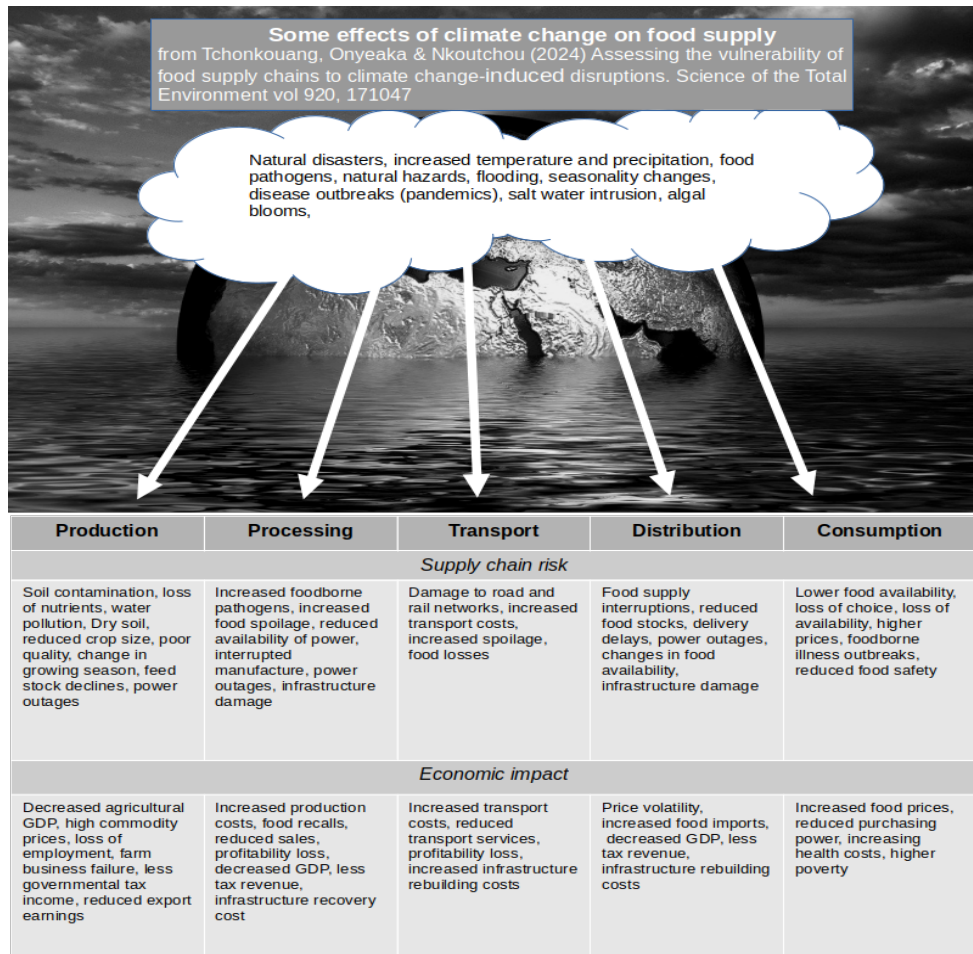
Shortly before Christmas, the Government published a report on the UK's food security. The report describes the current situation of our supply of food and looks at possible futures. Whilst global food production has increased steadily, the number of people around the world who are undernourished has increased, there has been a loss of productive land and productivity has fallen.

There are a number of factors that are impacting on food supply including the on-going war in Ukraine, the Middle Eastern conflict, and extreme weather in many parts of the world. These directly affect the price of food in our shops and economic inflation. According to the last government report for the UK, the average weekly household expenditure in 2023 was £567.70, 7 % more than 2022 but allowing for inflation, this was actually a decrease of £21.10 or 4 %, most of which was on food and non-alcoholic drinks. People have cut back or switched to cheaper alternatives. In 2024, the average monthly expenditure (to July) on food was £275.17, which when adjusted for inflation was a decrease of £7.50 a week. On the other hand, the weekly spend on eating out increased by 6 % over the same period. Overall food prices have continued to rise but the rate is lower than in 2022.

Climate change is having a major impact on food production in many parts of the world, including the UK. Between 2014 and 2023, the rate of warming has been 0.26 °C per decade, much faster than previous decades. The rising temperature directly affects the frequency and intensity of storms, heat waves and cold spells. As a consequence, the UK weather has become much more variable and this is affecting food production. In 2022, we had one of the hottest, driest summers ever experienced and then in England we had the wettest 18 months between September 2022 and February 2024.

The changes in climate and weather provide both threats and opportunities for farmers. Over the last few years we have seen how English vineyards have produced excellent wines. Conversely, crop production has been hit with yields of wheat, winter barley and oilseed rape being significantly down. With the average temperature rising, it's becoming possible to grow more exotic plants such as figs and avocados. In domestic gardens, some hardy species of bananas and ginger can survive winter and thrive in the summer. People are even growing persimmons, watermelons, jujube and yuzu, a citrus fruit. With the increases in food prices and people changing their food purchases, it might be thought that our diet would improve. In fact, as a nation we are still eating more than the recommended amounts of saturated fat, simple sugars and salt. At the same time, we're not eating enough fibre, fruits and vegetables and oily fish. Although all income groups are failing to reach the recommendations, unfortunately it is the lower income groups and those with disabilities who have the worst diets as they have to make difficult choices on where to spend their limited resources.

A recent review of the effects of climate change on food supply showed how vulnerable we are. Elevated temperatures will cause more droughts that will decrease the amount of food that can be grown. The drier conditions will also lead to more localised contamination of resources, a shorter growing season and more farm business failures. In the processing of commodities, extreme weather will damage processing equipment and adversely affect power supplies. The distribution network will also be impacted, with difficulties in moving supplies and higher energy prices. As a consequence, consumers will not only have to pay more for their food but the choice is likely to be diminished.



There are ways that we can mitigate and adapt the way we produce food. One of the most important ways is to reduce the loss of food post-harvest. Currently, the average loss is about 13 % of the total produced but in sub-Saharan Africa the losses are 20 % compared with less than 10 % in most of Europe. These could be reduced by improvements in roads and railways, better vehicles and better storage facilities. On farms, both in the UK and globally, there must be more attention paid to soil health, reducing deep ploughing, reducing artificial fertilisers and conserving water. In processing, the amount of water used must be reduced with more recycling of grey water and a much stronger move towards sustainable packaging. In transport, we need to decarbonise and shift to the use of rail where practicable. Consumers need to consider food choices and move towards buying locally when possible. We must consider the impact on the climate in all our activities.

Richard Marshall

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