Published on *Ciencia Puerto Rico* (https://www.cienciapr.org)

Industrialization of China and India increases fragility of global food supply – Radiocápsula RCP/CPR [1]

Submitted on 25 January 2009 - 9:18pm

This article is reproduced by CienciaPR with permission from the original source.

Experts predict that if China's recent urbanisation trends continue, and the country imports just 5% more of its grain, the entire world's grain export would be swallowed whole. The knock-on effect on the food supply - and on prices - to developing nations could be huge. Sustainability researchers have conducted a major study into the vulnerability of Chinese cropland to drought over the past 40 years, which has highlighted the growing fragility of global grain supply. Increased urban development in previously rich farming areas is a likely cause. "China is a country undergoing a massive transformation, which is having a profound effect on land use," says Dr Elisabeth Simelton, research fellow at the Sustainability Research Institute at the University of Leeds, and lead author of the study. "Growing grain is a fundamentally low profit exercise, and is increasingly being carried out on low quality land with high vulnerability to drought." The study looked at China's three main grain crops; rice, wheat and corn, to assess how socio-economic factors affect their vulnerability to drought. Researchers compared farming areas with a resilient crop yield with areas that have suffered large crop losses with only minor droughts. They found that traditionally wealthy coastal areas are just as susceptible to drought as areas with poor topography in the east of the country. "Quality land is increasingly being used for high profit crops, such as vegetables and flowers. The impact of this on local and global economies is an issue that the newly created Centre for Climate Change, Economics and Policy (CCCEP) will address," explains Dr Simelton. CCCEP is a partnership between the University of Leeds and the London School of Economics. Its main objectives include developing better climate change models and understanding how developing countries can adapt to climate change. At the moment the Chinese government claims that China is 95% self sufficient in terms of grain supply. If China were to start importing just 5% of its grain (to make up a shortfall produced by low yields or

change of land use to more profitable crops) the demand would hoover up the entire world's grain export. The pressure on grain availability for international grain markets could, in turn, have a huge knock-on effect. Poorer countries are particularly vulnerable, as demonstrated by the 2007-2008 food crisis. Published in the journal Environmental Science and Policy, the study used provincial statistics of harvests and rainfall together with qualitative case studies to establish the differences between land that is sensitive to drought and land that is not. "One aim of this research is better understanding of the socio-economic responses to difficult conditions so that we can improve models of climate change" says Dr Simelton. "These trends of urbanisation are also happening in India, with the population predicted to keep on rising until at least 2050. Ultimately the limiting factor for grain production is land, and the quality of that land." Further information Dr Elisabeth Simelton is available for interview through the University of Leeds press office. Contact: Clare Ryan, c.s.ryan@leeds.ac.uk [2], University of Leeds Tel: +44 (0)113 343 8059, Mobile: + 44 (0)7976 929 746

Copyright © 2006-Present CienciaPR and CAPRI, except where otherwise indicated, all rights reserved
Privacy | Terms | Community Norms | About CienciaPR | Contact Us

---

Source URL:https://www.cienciapr.org/en/external-news/industrialization-china-and-india-increases-fragility-global-food-supply-radiocapsula?page=4#comment-0

Links
[1] https://www.cienciapr.org/en/external-news/industrialization-china-and-india-increases-fragility-global-food-supply-radiocapsula [2] mailto:c.s.ryan@leeds.ac.uk