

Protecting the World's Poorest from a Global Food Crisis Linked to Climate Change

Climate change brings with it both changes in average temperatures and rainfall but also an increase in the variability of weather across the globe. Hence there is, at present, an ever-increasing probability that a 'perfect storm' of hostile weather conditions will hit global agriculture. This could see floods and droughts hitting vital breadbasket regions simultaneously and causing a collapse in world food supplies, with potentially devastating effects for the poor.

In the event of such a catastrophe it is inevitable that the world's most vulnerable countries such as those in Sub-Saharan Africa will bear the brunt of food shortages and price increases. It is therefore essential that world governments have proper plans in place to prevent unnecessary suffering and loss of life in these poorest areas of the world. As of 2010, the world produced over 5000 kcal per person, per day [1]. This is more than enough to feed the entire population twice over and illustrates an important point: even in a 'catastrophe' scenario involving a sudden large drop in global food production, we will still be producing enough to feed everyone. Therefore it is less a question of having enough food available and more a question of how to prevent huge price rises that will affect those already most in need.

Looking at recent history gives an idea of the effects a food shock can have, with the 2008 food crisis being a useful case study. At the height of the crisis prices had increased by over 50% for dietary staples in many developing countries [2]. Studies reported that acute malnutrition in under-5s in countries such as Bangladesh increased by up to 50%, with the depth of poverty also increasing in many areas [3]. From this evidence it is clear that there is room for much improvement when it comes to feeding everyone in a future, larger crisis, and a combination of preparation, co-operation and informed government policy is needed to achieve this.

The increasing interconnectedness of world food supply can be seen as a hazard. With many countries now relying on a few distant major suppliers for most of their food, drought or flooding in breadbaskets such as the US or Russia will have serious consequences across the globe. However, this globalised food industry can also be seen as an opportunity. It enables developed countries to quickly and effectively respond to a crisis in poorer regions, meaning decisions made in Washington or Beijing have the power to prevent widespread hunger and starvation in Somalia or Bolivia.

Governments and organisations such as the UN should invest in improving current climate models to enable a better understanding of how global weather patterns are connected, thus helping to predict simultaneous bread basket failures. Similarly, investment in economic modelling will give us more information about potential impacts on markets, and could help guide trade policy in the event of a crisis. These kinds of modelling are extremely complex and require high-level knowledge and technology and therefore there may be difficulties in advancing at any great speed, but focusing future development on risks to world food security should certainly be viewed as a priority.

There is also an argument for investment in food-relevant infrastructure and planning. The implementation of schemes to monitor household vulnerability in poorer countries is an example of how organisations and governments can act now to save lives later. The very nature of a food shock is that it's a 'shock', so having information already at hand regarding vulnerable households will

significantly assist any aid operations. Furthermore, the issues of storage and logistics should be considered. For example, investment in strategic storage and transport agreements could help address geographical pinch points in international trade. This would reduce the risk of bottlenecks that might hinder the flow of urgent assistance during a crisis.

Preparation will be useful when a food shock hits. However, real-time policy decisions and aid operations are likely to have the largest impact on both the prevention and reduction of suffering. The growing shift towards biofuel production is a particularly relevant case where government policy, especially that of the US, could have a huge impact on food availability and prices during a crisis. In recent years governments have increased biofuel mandates and provided billions of dollars in subsidies to the sector. In 2009 more than a quarter of US grain, 119 million tons, was sent to ethanol distilleries. This would have been enough to feed 350 million people for a year. An unpublished World Bank report also found that biofuels pushed global food prices up by 75% [4]. These statistics make it clear that if a food shock hits, or is predicted to hit, then government policy on biofuel can make a real difference. In such an event there should be a rapid move to ensure crops are used primarily for food not fuel. This will help keep food prices lower and more people away from hunger.

However, biofuel mandates are not entirely flexible and the industry is large and profitable, so quick response to a crisis involving new controls on the sector may face challenges. Therefore it is important that agreements are made before we experience a major food shock, so that politics and money don't obstruct efforts to divert grain into the food market as soon as it is needed.

For all the suggestions outlined here, money and political will is inevitably required before any real changes are implemented. There will be barriers and there will, of course, be costs – but it is essential that governments and organisations are forward-thinking and aware of the looming threat of a food shock. Past experience has shown what sudden drops in production can lead to – riots, hunger and malnutrition – so investment is not just a nice idea, but our duty; for the care of the human race.

References

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