

Dear SIRN community,

In this issue we highlight recent developments and opportunities for SI research. We also share information on relevant publications.

Adélia de Paula (on behalf of [SIRN Leadership Team](#))

Current news:

BBSRC announces results of SASSA call with nine important projects to improve sustainable agriculture in Sub-Saharan Africa (SSA) – congratulations to successful applicants

SASSA is a £10 million project to address research challenges relating to the sustainable intensification of agricultural systems. It was informed by the needs of countries in SSA, raised in a [Global Challenges Research Fund \(GCRF\) workshop](#) held in Kenya in March 2017.

The projects aim to enhance food security in SSA through collaborative research that combines the expertise of scientists in the UK with the knowledge and research involvement of partners in the region.

Read more [here](#).

Government published a summary of responses on ‘Health and Harmony: the future for food, farming and the environment in a Green Brexit’ consultation

From February to May 2018, the government consulted on a range of possible paths to a brighter future for food, farming and the environment in England. At the heart of exercise was a proposal to spend public money on public goods – principally, enhancing our environment and protecting our countryside. The consultation generated a huge amount of interest, receiving 43,356 responses and 127,183 signatories across three petitions. This was accompanied by a series of regional events and policy roundtables around England, where we heard the views of over 1,250 land managers and other stakeholders.

You can see results including summary of research priority areas [here](#).

New Agricultural Bill sets out major post-Brexit policy to invest in the environment and take back control for farmers after almost 50 years under EU rules

The legislation was introduced into Parliament on 12th September 2018 and you can read the bill in full and follow progress [here](#).

Scientific leaders sign open letter to Michael Gove over genetically modified crops

Letter calls for government to address the implications of a European Union ruling over genetic modification.

Read letter [here](#).

UKRI contributes to new Google search tool

Experts from UK Research and Innovation (UKRI) have contributed to a new Google search tool to help scientists, policy makers and other user groups easily find the data required for their work and their stories, or simply to satisfy their intellectual curiosity.

There are many thousands of data repositories on the web, providing access to millions of datasets; and local and national governments around the world publish their data as well. As part of the UKRI commitment to easy access to data, its experts worked with Google to help develop the [Dataset Search](#), launched on 6 September

Read more [here](#)

Professor Tim Wheeler, appointed UK Research and Innovation Director for International

Professor Wheeler will be moving across to lead UKRI International from the Natural Environment Research Council (NERC) where he has been Director for Research and Innovation since 2016. He will take up the role from 15 October 2018. He will work closely with Professor Stuart Taberner, UKRI Director for International and Interdisciplinary Research, who leads on UKRI's Official Development Assistance (ODA) research activities, including the Global Challenges Research Fund and the Newton Fund.

Read more [here](#).

New UKRI system needs community input on Horizon 2020 grants

A new system is being rolled out as a first step towards supporting the continuity of funding for UK organisations which have been awarded grants from the European Union's flagship programme for science and innovation, Horizon 2020. UK Research and Innovation (UKRI) is asking recipients of Horizon 2020 grants to input basic information about their awards into a bespoke portal. This will ensure that UKRI can keep UK researchers and businesses informed of the next steps if the government needs to underwrite Horizon 2020 payments. To ensure UKRI is ready for that eventuality, specialist teams have developed a bespoke portal designed to capture basic information about recipients' grants and identify a relevant contact at the participating organisation for the project, likely to be the LEAR (Legal Entity Appointed Representative), so that they can be informed of the next steps in the process. Those in receipt of Horizon 2020 grants need to input their information into the system as soon as possible.

Read more [here](#).

BBSRC Forward Look for UK Bioscience

The Forward Look for UK Bioscience is a roadmap setting the direction of travel for UK bioscience and is an opportunity to address some of the 21st century's greatest challenges to provide food security, clean growth and healthy ageing.

Read more [here](#).

All eight of N8 AgriFood's cities are now officially Sustainable Food Cities

The importance of food sustainability is spreading across the N8 AgriFood network and beyond as each of the programme's eight universities now sits within an officially declared Sustainable Food City. Read more [here](#).

Funding Calls:

Industrial Strategy Challenge Fund: Transforming Food Production

Application deadline: 24 October 2018, 12:00

UK Research and Innovation, through the Industrial Strategy Challenge Fund, will invest up to £20 million in innovation projects. These must improve productivity and sustainability by developing enhanced decisions support, precision agriculture technology solutions and systems for crop and ruminant agriculture.

Read more [here](#).

BBSRC 18ALERT: Mid-Range Equipment Initiative

Application deadline: 25 October 2018, 16:00

The 2018 ALERT call aims to enhance the capability of the UK research base in areas of science in BBSRC's remit. Applications are invited for mid-range equipment costing over £200,000 including VAT. Applications will typically be from groups of researchers in one or more eligible institutions for instrumentation to be deployed on a multi-project and multi-use basis.

Read more [here](#).

Gates Foundation – Global Grand Challenge: New Approaches for Strategic Prioritization of Agricultural Development Policies (Round 22)

Application opens on 19 Sep with deadline on 14 Nov 2018 - 11:30am PST

The foundation is seeking new approaches for strategic prioritization of agricultural development policies to inform long-term strategic planning. Proposed solutions may be generated from ideas and contexts outside of sub-Saharan Africa (SSA), all solutions must be relevant, transferrable, and applicable, in SSA focus countries: Nigeria, Tanzania, and Ethiopia. These approaches could include one or more of the following:

- Building a more robust approach to the challenge of policy prioritization using - but not limited to - modeling, e.g., creating a new "package" or "blend" of complementary practices that maximizes current tools to expand their use in data-scarce SSA contexts
- Improving how modeling is currently done, including new innovations around the cost-benefit analysis element of modeling
- Exploring alternative analytical approaches to the policy prioritization challenge outside of modeling altogether

Read more [here](#).

Gates Foundation – Global Grand Challenge: Tools and Technologies for Broad-Scale Pest and Disease Surveillance of Crop Plants in Low-Income Countries (Round 22)

Application opens on 19 Sep with deadline on 14 Nov 2018 - 11:30am PST

The foundation is looking for proposals that:

- Offer an innovative and transformative solution for surveillance and early detection of crop pests and diseases;
 - Offer potential for dramatic cost reductions or increases in efficiency or precision in data collection compared to current strategies;
 - Be amenable to integration into a national or regional pest and disease surveillance and response system for crop plants;
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- Have potential applicability to at least two of the following crops: maize, wheat, rice, millet, sorghum, cassava, sweet potatoes, yams, bananas, beans, cowpeas, chickpeas, and groundnuts;
 - Convey a clear potential for achieving data collection at broad geographic scale
- Read more [here](#).

Ecology and Evolution of Infectious Diseases

Application deadline: 21 November 2018, 16:00

UKRI-BBSRC, in collaboration with: National Science Foundation (NSF), National Institutes of Health (NIH) and U.S. Department of Agriculture (USDA) announce a call for transatlantic partnership involving researchers from the US and UK under the Ecology and Evolution of Infectious Diseases programme (EEID).

- The focus be on understanding the ecology, evolution and transmission dynamics of pathogens of farmed animals (including aquaculture), crops, and/or trees in managed forests or the wider environment. The scope also includes broader related issues, e.g., transmission dynamics of antimicrobial and anti-parasitic resistance, animal pathogens with zoonotic potential, and the interactions of pathogens with animal or plant-associated microbiomes.
- The funders wish to encourage high quality, innovative research conducted by interdisciplinary teams of researchers. Projects must address the quantitative or computational understanding of pathogen transmission dynamics.

Read more [here](#).

Agri-tech Catalyst round 7: agriculture and food systems innovation

Registration closes: Wednesday 21 November 2018 12:00pm

There is up to £3 million of funding available from the Department for International Development (DFID) for early-stage feasibility studies, mid stage industrial research and late-stage experimental development. Projects must work on agri-tech and food chain innovations with partners in eligible African countries.

Early stage feasibility studies: £100,000 to £500,000, 12 to 18 months. Mid stage industrial research: £250,000 to £1 million, up to 3 years. Late stage experimental development: £150,000 to £800,000, up to 18 months. Projects must start by 1 April 2019.

Read more [here](#).

Pre-announcement of the ERA-Net Co-fund on Biotechnologies call for transnational collaborative research projects - This joint call with an indicative budget of approximately €15 million brings together 18 funding organisations from 14 countries. BBSRC contribution is up to £2 million.

Call opens: 16 October 2018 with deadline: 14 December 2018, 13:00 CET (12:00 GMT)

The aim of the co-funded call is to contribute to transforming the global economy from a dependence on fossil raw material to a sustainable bio-based economy. The submitted proposals must be multidisciplinary and include at least two of the following scientific approaches: synthetic biology, systems biology, use of bioinformatic tools, biotechnological approaches. Applications must address one of the topics described below:

- Topic A - Microbial communities (natural or synthetic), co-cultures and cascades of microorganisms for new products, value-added products and supply services as well as sustainable industrial processes
- Topic B - Pure cultures, cell free systems and enzymes for new products, value-added products and supply services as well as sustainable industrial processes.

Read more [here](#).

Events:

Agroforestry and Environmental Farm enhancements workshop & site visit at the Allerton Project, Game and Wildlife Conservation Trust

11th October 2018 - Allerton Project, Loddington, Leicestershire

Read more [here](#).

Hacking the Green Revolution

15th October 2018 - CEH Lancaster

Event aimed for undergraduate and postgraduate students and in Collaboration with the Science & Technology Facilities Council

Read more [here](#).

AAB - Soil Improvement: Impact of management practices on soil function and quality

16th October 2018 - The Sofi Taylor Conference Centre NIAB Cambridge

Read more [here](#).

BES - Climate Change Adaptation in the Natural Environment: Measuring Progress

30th – 31st October 2018 - David Attenborough Building, Cambridge University

A two-day workshop of scientists, policy-makers, and conservation managers to inform the development of metrics (including indicators) to monitor and evaluate adaptation of the natural world to climate change.

Read more [here](#).

Winton Centre M2D Workshop in Communicating Uncertainty

26 - 27 November 2018, The Olde Bell Hotel, Berkshire, UK

This is a 24hr workshop on communicating uncertainty. The aim of the workshop is to bring together modellers and researchers with uncertainties to communicate, professional communicators and graphic designers from a range of backgrounds, and representatives of the decision-making audiences.

Overnight accommodation and all meals will be provided, and travel bursaries will be available to early career researchers and members of the target audiences who would otherwise not be able to attend. Applications (including places reserved for early career researchers) are now open. **Places are limited, so please apply by 1st October 2018.**

Read more [here](#).

Valuing Nature Annual Conference 2018

13 – 14th November 2018 - National Museum Cardiff

This 2-day conference aims to bring together people from diverse research areas and from business, policy and practice with the common goal of tackling Valuing Nature challenges.

Read more [here](#).

Natural Capital Investment Conference

28th February 2019, The Royal Society, London

The event is organized by UK Ecosystems Knowledge Network in partnership with WWF and presented as an innovative environmental finance conference, leading the movement to make the UK a leader in investment in the natural environment on the basis of its economic value.

Read more [here](#).

Using maths and engineering to solve problems in food production, biotechnology, resource efficiency, water and sustainability

29th April – 1st May 2019

Over the last few years KTN has joined forces with academic partners to harness the expertise of the research community and address nominated industry challenges through Mathematical Study Groups with Industry. The third study group, taking the theme of Clean and Sustainable Growth, will be held in partnership with the University of Nottingham.

Read more [here](#).

Valuing our Life Support Systems 2019

21st-22nd May 2019, The Crystal, London

Valuing our Life Support Systems 2019 offers an independent platform for people in science and policy, NGOs, businesses and local communities to discuss and debate innovative natural capital solutions that enhance the environment and strengthen society. This is your chance to share what you know about the latest developments in natural capital science, policy and practice – and find out what you don't.

Organizers **invite proposals** for sessions, speed talks and posters under these themes:

- New frontiers in natural capital data and methods
- Governance and institutions for implementing natural capital solutions
- Urban health and wellbeing
- Sustainable land and water management
- Sustainable marine planning

Read more [here](#).

4th World Congress on Agroforestry

20th-22nd May 2019, Montpellier, France

Three days of plenary and parallel sessions (35 in total, featuring more than 200 communications), poster sessions, field trips, side events, cultural events for the general public, etc. Themes include: Climate change; Fight against poverty / food security; Successes and failures of agroforestry; Desertification / land degradation / soil rehabilitation; Genetic resources; Gender in agroforestry; Public policies; Business / private sector / finance; and Socio-economic dimensions of agroforestry.

Read more [here](#).

RESISTANCE 2019 - 8th International Meeting on Pesticide Resistance

16-18th September 2019, Rothamsted Research

Event will cover the latest work on resistance to insecticides, fungicides and herbicides.
Read more [here](#).

Highlighted think-piece:

Food First: A Policy Approach to Achieve Health and Sustainability

Following a workshop with 10 leading researchers, the Global Food Security Programme released a new report “A food system approach to policy for health and sustainability”. Read [blog from their Director Riaz Bhunoo](#) to understand the context and access the report.

Highlighted papers:

Laura Vang Rasmussen, Brendan Coolsaet, Adrian Martin, Ole Mertz, Unai Pascual, Esteve Corbera, Neil Dawson, Janet A. Fisher, Phil Franks, Casey M. Ryan (2018) **Social-ecological outcomes of agricultural intensification**. *Nature Sustainability*, Volume 1, Number 6, Page 275
Read more [here](#).

Tom H. Oliver, Emily Boyd, Kelvin Balcombe, Tim G. Benton, James M. Bullock, Deanna Donovan, Giuseppe Feola, Matthew Heard, Georgina M. Mace, Simon R. Mortimer, Richard J. Nunes, Richard F. Pywell and Dominik Zaum (2018). **Overcoming undesirable resilience in the global food system**. *Global Sustainability*, 1, E9. doi:[10.1017/sus.2018.9](https://doi.org/10.1017/sus.2018.9)
Published online: 13 August 2018

Pretty, Jules, Benton, Tim G., Pervez Bharucha, Zareen, Dicks, Lynn V., Butler Flora, Cornelia, Godfray, H. Charles J., Goulson, Dave, Hartley, Sue, Lampkin, Nic, Morris, Carol, Pierzynski, Gary, Prasad, P.V. Vara, Reganold, John, Rockström, Johan, Smith, Pete, Thorne, Peter and Wratten, Steve (2018) **Global assessment of agricultural system redesign for sustainable intensification**. *Nature Sustainability*, 1. 441–446. doi: [10.1038/s41893-018-0114-0](https://doi.org/10.1038/s41893-018-0114-0)

Andrew Balmford, Tatsuya Amano, Harriet Bartlett, Dave Chadwick, Adrian Collins, David Edwards, Rob Field, Philip Garnsworthy, Rhys Green, Pete Smith, Helen Waters, Andrew Whitmore, Donald M. Broom, Julian Chara, Tom Finch, Emma Garnett, Alfred Gathorne-Hardy, Juan Hernandez-Medrano, Mario Herrero, Fangyuan Hua, Agnieszka Latawiec, Tom Misselbrook, Ben Phalan, Benno I. Simmons, Taro Takahashi, James Vause, Erasmus zu Ermgassen, Rowan Eisner (2018) **The environmental costs and benefits of high-yield farming**. *Nature Sustainability*, 1. 477–485.
Read more [here](#).

Agricultural Systems Call for submissions to a Special Issue:

“Science of scaling: connecting the pathways of agricultural research and development for improved food, income and nutrition security” special issue.

Manuscript submission deadline: 31 December 2018

Read more [here](#).

Highlighted reports:

Farms, fisheries and forests: Does certification make a difference? - Analysis of 15 sustainable production standards

The report produced by [Context Group](#) reviews open access, online literature, largely published since 2013. It looks for evidence for positive social and environmental changes prompted by requirements expressed in each standard's high-level criteria. Standard holders include Red Tractor, LEAF, Fairtrade amongst others.

Read more [here](#).

Valuing Nature Natural Capital - New reports, published by the Valuing Nature Programme, which is co-ordinated by the Centre for Ecology & Hydrology (CEH), summarise the science available to inform a Natural Capital approach in four key areas:

- The Natural Capital valuation of floodplains in relation to preventing floods, storing carbon, and supporting biodiversity.
- The Natural Capital valuation of soil in relation to producing food, storing carbon and regulating water supply.
- Natural Capital trade-offs from the afforestation of peatlands in relation to the effect on storing carbon, controlling water supply, supporting biodiversity, providing recreational spaces and preserving a record of the past.
- How businesses are using Natural Capital assessments in practice.

Read more [here](#).



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