

Welcome to the Newsletter of the University of Cambridge Global Food Security Initiative for January 2016

Happy New Year and welcome to the first newsletter of 2016. Please save the dates of 23-25 June 2016, when the Cambridge Conference on Global Food Security will be taking place in Cambridge. We will explore how to translate knowledge into action to secure future food supply, sustainability and equality, aiming to cover the most exciting developments, and to identify the most pressing knowledge gaps, across a wide range of different research fields. More information coming soon. Please also find details below of an event organised by the Cambridge Food Security Forum and Oxford Food Forum, on 7 May 2016, for graduate students and young career researchers.

Do use this newsletter for sharing your own food security-related news and events – content can be sent to the address below.

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News and announcements

Food at COP21 climate change talks

Food security concerns were prominent on the agenda at the COP21 climate talks in Paris. Agriculture had its own focus day hosted by the Lima-Paris Action Agenda (LPAA). A number of initiatives were launched. These included an [interactive mapping tool](#) showing how future climate change scenarios influence food security, developed by the World Food Program and the U.K.'s Met Office Hadley Centre. The Food and Agricultural Organization (FAO) and the International Food Policy Research Institute, meanwhile, launched a [new technical platform](#) to encourage G20 member countries, the private sector and NGOs towards the goal of fighting food waste.

At the Global Landscapes Forum, a major side event to the talks, was launched [Forests and Food](#), edited by Bhaskar Vira, Christoph Wildburger and Stephanie Mansourian. Published by Open Book Publishers, this resource is free to read, download and reuse under a Creative Commons Open Access license. The book is based on the work of the IUFRO Global Forest Expert Panel on Forests and Food Security, which was chaired by Bhaskar Vira. The cover image on the book is a photograph taken by the University of Cambridge Conservation Research Institute (UCCRI) Artist in Residence, Toby Smith, and several members of the Cambridge research community contributed to the book, including Bhaskar Vira, Chris Sandbrook, Josie Chambers, Katy Jeary and Anca Serban.

World Food Programme resources

Two resources to support smallholder farmers have been recently produced by the World Food Programme's Purchase for Progress (P4P) initiative. The first is a study and summary article examining the complex ways in which smallholder members of farmers' organizations develop marketing strategies. Based on research carried out in Burkina Faso and Rwanda, the study identifies the factors that influence farmers' decisions on which marketing channel to use, and in particular, whether or not to market crops through their organization. The overview article and study can be found [here](#).

The second resource is an overview article describing the results of two studies on how to ensure that smallholder farmers can access sustainable and profitable markets for their crops. The overview article and links to the studies can be found [here](#).

CUTEC Sustainable Futures Challenge

The focus of the challenge is to foster interdisciplinary collaboration and innovation in areas of importance for creating a sustainable future for the world. Scientists, engineers, business students, social scientists, and artists will be placed on teams to solve a challenge in one of five categories: 1)

Food 2) Water 3) Energy 4) Health and 5) Housing. Solutions will need to take into account and will be judged on innovative nature, sustainability, and economy. Teams will share their ideas with industry experts at workshops during the first term, continue to develop them during Lent and Easter terms, and then present their solutions on stage at the TVC (June 25th 2016) in front of investors, academics, students, and incubators. There will be a launch event on 21 January 2016, 7.30–9.30pm. Application deadline: midnight 31 January. Program workshops from 3 February–25 June. Contact Thomas Meany for informal inquiries tm34@cam.ac.uk.

GROW: Agri-tech Business Plan Competition

Agri-tech East has recently launched GROW: the UK's first agri-tech business plan competition. Entrepreneurs and innovators from across the UK are encouraged to submit a 12-page business plan describing an innovative new technology, product or service that will help improve the efficiency, productivity or sustainability of agriculture and horticulture. There is a cash prize, and finalists will be able to select further business support from a menu of options designed to help accelerate their businesses. The competition will run from 11th November 2015 to 29th April 2016.

Applicants must register an expression of interest by 7th March 2016 and will be assigned an expert mentor to talk through the competition and help them develop their idea and the plan. Applicants that have not pre-registered are not eligible to submit a plan to the competition. [Further information](#).

Events and talks

19 January 2016: [The Good, the Bad and the \(B\)ugly](#)

Centrum, Norwich Research Park, Norwich, NR4 7UG
An Agri-tech East Pollinator event

26 January 2016: [The Future of Food](#)

17.45 – 21.00, BDO LLP, 55 Baker St, London
Features GFS Champion Professor Tim Benton

23 February 2016: [Pipettes and Ploughs: Taking the Lab to the Field](#)

Rothamsted Research, Harpenden, Hertfordshire, AL5 2JQ
An Agri-tech East Pollinator event

22 March 2016: [Priorities for the UK food and drink industry - implementing the 25-year food and farming plan](#)

Central London
A Westminster Food & Nutrition Forum Keynote Seminar

27 April 2016: [Priorities for the UK food supply chain and for the Groceries Code Adjudicator](#)

Central London
A Westminster Food & Nutrition Forum Keynote Seminar

7 May 2016: [Technological Frontiers in Food Security and Sustainability](#)

University of Oxford
Jointly organised by the Oxford Food Forum and Cambridge Food Security Forum

Publications

If you have any relevant papers recently published or in press, please keep us informed.

Kamp, J., Urazaliev, R., **Balmford, A., Donald, P.F., Green, R.E., Lamb, A.J. & Phalan, B.** (Dec 2015) [Agricultural development and the conservation of avian biodiversity on the Eurasian steppes: a comparison of land-sparing and land-sharing approaches](#). *Journal of Applied Ecology* 52(6): 1578–1587.

Lamb, A., Green, R., Bateman, I., Broadmeadow, M., Bruce, T., Burney, J., **Carey, P.,** Chadwick, D., Crane, E., Field, R., Goulding, K., **Griffiths, H.,** Hastings, A., **Kasoar, T.,** Kindred, D., **Phalan, B.,** Pickett, J., Smith, P., Wall, E., **zu Ermgassen, E.K.H.J. & Balmford, A.** (Jan 2016). The potential for land sparing to offset greenhouse gas emissions from agriculture. *Nature Climate Change* doi:10.1038/nclimate2910.

Katayama, N., Osawa, T., **Amano, T.** & Kusumotoa, Y. (Dec 2015). [Are both agricultural intensification and farmland abandonment threats to biodiversity? A test with bird communities in paddy-dominated landscapes](#). *Agriculture, Ecosystems & Environment* **214**:21–30.

Nally, D. (Dec 2015). [Governing precarious lives: land grabs, geopolitics, and ‘food security’](#). *The Geographical Journal*. **181**(4): 340–349.

Jeong, K., Mattes, N., Catausan, S., Chin, J.H., Paszkowski, U., & Hueur, S. (Nov 2015). [Genetic diversity for mycorrhizal symbiosis and phosphate transporters in rice](#). *Journal of Integrative Plant Biology* 57(11): 969–979.

Covshoff, S., Szecowka, M., Hughes, T.E., Smith-Unna, R., Kelly, S., Bailey, K.J., Sage, T.L., **Pachebat, J.,** Leegood, R.C., **Hibberd, J.M.** (Jan 2016). [C4 photosynthesis in the rice paddy: insights from the noxious weed *Echinochloa glabrescens*](#). *Plant Physiology* **170**: 57–73.

Gutjahr, C., **Gobbato, E., Choi, J.,** Riemann, M., **Johnston, M.G., Summers, W.,** Carbonnel, S., Mansfield, C., Yang, S.-Y., Nadal, M., Acosta, I., Takano, M., Jiao, W.-B., Schneeberger, K., **Kelly, K.A. & Paszkowski, U.** (Dec 2015) Rice perception of symbiotic arbuscular mycorrhizal fungi requires the karrikin receptor complex. *Science* **350**(6267): 1521-1524.

Funding

[Empowering people award](#) (deadline 15 January 2016)

This Siemens Stiftung award supports innovative technical solutions to tackle basic supply challenges in developing and emerging countries. Effective and simple low-tech innovations are sought in eight categories including food and agriculture. Maximum award 50,000 euros.

[Innovate UK Satellites to improve agri-food systems](#) (deadline 17 February 2016)

This aims to stimulate the development and adoption of new technologies and business models based on the innovative use of satellite technology, in order to improve the productivity of the UK food and farming industries and simultaneously address the environmental impacts of increased land use and intensification. The budget for this call is worth up to £3.75 million and grants are worth up to £1 million each.

Thought for Food Initiative (deadline 29 February 2016)

Agropolis Foundation invites concept notes for its thought for food initiative. This aims to advance understanding of the sustainability of food systems and explore innovative solutions, facilitate the emergence of new and high-impact research activities, and generate a leverage effect that encourages new collaboration between different types of disciplines with a specific focus on combining natural and social sciences. Funding is worth a minimum of €200,000 per project over three years.

Joint call for proposals on sustainable animal production (deadline 29 March 2016)

ERA-NET SusAn, with the support of the European Commission, invites applications for its joint call for proposals on sustainable animal production. This aims to mobilise resources and motivate different actors from the animal production sector to cooperate in transnational research consortia towards the development of a more sustainable animal production sector in Europe. Up to €300,000 can be requested per project from any one funding party.

DEFRA European Innovation Partnership for Agricultural Productivity and Sustainability grant (EIP-Agri) (deadline 31 March 2016)

Supports projects which link research, farming and forestry practice to encourage innovation and improve productivity and sustainability in the agricultural sector. Grants are worth between £5,000 and £150,000 for up to three years. The total budget is worth £5 million.

Community Resource for Wheat Transformation (deadline 31 May 2016)

This funding from NIAB provides capacity for **50** genes to be transformed into wheat free of charge. Half of this resource is reserved for researchers working on model crops, to encourage early testing of novel genes in wheat. The remaining half of the resource is reserved for researchers working on UK cereal crops, wheat and barley. This project has been funded for 5 years by the BBSRC Bioinformatics & Biological Resources fund.

COMING SOON: Monitoring & mitigation of greenhouse gases from agri- and silvi-culture

The ERA-NET for monitoring & mitigation of Greenhouse gases from agri- and silvi-culture (ERA-GAS) is planning to launch a call for transnational research proposals under the ERA-NET Cofund scheme of Horizon 2020 of the European Commission on 1 March 2016. The scientific scope of the present call for proposals addresses collaborative projects in the following four research areas:

- 1) Improving national GHG inventories and monitoring, reporting and verification of emissions
- 2) Refining and facilitating the implementation of GHG mitigation technologies
- 3) State of the art production systems that are profitable and improve food and for biomass production while reducing GHG emissions
- 4) Assessment of policy and economic measures to support emissions reductions across the farm-to-fork and forest-to consumer chain.