

Relu Newsletter

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1 How can the horticultural industry support sustainable gardening?

Gardening is a popular pastime in the UK that can help people maintain their physical and mental health and also keeps them in touch with nature, but not all current gardening practices are sustainable. How could the horticultural industry help to encourage gardeners to think more about how they maintain their gardens and to take positive steps to support nature and biodiversity? LWEC's policy and practice note no 29 "[Gardening sustainably for the future](#)" provides some pointers. All the LWEC policy and practice notes [may be downloaded from the LWEC web page](#).

2 Looking inside the policy evaluation process

Are you facing challenges about or are you exploring new approaches to evaluating policy? The Centre for Evaluation of Complexity Across the Environment-Food-Energy Nexus is inviting applications for the CECAN Fellowship scheme. This is an opportunity for policymakers, analysts and academics to find out more about the work of the Centre and the range of methods they are examining by spending time with the researchers. Applicants should email an initial query to cecan@surrey.ac.uk outlining an area they are interested in pursuing as a Fellow and, if they wish, who in CECAN they would like to work with. [Details are available on the CECAN website](#).

3 Taking the threat of coastal surges into account in planning for the future

With climate change towns, cities and energy infrastructure in the UK's coastal zone are under increasing threat from sea-level rise and intermittent storms. Storm surges are particularly dangerous due to their extreme water level and large waves. Strengthening and raising the height of sea defences is an immediate option, but how do we identify when, where and if to take such actions, and what alternatives can be considered to increase our resilience to climate change? [LWEC Policy and Practice Note no 30](#) draws on the latest research. All the LWEC policy and practice notes [may be downloaded from the LWEC web page](#)

4 Relu research that helped to slow the flow creates flood of requests

Relu's [Understanding Environmental Knowledge Controversies](#) project has had very positive impacts for Pickering in North Yorkshire, resulting in a scheme to "slow the flow". This helped to ensure that Pickering was not one of the communities flooded during winter 2015/2016. Mike Potter who, along with other local residents was an active participant in the project,

said: “The media response was overwhelming, as was the flood of requests from other desperate communities struggling for protection. Lobbying for similar measures to be adopted nationwide has been helped by the stream of VIP’s beating a path to Pickering - Prince Charles, Oliver Letwin MP, Environment Agency CEO and chair and many more.” [A video about the work is now available on line.](#)

5 Balancing growing demands for power with carbon reduction targets

Fulfilling the UK’s objective of both ensuring resilient infrastructure is in place to meet future energy needs and the country can meet its carbon emission reduction targets poses challenges. The use of low carbon, renewable energy technologies, such as wind turbines and hydropower, is expected to increase. However, the supply from these technologies may be periodic and/or irregular and demand for power is increasing. [LWEC policy and practice note no 31](#) looks at the latest research and makes recommendations for decision makers and energy suppliers. All the LWEC policy and practice notes [may be downloaded from the LWEC web page.](#)

6 Health and wellbeing research projects funded

Four projects have been awarded funding from the Valuing Nature [Health & Wellbeing Call](#). They are [CoastWEB](#): Valuing the contribution which coastal habitats make to human health and wellbeing, with a focus on the alleviation of natural hazards, led by Dr Nicola Beaumont, Plymouth Marine Laboratory; [Improving Wellbeing through Urban Nature](#): integrating green/blue infrastructure and health service valuation and delivery, led by Dr Anna Jorgensen, University of Sheffield; [Green Infrastructure to Promote Health and Wellbeing in an Ageing Population](#), led by Dr Sarah Lindley, University of Manchester and [Taking the bite out of wetlands](#): managing mosquitos and the socio-ecological value of wetlands for wellbeing, led by Dr Tim Acott, University of Greenwich.

7 Tree Health and Plant Biosecurity Initiative tackles pests and diseases

The landscape, cultural, economic and environmental value of trees and the services they provide are under threat. Policy decisions and management strategies to reduce the spread of pests and diseases, prevent and treat outbreaks, and manage forests to maximise their resilience requires a multidisciplinary approach. The UK’s Tree health and Plant Biosecurity Initiative ([THAPBI](#)) is a multi-donor (BBSRC, Defra, ESRC, the Forestry Commission, NERC and the Scottish Government) research programme that aims to tackle issues such as detection, disease and pest transmission; infection and damage; genetics, adaptation and resilience; and the impact of pests and diseases on forest ecosystem services. Research also addresses public responses to the decline in tree health and increased tree mortality, how to reduce the spread of tree pests and diseases and options for forest management. Further information is available from the [THAPBI](#) website.

8 Cool Farm Biodiversity - a new online calculator

New software called Cool Farm Biodiversity has been added to the Cool Farm suite of tools (www.coolfarmtool.org). Cool Farm Biodiversity quantifies how well farm management practices support biodiversity at farm scale. It is most appropriate for arable, livestock and mixed farms. Points are awarded for wildlife-friendly actions in four areas: diversity of products; production practices; small natural habitats; and larger natural areas and landscape. Points are also awarded separately for eleven different groups of species (elements of biodiversity), to allow farms to set different objectives for their biodiversity management. [Register for a free account](#) to use the tool and send any feedback to Dr Lynn Dicks, email lvd22@cam.ac.uk.

9 Forestrisks website now available

[Forestrisks.net](#), a website hosted by the University of Edinburgh and developed by Dr Genevieve Patenaude and Susan Davies, with funding from NERC, is now available. It provides a wealth of information from UK research on threats from natural disturbances to forests worldwide, including wind, fire, pests and disease and drought. The website is designed to help anyone involved in risk assessment and risk management, including insurers, forest owners and manager, consultants and advisers and investors. It will be updated regularly and the information is provided free of charge. Please inform susan.davies@ed.ac.uk if you make use of any information in a professional context to assist in evaluation.

10 New ASSIST programme exploring sustainable intensification of farming

Feeding the growing population without causing unacceptable environmental damage is one of the greatest challenges facing humanity. ASSIST (Achieving Sustainable Agricultural Systems) is a new 5+ year £11M research programme that unites NERC and BBSRC science with support from the farming industry to help understand how to tackle this challenge. The Centre for Ecology & Hydrology, in partnership with Rothamsted Research and the British Geological Survey, will develop innovative farming systems that advance our understanding of sustainable intensification to increase food production with more efficient use of inputs, promote resilience of agro-ecosystems to future environmental change and reduce the environmental footprint of agriculture. Project partners include Agrimetrics; Agrii; Syngenta; Defra; Natural England and The James Hutton Institute. For further information [visit the website](#) or contact Professor Richard Pywell rpf@ceh.ac.uk or Dr Jonathan Storkey jonathan.storkey@rothamsted.ac.uk

11 What works to enhance natural pest control?

Can academics and land managers combine their knowledge on pest control and come up with better approaches? [A new open access paper published by the University of Cambridge](#) assesses evidence for the effectiveness farming practices to enhance natural pest regulation, an important and valuable ecosystem service in agriculture. The method was initially developed under the Relu programme. Here it identifies five practices with good evidence of a benefit to natural pest

regulation, the most beneficial being “Combine trap and repellent crops in a push–pull system”. It highlights knowledge gaps, or potential research priorities, by showing practices considered important by stakeholders for which there is not enough evidence to make an assessment of effects on natural pest regulation. The evidence is summarised on the website www.conservationevidence.com.

12 New animal welfare research network launched

At an inaugural meeting of a new [Animal Welfare Research Network](#) in May, over 100 academics and representatives from businesses, government departments and NGOs, came together to reflect on the challenges faced by the livestock industry in ensuring welfare standards, while also addressing complex issues such as sustainability, profitability and the demands of consumers. The network has been established with funding from BBSRC.

13 Genetic variant of deformed wing virus poses increased threat to honeybees

According to an international research group, a genetic variant of the deformed wing virus is more dangerous to honeybees than the original virus strain. The consortium of researchers is based at Freie Universität Berlin and Martin Luther University Halle-Wittenberg. The emerging variant could represent a threat to honeybees worldwide and is probably already widespread in many parts of Europe. The findings were published in the “Proceedings of the Royal Society B” (DOI: 10.1098/rspb.2016.0811). Honeybees as pollinators are indispensable for the yield of many wild and cultivated flowering plants and for the preservation of biodiversity. Losses in honeybee populations are an on-going concern. Deformed wing virus, which causes crippled wings and is transmitted by varroa mites, is implicated as a major driver of colony decline. The work was partly funded by the [Insect Pollinators Initiative](#).

14 Are animals happy and how can we tell?

BBSRC-funded research groups across the UK are using innovative new techniques to get a closer and more accurate look at an animal's welfare state, particularly those relevant to farming and agriculture. [A video with more details about the research may be viewed on line.](#)

15 Collaborators sought for research on ecological intensification

[Dr Lynn Dicks](#), a previous RELU programme post-doc on [Linking evidence and policy for managing biodiversity in the agricultural landscape](#), has been awarded a NERC Independent Research Fellowship from 2016 to 2021 at the University of East Anglia. Her new research project, "Towards crop-pollinating' landscapes: quantifying pollen supply and demand to manage wild pollinators for their benefits to food production", focuses on common wild crop pollinators and how they use landscape. Lynn is interested in the potential for ecological intensification to enhance or maintain high agricultural yields, from ecological and policy perspectives and is looking for PhD students, collaborators and partners to work with her at UEA. Until October, she can be contacted via lyd22@cam.ac.uk.

16 AgriFood launch sparks discussion

Eight universities are joining forces on agri-food research in the North of England: [Newcastle](#), [Durham](#), [Lancaster](#), [Leeds](#), [Liverpool](#), [Manchester](#), [Sheffield](#) and [York](#) form the [N8 partnership](#). The [N8 AgriFood Launch](#) held in Manchester in June created a unique opportunity for a much needed discussion between members of the academia, industry, NGOs, government and farming community. The five year N8 AgriFood partnership will concentrate on sustainable production, strengthening supply chains and improving health.

17 Participology for decision makers

[Participology](#), the board game that is designed to engage stakeholders in spatial planning builds upon work done by Relu's [Managing environmental change at the rural urban fringe](#) project. [In his blog Professor Alister Scott who led the project explains](#) how Participology was developed, how planners, local authorities and other decision makers can access the game on line and how they can now tailor the game to their own particular geography and stakeholder needs.

18 Deteriorating global farmland and forests could threaten ecosystems worldwide

The effects of climate change may be far greater for the world's poorest people than previously feared because of the way people are managing land, according to Professor Mark Reed and Professor Lindsay Stringer. The findings, which offer the first comprehensive synthesis of the links between global climate change and land degradation, were published in a new book "[Land Degradation, Desertification and Climate Change: Anticipating, Assessing and Adapting to Future Change](#)" by Routledge and the United Nations Convention to Combat Desertification (UNCCD). The findings will inform the work of the UNCCD's Science Policy Interface and other global programmes, such as the Economics of Land Degradation Initiative that is assessing costs of action and inaction against degradation, and the first Global Land Outlook, to be published in June 2017.

19 Mapping saltmarsh stocks

The [CBESS](#) (A hierarchical approach to the examination of the relationship between biodiversity and ecosystem service flows across coastal margins) project has produced a free tool for predicting and mapping carbon stock in salt marshes. [The tool is for governmental and non-governmental organisations](#) that have interests in salt marshes and are seeking information about natural carbon stores. There is also a saltmarsh app for the public that includes guides to saltmarsh species, background science and guidance on how to survey for carbon stock. Users can upload their survey results on the accompanying [website](#). If you have any queries about these resources contact Dr Laura Harrison email laura.harrison@york.ac.uk

20 Peatland Strategy conference

“Creating a Legacy for Peatlands”, the 2016 conference of the IUCN UK Peatland Programme will take place from 29 November to 1 December at the Shropshire Conference Centre. For details [visit the website](#) or email joanna.richards@iucn.org.uk.

21 Building Prosperous Cities: the role of natural capital and green infrastructure

This conference in London on 27 September 2016, and organised by the Ecosystems Knowledge Network, will look at what green infrastructure and natural capital mean for the planning and development of UK cities. The full programme and tickets are available from the [Ecosystems Knowledge Network website](#).

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