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Food Security in Europe in the Age of Global Climatic Change

Since food security has become a growing concern throughout the world, Europe has begun to take it seriously. According to Rita Floyd, that's why the region's states are now promoting self-sufficiency, climate-resilient agricultural practices and sustainable consumption.

By Rita Floyd for ISN

According to the IPCC's much-anticipated 5th assessment report (released on 31 March 2014) the linkage between climate change and security is unprecedented. Although food security featured prominently in previous reports, this time the tone is more sober. The negative effects of climate change on crop-yields are worse than previously anticipated, and the few positive benefits (such as increased crop-yields in Northern countries) are expected to be less consistent and potentially off-set by a rise in pests and diseases. Food insecurity, in short, is the new reality.

The most relevant linkages between food security and climate change are: 1) food insecurity due to local and global decreases in production; 2) decreased access to food, and 3) food safety. Because safe and sufficient amounts of nutritious food are required to lead a life free from 'want', food security is part of a wider agenda of human security. However, because states are obliged to safeguard what Barry Buzan once called their 'physical base,' i.e. their population and territory, food insecurity is simultaneously an issue for national security. Only a well-nourished workforce can compete in the global economy, while hunger and undernourishment threaten the armed forces' ability to provide national security. Food shortages may also give rise to social unrest or even violent conflict – as the drought-induced crop failures that led to the Arab Spring suggest. Finally, regions that are relatively food-secure may see increased migration from food-insecure areas, raising political tensions and triggering fears over the sustainability of essential services.

Food inequality

For many parts of the world, food insecurity is not new at all. Throughout the 1980s and 90s there were devastating famines in Ethiopia, Somalia and North Korea. Today the UN's Food and Agricultural Organization (FAO) estimates that 870 million people, or one in eight, are chronically undernourished. The vast majority of these people are in the developing world, which is expected to suffer the most far-reaching effects of climate change, including the most extreme weather changes.

In the developed world, problems with food are typically at the other end of the spectrum. Overconsumption means that obesity is becoming widespread, even as undernourishment is rampant.

For the time being, violent conflict as a result of food shortages – at least in Western Europe – is hard to imagine. In the UK, for instance, an estimated 15 million tons of food are thrown away each year.

The effects of climate change, however, could change this situation. Already, food insecurity in the developed world is not unheard of. Japan, which has no permanent cropland, imports 60% of its food. It also has an ageing population (which means fewer people capable of working in agriculture) and an increasing appetite for a Western diet rich in carbohydrates and animal protein. As global production declines as a result of climate change, dependence on cheap food from abroad will undermine Japan's security.

Food insecurity in Europe

How acute is climate change-induced food insecurity in Europe? Like Japan, Europe has an ageing population, and many European states import a high percentage of the food they consume. Switzerland and the UK, for example, import 40%, while Germany imports at least 30%. Unlike Japan, however, most of the food imported by European states comes from other European states (Germany, for example, imports 19.3 % of its food from the Netherlands, 7.6% from France and 6.4% from Spain). Europe is also one of the world's largest producers of food (agriculture accounts for 45% of land use) and has a largely temperate climate that is comparatively less vulnerable to the effects of climate change.

Europe, however, is far from immune to the effects of climate change and food insecurity. Extreme heat-waves and droughts have already decreased grain harvests in some parts of the continent. With more extreme weather events to come, Oxfam estimates a 2% decrease in agricultural output every decade. In a globally connected world, Europe will also be affected by food price spikes abroad, which are set to become more frequent due to extreme weather and crop failures in the developing world. At present, for instance, Europe imports around 70% of its animal feed from affected regions.

An increase in the prices of key commodities is also expected to make access to food more difficult for Europe's poorest, who spend about one fifth of their income on food – further deepening social inequality in Europe. Social unrest over food shortages like that seen in Venezuela is not unimaginable, especially in Eastern Europe. The ongoing crisis in Ukraine, as well as events in Georgia in 2008, demonstrate just how weak politically, and how societally fragmented, many Eastern European states actually are. In these places, food shortages – like environmental scarcity elsewhere – could trigger overt violent conflict with deeper political, ideological and societal roots.

Food shortages and high food prices may also lead to further intra-EU migration, with migrants leaving Eastern European states to settle in food-secure Western Europe. In Ukraine, Belarus and Georgia the poorest spend 40% of their income on food, compared to 8.9% in the UK, 11.4% in Germany and 10.3% in Switzerland. At a minimum, increased migration would trigger fears over the sustainability of welfare states, but it would also foster tensions that could undermine the cohesion of the EU.

Yet another concern is food safety. Rising temperatures will expand the seasonal activity of pest vectors, and tick- and insect-borne diseases are expected to travel northwards, adversely affecting livestock. The spread of bluetongue virus, for example, in sheep across Europe can be partly attributed to climate change.

Policies

There can be little doubt that the European Union and individual European countries are taking the problem of food insecurity seriously. Among the policies being considered are a return to

self-sufficiency by individual countries, climate-resilient farming and sustainable consumption.

Self-sufficiency is especially popular in the UK because of the high percentage of food it imports. In 2012 the National Farmers Union (NFU) launched a campaign to “Back British Farming” aimed at reversing the decline in self-sufficiency. British agriculture is also increasingly turning to climate-resilient high-tech farming. Four greenhouses at Thanet Earth produce, among other things, 12% of the tomatoes consumed in the UK, as well as 11% of peppers, suggesting that greater self-sufficiency is not out of the question.

However, self-sufficiency only goes so far and Britain is unlikely to grow vast quantities of luxury commodities (coffee, tobacco, and cacao) or exotic fruit (bananas, pineapples). Moreover, Britain remains part of the EU and is thus subject to the Common Agricultural Policy (CAP). Following a public consultation in 2010, the CAP is now set to undergo significant changes. Some of these concern fairer payments to farmers across the EU but there is also an emphasis on climate resilient farming. The latter consists of crop rotation to make the best use of available water; the adjustment of sowing times in accordance with temperature and precipitation patterns; and the planting of hedgerows to avoid water run-off as well as the usage of climate-resistant crops.

A third strategy towards achieving food security is sustainable consumption. Favored in particular by the German Federal Government, it emphasizes the responsibility of the individual consumer in food consumption, concerning the choice for seasonal local produce and the reduction of food waste.

Conclusion

In an age of climate change, Europeans are not immune to the problem of food insecurity. Production, access, and safety are all seriously affected by climate change, and the consequences for national security, in terms of unrest, migration and the potential for conflict, could be serious.

Already, European countries and the EU have implemented policies to tackle the problem of climate change induced food insecurity, including a return to greater self-sufficiency, climate-resilient agriculture and consumer education. As with climate change more generally, however, adaptation only goes so far. Agriculture and thus food production play a major role in overall GHG emissions, which is why the greening of agriculture is an important component of climate action. In other words, food security cannot be achieved regardless of the GHG emissions produced; instead, adaptation and mitigation must be part of the same strategy.

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