relu
Rural Economy and Land Use

Harnessing the social and natural sciences for sustainable rural development

Relu Newsletter

January 2015
Contents:

1 New research to tackle disease in developing countries
Over the next five years the Zoonoses and Emerging Livestock Systems (ZELS) programme will support 11 interdisciplinary projects in developing countries in Africa, south Asia and south east Asia, bringing together expertise from the human and animal health sectors and the natural and social sciences. In addition15 students from the UK and developing countries will receive doctoral training in ZELS-related research. The programme is funded by four UK research councils (BBSRC, ESRC, MRC and NERC), the Defence Science and Technology Laboratory and the

Department for International Development and is drawing on the lessons for interdisciplinary research gained through the Relu programme. Zoonoses, which are diseases capable of passing from animals to humans, are estimated to have cost more than $20BN in direct costs globally between 2000-2010, with a further $200BN in indirect costs. As well as threatening human and animal health, zoonoses affect livestock production, causing economic and social harm to communities in developed and developing countries.

2 Could wetlands help improve management of land and water?
A growing emphasis on the value of "natural capital" and rising concern about the need to protect water at source, rather than cleaning up abstracted supplies with chemical inputs, could be major drivers for public and private organisations to look for more systemic solutions such as wetlands. LWEC's policy and practice note No 15 on the topic is now available in hard copy (contact anne.liddon@ncl.ac.uk) and on line.

3 Nexus underway with conference and workshops
Since its launch the ESRC Nexus Network has sprung into action with several significant events. "What Works at the Nexus" Conference in November 2014 attracted over 170 people, from academia, business, policy and civil society to discuss the social science of food, energy, water and the environment. This was followed by the first Nexus Network workshop on "Values and Valuation" with speakers from Defra, Anglian Water and several universities. Fifty participants took part in sessions to uncover the issues for business and policy of nexus decision making and to see if and when an economic approach can be of use. Talks from the workshop are available on line.

4 Dragons Den showcases emerging technologies for early tree disease detection
A Dragons' Den session had scientists seeking "investment" (real or in terms of honest advice) on their emerging technologies from a (gently) heckling audience when the " New approaches for the early detection of tree health pests and pathogens" project held the first of three annual Learning Platform workshops in November. Participants, including plant health inspectors, foresters, natural and social scientists and representatives from biotechnical and nursery industries, NGOs and government departments, were treated to an innovative agenda with plenty of opportunities to discuss the problems and opportunities relating to early detection. This new interdisciplinary project started in 2014 and is funded through the LWEC Tree Health and Plant Biosecurity Initiative. Researchers are exploring, for example, "sniffer technologies" to identify chemical changes in the air triggered by disease; imaging techniques that detect changes beyond the range of human vision; new traps for detecting and capturing insects; and DNA-based approaches to seek out established and new pests. They are also looking at how these technologies can be developed better in partnership with practitioners and with industry representatives. The event included contributions from

Defra on policy and recent steps taken in biosecurity; plus the wider context of environmental change and regional adaptive management from a forestry perspective. A “keynote listener” reminded the researchers about the need to go beyond the laboratory and forest to investigate marketing and manufacture if technologies are to be implemented successfully. Anybody wishing to get involved in Learning Labs, future Learning Platforms or who wants to find out more about the project can contact Mariella Marzano (Mariella.Marzano@forestry.gsi.gov.uk) or Rehema White (rehema.white@st-andrews.ac.uk).

5 Dissemination event buzzing

Live bumblebees in a pollen-rich “meadow” setting were among the displays at the Insect Pollinators Initiative (IPI) dissemination event in October, at the Wellcome Trust building in London. All nine projects involved in IPI set out their stalls, which, as well as the bumblebees, included videos and models, food, flowers, bee hotels and microscopes. Stakeholders visited the stands in turn, and then had the opportunity for discussion with the researchers over lunch. There were also presentations, with a focus on how the outputs can be used to understand and address pollinator decline. The IPI projects address a wide range of issues, including the effect of land-use change, the importance of urban environments for insect pollinators, the effects of pesticides on them and diseases of honeybees and bumblebees. The programme is funded under the auspices of the LWEC partnership.

6 Rufopoly plays well with ESRC

Alister Scott and his team at Birmingham City University, who created the participatory learning board game Rufopoly as part of their Relu project, have secured funding from the ESRC's Knowledge Exchange Opportunities programme to develop the work further. Rufopoly has been used extensively in early stages of planning projects and has been adapted in both Malmo and Nebraska for participative events. The game introduces players to the delivery and trade-offs associated with planning and environmental issues at the rural urban fringe. With this new funding the team aims to develop a resource kit for stakeholders that can be used to widen participation and deliver improved policy and decisions.

7 Guidance for growers on getting optimum pollination from insects

Bees, hoverflies and other insects play a vital role in pollinating many crops in the UK, as has been emphasised in Defra’s recently published national pollinator strategy . LWEC’s Policy and Practice Note No 13 “The benefits of managing pollinators for crop production” draws on research from the Insect Pollinators Initiative to provide practical advice for growers and farmers about how they can manage this important resource for optimum returns, as well as pointers for policy. The PPN may be downloaded from the LWEC website and printed copies are also available from anne.liddon@ncl.ac.uk.

8 Newcastle symposium promotes rural innovation

Tim Benton from Global Food Security was guest speaker at Newcastle University’s John Moffitt Symposium in supporting innovation in agri-food

systems and rural economies just before Christmas. Staff from across the university's School of Agriculture Food and Rural Development reflected on how their research is contributing to "producing more from less" and the significant role being played by an interdisciplinary approach.

9 How can land advisers make new Agri Tech Strategy work?
The Government's new Agri Tech Strategy will need key knowledge exchange partners if it is to make a difference and fulfil its objectives of sustainable intensification. LWEC Policy and Practice Note no 12: "Strengthening the links between the UK strategy for agricultural technologies and farm advisory professions" produced by Landbridge emphasises the important role that the advisory professions will play.

10 BESS reaches out to youngsters
Could you design a game that helps to balance the different benefits from ecosystems services while keeping your citizen stakeholders healthy and happy? If you are between 11 and 14 years old you could be a winner. The Biodiversity and Ecosystem Services Sustainability (BESS) programme has implemented a range of outreach activities, many of them designed to engage children and young people. Their game design competition is just one that they are piloting in York schools this year. The winning design from the national competition will be developed into an app and BESS is working with CREST awards, STEMclub challenges, York University games researchers and an app development company to make this happen.

11 Urban bee thrives while country cousins are in decline
The tree bumblebee is bucking a trend in Britain, and this could be because it thrives alongside humans in towns and villages. Many other bumblebee species seem to be in decline but Bombus hypnorum has spread to nearly all of England and Wales since its first appearance in southern England in 2001. According to research from the University of East Anglia these insects are associated with built-up areas which form a large part of their habitat use.

12 Report recommends better partnership working to combat animal and plant disease
Diseases in animals and plants can have significant impacts on the economy, the environment and society, and the burden of threat is increasing in all areas. The UK Government recognises that threats such as these can only be addressed by improved coordination and collaboration, to maximise our ability to predict threats, detect and stamp out disease outbreaks, and minimise their effects when they become endemic. The approach for a new UK science partnership for animal and plant health is outlined in a report by UK Government Chief Scientific Adviser, Sir Mark Walport and Defra Chief Scientific Adviser Professor Ian Boyd – "Animal and Plant Health in the UK: building our science capability".

13 LWEC addresses health implications of climate change
The LWEC Health Conference – Promoting Health and Wellbeing in our Changing Environment which took place in September 2014 can now be viewed on the KTN Youtube channel. The sessions focused on current policy and practice, climate change and environmental quality and ecosystem services. LWEC Policy and Practice Notes No 6 Ensuring resilience in care for older people and No 7 Avoiding summer overheating with saving energy in acute hospitals are available on the LWEC website.

14 Identifying areas where wildlife can survive in a changing climate
A project by Natural England with the University of Exeter is helping to target conservation action. Two reports will help future conservation management by identifying climate change "refugia". These are localised areas like hills, valleys, moors and mountains, with specific environmental conditions that could allow wildlife to survive, despite climate change making the surrounding areas less suitable. 'Climate change refugia for the flora and fauna of England' describes and maps the location of these sites in existence today. 'Palaeoecological evidence to inform identification of potential climatic change refugia and areas for ecological restoration' considers how data on past environmental change, from peat bogs and lake sediments, can help us understand where refugia have been present in the landscape since the last Ice Age.

15 Could your research feature in an LWEC Policy and Practice Note?
The LWEC Policy and Practice Note series has now reached No 15 and all are available on the LWEC website. We welcome proposals for new notes that feature research being carried out across the LWEC partnership and that draw on results either from a particular research programme or several programmes. Contact Anne Liddon anne.liddon@ncl.ac.uk for further information or to discuss any possibilities.

16 Environment Agency calls for comments on draft plans
There is still an opportunity to comment on the Environment Agency consultations on draft updates to the River Basin Management Plans and draft Flood Risk Management Plans. The Flood Risk Management Plans consultation closes on the 31 January 2015, while the River Basin Management Plans consultation continues until10 April 2015.

17 Understanding water needs for agriculture in the East of England
Supplying sufficient water for agricultural production in the East of England is predicted to become problematic in future years. Researchers from the University of East Anglia hosted a workshop at the Suffolk Showground in November to progress our understanding of current and future needs. Round table discussions were held involving a range of participants, including farmers, agri-tech companies, the Environment Agency, agri-businesses, Water Abstractor Group members, CLA, Framlingham Farmers, the NFU and many more and a report is now available.

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