Chinese drought, bread and the Arab Spring

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China has 22% of the world’s population but only 7% of its water; it is the largest dryland country in Asia. As the climate changes droughts, floods and ice storms affect millions of people. China’s responses to the effects of climate change also have a global impact.

In 2011 winter drought in eastern China’s wheat-growing region had significant implications beyond the country’s borders. Potential crop failure due to drought led China to buy wheat on the international market and contributed to a doubling of global wheat prices; the resultant price spikes had a serious economic impact in Egypt, the world’s largest wheat importer, where bread prices tripled.

Quantifying the 2011 drought in China’s wheat region with the Standard Precipitation Index identified extreme drought across the region that peaked in January 2011. Findings document the spatial extent and severity of the drought as the most serious on record and explain China’s efforts to minimize the 2011 drought’s domestic impact.

The country’s mitigation efforts had repercussions in Egypt where high food prices were a contributory factor to civil unrest. Tracking the drought – wheat price rise – protest trajectory suggests the potential direct and indirect links between natural hazards, food security and political stability at local and global scales.

Furthermore, the environmental challenges are increasing. Growing consumption, particularly meat, places a high demand on scarce water resources; increasing population and soil and water contaminants threaten food safety and security whilst increasing air pollution causes health problems.

There are a number of environmental rehabilitation projects beginning to emerge in China and assistance with these projects offers a real opportunity for further China-UK cooperation. China has already begun to look at British air pollution policies from 1952 as a model for implementation within Beijing, but the UK can offer many more up-to-date best practice case studies to aid in quicker, more efficient development. In addition, the UK has a wide number of expertises and technology, from its own development and experiences with the environment, food and water, which can be drawn upon.

For more detail, please see Troy Sternberg, “Chinese Drought, Bread and the Arab Spring,” Applied Geography 34 (May 2012): 519-524.