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1 Complete LWEC PPN series available on line

The Living With Environmental Change policy and practice note series is now complete and may be found [on the NERC website](#). There are 36 notes in total, and the topics covered are wide ranging, from building coastal resilience to sea level rise and storm surges, to the heritage value of public parks and gardens, and there is a whole sub series on pollinators drawing on evidence from the Insect Pollinators Initiative. Printed copies of all the notes are still available and if you would find any of these useful for colleagues, for meetings and events, or for your own information please email anne.liddon@ncl.ac.uk.

2 Sustainability in turbulent times

Join 350 professionals from academia, policy, business and civil society to explore how research, policy and business can meet global challenges in these turbulent times. The Nexus Network, CECAN (Centre for Evaluation of Complexity Across the Nexus) and CUSP (Centre for Understanding of Sustainable Prosperity) are holding a joint event [Sustainability in Turbulent Times](#) in London on Thursday 16 March 2017.

3 Ten policy recommendations to protect pollinators

Following on from the first global thematic assessment from the [Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services \(IPBES\)](#) evaluating the state of knowledge about pollinators and pollination, NERC-funded researchers have gathered crucial evidence on how governments and people can best protect pollinators vital to the production of food worldwide and

[suggest ten key policies](#) that governments should seriously consider to secure their important services.

4 Business plays a key role in sustainable management

The private sector has a critical role in driving positive change towards more sustainable management of food, energy and water resources but opportunities are missed because businesses are rarely involved in identifying research priorities. The Nexus Network brought together senior research scientists and influential business leaders to identify the top forty questions that, if answered, would best help companies understand and manage their food-energy-water-environment nexus dependencies and impacts. [The results have now been published in Sustainability Science.](#)

5 Bring up the bodies

Vertebrate scavengers such as foxes, carrion crows and magpies are providing a key urban ecosystem service by removing carcasses, according to [Urban Bess](#) researchers. But these useful “binmen” of the natural world are often disliked and even persecuted. In [an article in Ecology and Evolution](#) they put forward evidence for the useful role played by some despised species.

6 New website provides insight into unique case study

The NERC-funded [CORPORATES \(Cooperative Participatory Evaluation of Renewable Technologies on Ecosystem Services\) project](#) builds community understanding of, and dialogue about, the range of ecosystem services provided by the Firth of Forth marine region in Scotland. As its new website explains, it brings together leading ecological, economic, social-cultural, and legal experts from the University of Aberdeen, the Scottish Association for Marine Science, the James Hutton Institute and Marine Scotland Science with three marine renewable energy companies; Seagreen, Repsol & MainStream RP, together with a wide range of community and industry stakeholders. The Firth of Forth provides a unique case study where there are plans for a Marine Protected Area in the same location as windfarm development, fisheries and marine recreation.

7 Mapping ecosystem services with BESS

There is growing interest in mapping ecosystem services at a landscape scale as part of implementing the Ecosystem Approach. It is important that new initiatives are able to collaborate with and learn from existing projects. The BESS hosted [Ecosystem Services Mapping Gateway](#) provides an interactive way to explore projects and to share [good practice](#). A policy and practice note in the LWEC series [Locating and measuring nature's benefits](#) outlines the principles.

8 Scientists solve 60 year old mystery

[A new paper from scientists at the John Innes Centre in Norwich](#) explains why plant breeders have found it difficult to produce wheat varieties which combine high yield and good resistance to Septoria, a disease in wheat which can cut yield losses by up to 50%. It traces the problem back to decisions made nearly sixty years ago.

9 New knowledge exchange coordinator for Food System Resilience programme

John Ingram and the [Environmental Change Institute's](#) food research team have been appointed to coordinate the Food System Resilience programme's knowledge exchange activity. This is a five year interdisciplinary research programme aiming to address resilience of the UK food system in a global context and is supported by BBSRC, ESRC, NERC) and the Scottish Government.

10 Salmonella risk in damaged salad leaves

[Investigations by University of Leicester microbiologists](#) funded by a BBSRC i-case Studentship have revealed that just a small amount of damage to salad leaves could massively stimulate the presence of the food poisoning bug Salmonella in ready-prepared salad leaves. The scientists have discovered that juices released from damaged leaves also had the effect of enhancing the virulence of the pathogen, potentially increasing its ability to cause infection in the consumer.

11 GFS Champion bows out

In [a final blog](#), the Global Food Security programme's Champion, Professor Tim Benton, reflects on leaving the role after five years in the post. [In a guest article in the latest newsletter](#) from [PROHEALTH](#) a major European project researching sustainable control of livestock disease in pig and poultry production, he offers some of his own views on how food production systems may look in the future

12 New food security network will fund studies

[N8 AgriFood](#) is running a £0.6 million [Science and Technology Facilities Council food security network](#) that will be funding small scoping and proof of concept studies to address agri-food challenges from farm to fork. The network is led by Professor Sarah Bridle from Manchester University, with co investigators from across the N8 universities. Members will have the opportunity to join an “impact sandpit” to pitch to industry for additional funding to extend the work of the network.

13 Digital technologies will transform livestock production

The new agri tech centre [CIEL \(Centre for Innovation Excellence in Livestock\)](#), is leading the way in transforming animal production with the development of a Centre for Digital Technologies Applied to Livestock (C-DIAL) at Newcastle University’s Cockle Park Farm. Building work will be completed in the spring.

14 New mobile laboratories ready for use

As part of the [Centre for Applied Crop Science](#) (formerly CHAP) agri tech centre four mobile laboratories have been developed. These unique facilities, based at Newcastle University, will allow scientists to conduct research in the field, to perform sophisticated sample preparation, diagnostic testing and better involvement of farmers, agronomists and other land professionals in the research. The approach can also be more flexible, responding immediately to on-site results. The labs will be using state of the art portable scientific equipment for DNA and protein analysis, imaging and spectroscopy, as well as crop canopy sensors and other soil, spore and weather measurements.

15 Providing food alongside other ecosystem services

Global Food Security (GFS) is inviting early career researchers to take part in a Policy Lab on multi-functional landscapes. Policy Labs bring together early career researchers from different disciplines to scope a policy-relevant issue, with teams forming at the workshop and then competing to write a report for the GFS programme. Deadline for applications is 10 February 2017 and the workshop will take place 27-28 March 2017. [Details about the policy lab and how to apply are available on the GFS website.](#)

16 £6m project to benefit Yorkshire economy by £50m

A new £6 million project led by the University of Leeds is predicted to bring a £50 million benefit to the Yorkshire economy by reducing the costs and impact of water-related threats to the region. Bringing together partners from across the region and using existing research funded by NERC the team will look to join up ways of improving water quality, resilience to floods and droughts, carbon storage and biodiversity. In this way the project will make more efficient uses of resources and enable planning across the whole catchment area, bringing both economic and societal benefits. Work on the project, called [Yorkshire Integrated Catchment Solutions Programme \(iCASP\)](#), will begin in March 2017.

17 Genetic diversity is vital for food security

Wild relatives of crops are invaluable to our food security, particularly when we need to develop new varieties that can respond to food security challenges, says Natural England’s Senior Specialist in Farming and the Environment James Petts. [In a blog for the Sustainable Intensification Research Platform](#) multi-partner research programme (SIP), he explains why he thinks it’s so important for research like [SIP](#) to find viable ways of improving productivity whilst at the same time enhancing the natural environment and the ecosystem services it provides.

18 BESS Research for Better Environments – a few places left

A few places are still available for the BESS (Biodiversity and Ecosystem Service Sustainability) [Science into Practice event](#) in London on 27 January. This is an opportunity to for stakeholders and practitioners to hear some key findings from the research and provide feedback on best ways to take these forward into practice. The event is free but booking is essential so please contact Toshiko.smith@york.ac.uk to reserve a place.

19 Valuing Nature Network Schemes for 2017

Researchers who would be interested in working in a different academic discipline or applied environment are invited to apply to work for up to four months on Valuing Nature topics Full details and applications forms are [available online](#). Valuing Nature Network is also looking for offers to host placements via the VNN [offers page](#). Closing date is 9 am, 30 January 2017. Valuing Nature

Network's second Business Impact School will be held in London from Tuesday 7 to Thursday 9 March 2017. The school aims to provide early career researchers with an opportunity to gain insight into producing research with business impact. NERC has provided funding to offer fully-funded places (school, travel, accommodation, meals, field trip) for around 25 early stage researchers (current PhD students or PhD recently awarded). The deadline for submission of applications is 9 am, 19 January 2017. [Full information on how to apply is available on line.](#)

20 Rural Entrepreneurship Conference

The 15th Rural Entrepreneurship Conference, will take place Newcastle University, 15-16 June 2017 and the organisers are inviting contributions from practitioners and academics any of the following themes:

Entrepreneurship, farming and the natural environment
Digital rural entrepreneurship
International dimensions of rural entrepreneurship
New approaches in rural theory, method and measurement
Opportunities and challenges for rural development
Rural innovation, EU funding and the role of universities
Rural social entrepreneurship
Rural place marketing

Practitioner papers and reports, case studies and academic research papers are welcome and abstracts should be emailed to robert.newbery@newcastle.ac.uk by 1st February 2017 using [the downloadable form](#). Early bird delegate rates apply for bookings up to 29th April 2017.

21 ESRC seeks Global Challenges Research Fund peer review group members

ESRC is establishing a new interdisciplinary peer review group specifically to assist with the review of applications to ESRC Global Challenges Research Fund calls. Members will be invited to review around 10 proposals over any rolling year and may also be invited to join GCRF assessment panels for particular initiatives where they will be required to review a group of proposals and attend a decision meeting. If you are interested in joining this group please complete the [online application form](#) or contact gcrfcollege@esrc.ac.uk for any further information.

22 Relu people

- **Clive Potter** who led Relu's project on [Lessons from Dutch Elm Disease in assessing the threat from Sudden Oak Death](#) has been appointed Imperial College London's first Chair of Environmental Policy.
- **Alister Scott** who led Relu's [Managing Environmental Change at the Rural Urban Fringe](#) project has been appointed Professor of Environmental Geography at the University of Northumbria, leading the [bioeconomy research theme](#). While at Birmingham City University he was instrumental in developing the [Participology](#), a stakeholder engagement resource in board game format which has just launched a Linked In forum (accessible via the webpage) to discuss the use, value and impact of the resource.

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