



## Programme

### Day 1 Tuesday 9th May 2017

10.00 Arrive tea/coffee/registration  
10.20 Welcome

 **10.30 Session 1. Long term monitoring to inform future management**

10.35 What have we learnt from long term monitoring?  
David Gowing Floodplain Meadows Partnership

11.00 Long-term vegetation dynamics of two floodplain grasslands in the Netherlands  
Chris Smit, University of Groningen

11.25 Current monitoring and research on Russian floodplain meadows  
Tatyana Parinova, Northern (Arctic) Federal University, Arkhangelsk, Russia

11.50 Floodplain meadow restoration on the northern Upper Rhine - measures and monitoring.  
Matthias Harnisch, City of Riedstadt, Germany

12.15 FMP Ambassadors – an introduction  
Emma Rothero, Floodplain Meadows Partnership

12.20 A brief landscape history of the Ouse Ings and Lower Derwent Valley  
Martin Hammond, North Yorkshire County Council

**12.30 Lunch at National Railway Museum and posters**





13.15

## Session 2. Practicalities and realities of site management in the LDV

Two sites will be visited in the Lower Derwent Valley, exploring the different issues of site management. Wheldrake Ings is a Yorkshire Wildlife Trust reserve, and North Duffield Ings a site owned privately, but managed by Natural England as part of the National Nature Reserve

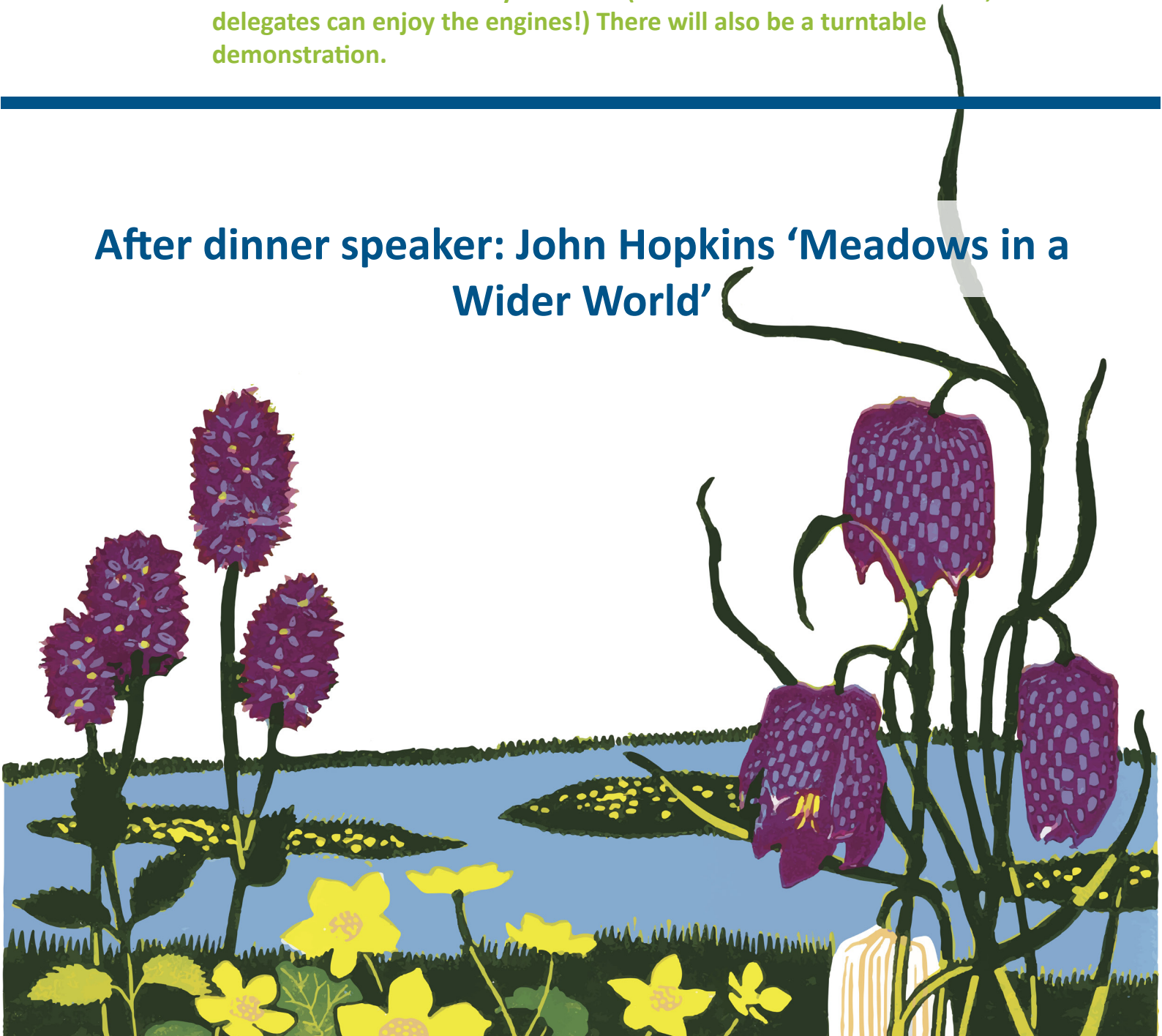
18.30 Arrive back at NRM for refreshments and posters.

**NB: There may not be time to go back to hotels and change etc before dinner. Please come prepared for this eventuality. There will be space to lock things away safely.**

19.00

Dinner in National Railway Museum (Great Hall available from 19.00, when delegates can enjoy the engines!) There will also be a turntable demonstration.

**After dinner speaker: John Hopkins 'Meadows in a Wider World'**





## Day 2    Wednesday 10th May 2017



### Session 3. Natural Flood Management and restoration

Site visit to Clifton Ings and Rawcliffe Meadows SSSI - management of a large floodplain meadow as flood storage area and a community restoration project in the heart of York.

Meet on site at designated points (see Clifton and Rawcliffe Ings map) at 9.30 am. We will also lead anyone who wishes to walk from the NRM leaving at 8.45. You may also leave your bags in the NRM before we depart. We will be on site from 8.15 if you wish to leave bags. If you were on BUS 1, meet at point 1. If you were on BUS 2, meet at point 2.

**13.00**      **Lunch at National Railway Museum and posters**



### 13.50      Session 4. Floodplain Meadows for the Future

- 13.50      John Ellerman/FMP restoration project  
            Irina Tatarenko, Floodplain Meadows Partnership
- 14.10      Short talks from FMP Ambassadors  
            Ken Pomfret and Debbie Lewis
- 14.20      Enhancing and restoring floodplain meadows: evaluating community change between 2005 and 2014 at Chimney Meadows  
            Lisa Lane, Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust
- 14.40      Looking to the future - results based agri-environment schemes England, Ireland and Spain  
            Annabelle LePage (Natural England) and Caitriona Maher (European Forum for Nature Conservation and Pastoralism)
- 15.05      Nature's ups and downs in a changing Europe  
            John Rodwell
- 15.35      Wrap up session
- 15.45      Finish





# About the talks and speakers

## David Gowing, Open University and Floodplain Meadows Partnership

Contact: [David.Gowing@open.ac.uk](mailto:David.Gowing@open.ac.uk)

Additional authors: Gonzalo Garcia-Baquero, Hilary Wallace and Irina Tatarenko



The Partnership has been monitoring a number of meadows annually for more than ten years and compiling the results into a database. This talk will share some of the patterns we have found and discuss the various techniques we have used for interpreting long term data. The theme throughout will be the timescales of response. We will look at both hydrological and botanical data from a range of sites and present some recent results on how to combine these in order to interpret the response of vegetation to changes in soil hydrology. Examples from our dataset will be used to discuss issues of where responses to change involve a lag period and how to separate the effects of multiple drivers. Other useful techniques include the use of Ellenberg's indicator values and the calculation of goodness-of-fit coefficients against target communities. All of these methods form a toolbox of approaches for making sense of your data.

### Career

David gained a PhD in the use of water by plants in 1991 and has researched the soil-water-plant system ever since. He has held a special interest in floodplain meadows since 1993 and has been involved in collating long-term datasets at a number of meadow sites. He was a founder member of the Floodplain Meadows Partnership in 2007, which he currently directs. He holds a teaching post at the Open University, where he contributes to the qualifications in Environmental Science and Biology.

## Chris Smit, University of Groningen, Netherlands

### Long-term vegetation dynamics of two floodplain grasslands in the Netherlands

Contact: [c.smit@rug.nl](mailto:c.smit@rug.nl)

I will present results from some long-term studies in floodplain grasslands in the Netherlands. The first area is the Junner Koeland area, 100-ha nature reserve along the river Overijsselse Vecht, with a centuries-long grazing history, and multiple rare and endangered species of plants, birds and fungi that are typical for these – once abundant – floodplain grasslands. To evaluate the influence of grazing and nutrient availability on plant community assembly, we established an herbivore exclusion experiment in 1994 with: (i) unfenced areas accessible to all herbivores (hereafter “controls”); (ii) areas fenced to exclude larger herbivores (i.e. cattle), but allowing access to smaller species (i.e. rodents and lagomorphs); and (iii) areas fenced to exclude all mammals except small rodents. In addition, we manipulated nutrient availability. Our results showed that herbivores promoted a more deterministic plant community assembly, while nutrients played a relatively minor role. Furthermore, we reveal that although large and small mammal herbivores often have contrasting effects on community and ecosystem properties, they can also synergistically homogenize plant communities. The second area is the Drentse Aa, a naturally meandering ‘rain’ river located within a National Park. The landscape is fairly well preserved and similar as it was in the mid 19th century, as the agricultural landscape reforms of the 20th century were not implemented here. Because of this, many hedges, heathlands and traditionally managed fields were spared from transformation.



Traditionally, the meadows were used for hay-making. Since 1960's the management of these fields was gradually handed over to nature conservation agencies. This management includes (mostly) mowing, mimicking the traditional hay-making culture, while some parts are being grazed by cattle at low grazing pressure. The fields contain many rare and endangered plant species. Long-term monitoring plots were established in 1972 and monitored regularly. I will discuss trends in the plant community composition and relate this with management interventions.

Lastly, I will discuss the results of a study that addressed the question: can grazing be used as a management tool to achieve goals for both nature conservation and flood defense along rivers? As the pressure on space increases along Dutch rivers, the functions of these areas need to be optimized, which means searching for a balance between nature conservation and flood defense. We constructed a large database with information on the abiotic (flooding frequency, soil type, topography) and biotic conditions (grazing management, biodiversity and vegetation changes) from a dozen riverine floodplains in the Netherlands. We constructed Structural Equation Models to analyze which pathway and individual factors best explain the changes in diversity (plants and butterflies) and vegetation structure over a period of 12 years.

## Career

Chris began his research career at Wageningen University before undertaking his PhD at the University of Fribourg, Switzerland. From there he secured a post-doc position at the University of Groningen after a post-doc appointment in Spain. He has worked at the University of Groningen ever since, having gained an Assistant and Associate Professor post. His group works on species interactions and consequences for the dynamics and spatial organization of plant communities. He is particularly interested in facilitation, i.e. positive interactions between species, and how these interactions are shaped by the interplay of various (a)biotic factors. He typically uses large-scale field studies in ecosystems where (large) herbivores play an important role, such as temperate savannas or wood pastures, semi-arid steppes, temperate lowland forests, salt marshes, and riverine floodplains. He aims to contribute to the advancement of fundamental ecological concepts with relevance for conservation.

## Dr Tatyana Aleksandrovna Parinova Northern (Arctic) Federal University, Arkhangelsk, Russia

### The floodplain meadows with great burnet (*Sanguisorba officinalis*) : a look across geographical gradient

Contact: [Nadeinata@mail.ru](mailto:Nadeinata@mail.ru)

Plant communities with Great Burnet (*Sanguisorba officinalis*) are widely distributed on the floodplains across geographical gradient from the British Isles to Eastern Siberia. These meadows are famous for exceptionally high biodiversity which combines with the high productivity. We are going to discuss an effect of topology, soils and floristic composition on formation and sustainability of the meadows with *Sanguisorba officinalis*.

## Career

Grassland ecologist. The object of our scientific research since 2001 up to the present time are floodplain meadows of the Northern Dvina river (one of the largest river of the Russia North-West). We study a variety of morphological and typological characteristics and basic physical and chemical soils properties of the floodplain meadows. We are interested in changes of floristic composition, vegetation, soil cover and productivity under the influence of various natural and anthropogenic factors.



**Matthias Harnisch, City of Riedstadt, Germany**  
**Floodplain meadow restoration at the northern Upper Rhine -  
measures and monitoring**      **Contact: [m.harnisch@riedstadt.de](mailto:m.harnisch@riedstadt.de)**



Since the late 1990's projects aiming at the recovery of rare alluvial meadows have been taking place in the city of Riedstadt, situated 40 km south-west of Frankfurt in the Holocene floodplain of the northern Upper Rhine. The projects dealt with the *Cnidion* alliance (on rich alluvial soils) and *Molinion* on rare nutrition-low soils. Aiming at species-enrichment, green hay was transferred from old species-rich flood-plain meadows onto ex-arable fields and species-poor meadows. Target species are such rare and endangered species as *Iris spuria*, *Arabis nemorensis*, *Cnidium dubium*, *Viola pumila* or *Iris sibirica*, *Gentiana pneumonanthe*, *Allium angulosum* and *Galium boreale*. The restoration area consists of 70 ha along both sides of the main dyke of the Rhine, thus including areas in the functional floodplain as well as in the fossil floodplain. Beyond solely restoring species-rich floodplain-meadows we wished to establish an agricultural utilisation system which enables long-term maintenance of the meadows. Therefore local farmers were included from the very beginning. Circumstances in Riedstadt are favourable as there is a high and long-term demand for hay to feed horses. This serves the conservation aims as horses need late cut hay, which in turn enables most of the target species to finish seed-production. The restoration areas were monitored from 2001 - 2006 (flora and fauna). In 2007 and 2008 only the development of the vegetation was surveyed. Then, after some years without monitoring (due to financial reasons) we could again surveyed the vegetation in 2014.

### Career

Matthias Harnisch was born in 1965. landscape architect & artist. From 1986 - 1988 he had an apprenticeship as a gardener. He then went on to study landscape architecture at RheinMain (University of Applied Sciences), then working as a town and country planner in a private office for landscape architecture. Since 1997 he has been registered as a landscape architect in the German Order of Architects. In 2001 he became the Floodplain meadows manager in the City of Riedstadt (see: <http://www.riedstadt.de/stromtalwiesen/english-version.html>) and additionally, since 2008, manager of the cities inner urban green areas (see: <http://www.riedstadt.de/gruenflaechen/english-version-redesigning-innerurban-green-areas.html>)

**Emma Rothero, Open University/Floodplain Meadows Partnership, UK**  
**Floodplain Meadows Partnership Ambassadors**

**Contact: [Emma.Rothero@open.ac.uk](mailto:Emma.Rothero@open.ac.uk)**

The Floodplain Meadows Partnership Ambassadors scheme started in 2015, aiming to train 34 individuals over 2 years who wished to understand in more detail the science behind floodplain meadows. Ambassadors were invited to apply for subsidised places, and have then had to study a specific site in more detail, monitoring plants, soils, water and management. They will aim to produce a report summarising their sites, and will then act as a county representative for the Partnership, able to give advice and support to others.



### Career

Emma secured a degree in Freshwater Ecology from Liverpool University before studying for a Masters in Applied Hydrology from the University of Wales, College Cardiff. She then worked for the Environment Agency for 12 years as a Conservation and Recreation and then Biodiversity Officer, responsible for advising on flood defence projects, planning applications, securing funds to help deliver local partnership projects, and providing general conservation support to Environment Agency staff as they delivered their duties. She then took up the role of Floodplain Meadows Partnership Outreach Co-Ordinator in 2008, where she has remained ever since.

## **Martin Hammond, North Yorks County Council, UK**

### **A brief landscape history of the Ouse Ings and Lower Derwent Valley**

Contact: [martin.hammond@northyorks.gov.uk](mailto:martin.hammond@northyorks.gov.uk)

North and East Yorkshire support around 300 ha of MG4 Burnet Meadow, 19% of the UK resource. Historically, the floodplains of the Vale of York held much more extensive areas, and were a critical resource for local communities for many centuries. Hay-making probably began in the Roman era and in 780 AD the great Anglo-Saxon scholar Alcuin described flower-filled plains beside the Ouse. Meadows were a feature of most riverside manors along the Ouse by the time of the Domesday survey and extensive documentation exists for the 13th century onwards. In the medieval period, floodplain meadows were worth 2 to 4 times as much as arable and they contributed to the capital of many ecclesiastical institutions as well as helping fund early-modern social welfare arrangements. As in lowland river valleys further south, floodplain meadows were managed under a shared-use system with the hay crop divided into numerous individual strips (doles) but with common-right grazing on the aftermath. Abundant documentary evidence shows that sustainable and equitable use of this resource were guiding principles, firmly established in common law as well as in local customs.



Meadows were highly prized resources and attempts to usurp local land-use rights sometimes met with a violent response, as in the Middlethorpe Ings hay riot of 1521. Once the jurisdiction of Manorial courts waned, committees were often formed with an elected Ings Master to oversee agricultural management. Most meadows were divided-up during the Parliamentary Enclosure period and eventually converted to arable or improved pasture, but Clifton Ings was never enclosed and Acaster South Ings remained in traditional management. In the Lower Derwent Valley, traditional farming practices also prevailed despite the extinguishment of common grazing rights and the valley today contains one of the most extensive surviving floodplain meadow landscapes in Britain.

## **Career**

Martin Hammond has been a freelance wildlife surveyor for 20 years and also works part-time as ecologist for North Yorkshire County Council. He has been involved in the restoration of Rawcliffe Meadows, on the Ouse floodplain at York, since 1990. His study of the landscape history and biodiversity of the Ouse Ings, 'Deep meadows and transparent floods', has just been published by the Carstairs Countryside Trust. Martin's other interests include wetland invertebrates (his 'Water beetles of Yorkshire' was published recently), and fen restoration.

## **John Hopkins**

**Meadows in a Wider World**      Contact: [johnjameshopkins@gmail.com](mailto:johnjameshopkins@gmail.com)

Science is at the core of site based meadow management and protection; the starting point of all conservation. Over the past 50 years we have developed a sound and growing base of evidence about meadow conservation and meadow enhancement. A more complex challenge is understanding how meadows form parts of landscapes and deliver the much vaunted ecosystem services. Equally important are the imagined meadows which infect the psyche of our society and the role they play in marshaling support. In a post Brexit world we need also to see our temperate grasslands in a wider, not a narrower geographical arena than Europe; a task we have so far performed poorly.



## **Career**

John began his career at the University of Bristol in the late 1970s, carrying out research and survey into the heaths and grasslands of The Lizard District, Cornwall. In 1981 he joined the staff of the Nature Conservancy Council as officer responsible for County Durham and was subsequently for six years NCC grassland specialist. Between 1992 and 1998 he was Head of the Habitats Branch of JNCC, responsible for coordinating all aspects of Habitats Directive implementation in the UK, and officially represented the UK government at meetings in Brussels and elsewhere in Europe. Between 1998 and his retirement in 2012 he spent much of his time ruminating upon the the science base of conservation and its interpretation. He continues in retirement to sit on a few committees, lecture and write.

**Irina Tatarenko, Open University/Floodplain Meadows Partnership, UK**  
**John Ellerman/FMP restoration project**    **Contact: [Irina.Tatarenko@open.ac.uk](mailto:Irina.Tatarenko@open.ac.uk)**



The John Ellerman Foundation have funded a three-year project to visit floodplain meadow restoration sites around England and Wales, collect data and understand where restoration is working and where, and if it is not working, why it is not. Irina will present the findings from this project to date.

### **Career**

Irina is a botanist with particular interest in meadow ecology and orchids. She started her research career in 1982 studying great sphagnum bogs in Western Siberia, then doing rare orchid species in the Far East of Russia, before getting a job as Research Fellow at the Meadow Research Station in Moscow Province to concentrate on the plant communities on European floodplain meadows. Back to orchids, she had got her PhD in orchid population and mycorrhiza studies in 1991, and continued extensive research in various aspects of orchid biology across Russia and Japan, which resulted in Dr of Science dissertation in 2008. Back to meadows, she's settled in the UK and become botanical surveyor and eventually, Floodplain Meadow Partnership research co-ordinator.

### **FMP Ambassadors**

**Ken Pomfret**    **Contact: [kenpomfret@btinternet.com](mailto:kenpomfret@btinternet.com)**

Avon Meadows Community Wetland is a designated Local Nature Reserve located on the West bank of the River Avon in Pershore, Worcestershire. The 23 ha site comprises approximately 13 ha of unimproved neutral grassland Floodplain Meadow together with roughly 5½ ha of artificially created wetland, plus scrubland, riparian margins, footpaths, ditches and hedges. He is the FMP Ambassador for Worcestershire and works with the Friends of Avon Meadows (FoAM) and Wychavon District Council to help in the management and restoration of Avon Meadows.



### **Career**

Ken is a retired Mechanical Engineer with an industrial background of international Commercial and General Management roles. He spent the last 15 active years as an independent consulting engineer specialising in design and installation of automated production lines in shipyards.

**Debbie Lewis**    **Contact: [debbielewis@BBOWT.org.uk](mailto:debbielewis@BBOWT.org.uk)**

Meadow Farm is part of the Upper Ray complex of meadows to the east of Bicester. The site has deep a network of ridge and furrows, with MG4 dominating the higher ridges and a more sedgy MG9 community found in the wetter furrows. The site has low fertility and a long tradition of hay cut followed by aftermath grazing with sheep. Meadow Farm is Debbie's study site and she is one of the Ambassadors for Oxfordshire.



### **Career**

Debbie studied Ecology at the University of East Anglia. She started working for the Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust in 2002, where she developed their reserve monitoring programme. Debbie now heads up the Trust's Ecology Team at the Trust.





**Lisa Lane, BBOWT, UK**

## **Enhancing and restoring floodplain meadows: evaluating community change between 2005 and 2014 at Chimney Meadows**

**Contact: [lisalane@bbowt.org.uk](mailto:lisalane@bbowt.org.uk)**



Following the purchase of Chimney Farm by Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust in 2003, 70 ha of floodplain meadows were recreated on former arable land, using green hay from the neighbouring Chimney Meadows National Nature Reserve. Early monitoring of the arable reversion fields showed that target vegetation communities of MG4/5 were reached within 3 years. As part of a long term monitoring project, these fields were re-surveyed in 2014 by the Earth Trust, in order to evaluate how both plant and invertebrate communities had changed 2005-2014.

### **Career**

Lisa graduated from University College London in 1994 with an M.Sc. in Nature Conservation and went on to work for Cheshire Wildlife Trust, initially as Woodland Project Officer, followed by HLF Reserves Officer. In 2004, she became Chimney Meadows Project Officer for Berks, Bucks and Oxon Wildlife Trust, converting 200 ha of intensively managed farmland into a nature reserve. This included reverting 70 ha of arable land into floodplain meadows. In 2006, she changed roles and as People and Wildlife Reserves Manager, oversaw the management of a suite of Community Nature Reserves. In 2010, she returned to Chimney Meadows as Upper Thames Living Landscapes Manager, overseeing the management of this site and working with other organisations to inspire communities about their local area and to encourage farmers and landowners, along the Upper Thames, to manage their land in ways that are beneficial to wildlife.

## **Looking to the future – Results Based Payment schemes**

**Annabelle LePage, Natural England, UK.**

**Contact: [annabelle.lepage@naturalengland.org.uk](mailto:annabelle.lepage@naturalengland.org.uk)**

Agri-environment (AE) schemes provide important sources of funding that enable farmers to protect wildlife habitats on agricultural land. These typically provide fixed payments for a change in management to produce a desired outcome, structured around a list of management prescriptions which the farmer must follow. An alternative results-based approach focuses payments on rewarding improvement in farmland biodiversity; they focus on the outcome rather than how it is achieved.



The concept of Results Based Payment Schemes (RBAPS) or “Payment By Results” has been around for a while, but despite widespread interest they’ve not been widely implemented. There’s now increasing concern about the effectiveness of mainstream AE schemes and the limitations of a ‘one-size fits all’ approach with fixed management prescriptions and payments. The concerns of the European Court of Auditors (ECA) have also resulted in major changes to scheme controls and a need for farmers to keep detailed records to prove they have followed the rules. Reflecting these dual concerns of effectiveness and controllability, EU DG Environment is funding 3 pilot projects to test and develop alternative RBAPS approaches in Ireland/Spain, Romania and England.

The 3 year English pilot is managed by Natural England in partnership with Yorkshire Dales National Park Authority. It operates in 2 contrasting areas:

Grassland: Wensleydale, North Yorkshire - species-rich hay meadows and habitat for breeding waders  
Arable: Norfolk/Suffolk - plots for winter bird food and pollen & nectar mixes for invertebrates

The pilot aims to:

- assess the environmental performance of habitats under RBAPS agreements.
- compare the RBAPS approach to control sites within the pilot boundary.
- test accuracy of farmer self-assessment of results.
- test cost effectiveness of RBAPS approach.
- explore agreement holder and stakeholder attitudes to RBAPS.

Key to the pilot's success in the first year was identification of appropriate results criteria for each habitat, an assessment methodology and payment rates. There are now 19 grassland and 15 arable agreements in place which will run for 2 years.

The species rich hay meadow option is targeted at good quality upland hay meadows and sites with potential for restoration. Meadows are assessed annually by transect survey before hay cut, with the presence of particular plant species recorded at 10 stops. A total score is calculated based on positive and negative indicator species and the extent of any damaging activities. The annual payment is linked to the total score with 5 payment tiers ranging from £112/ha to £371/ha.

The breeding wader habitat option is targeted at rough grassland with suitable habitat for redshank, curlew, lapwing and snipe. An annual assessment is made of rush cover, extent and quality of wet features and sward height, with points awarded for each category. There are 5 payment tiers ranging from £35/ha to £174/ha. Results from the first year will be available later this summer. What is already apparent is the sense of ownership and enthusiasm of the farmers, who value being able to use their own skills and judgement to deliver the outcomes and the flexibility which the RBAPS approach offers.

## Career

Annabelle started her career with a degree in Environmental Science from the University of Southampton, before working for Scott Wilson Resource Consultants undertaking Environmental Impact Assessments of transport and quarry developments and river and groundwater abstraction. She moved on to spend 2 years visiting farms as a Pesticide Usage Surveyor for the Central Science Laboratory, before becoming an Agri-Environment scheme Adviser with the Farming and Rural Conservation Agency and its successor bodies. She worked in this role for 6 years before transferring her skills to become a Senior Advisor on Environmental Stewardship within the national delivery team in Natural England, where she worked on implementation of the ES scheme including editorial duties on the scheme handbooks, guidance, training and new developments. After 9 years, she became a Senior Advisor within the Countryside Stewardship Development team, acting as Project Manager on the Payment by Results pilot scheme with responsibility for the Wensleydale pilot area.

## Dr Caitriona Maher, Ireland

Contact: [caitrimonamaher@gmail.com](mailto:caitrimonamaher@gmail.com)

## Results-based payments for species-rich flood meadow in Ireland and Spain

The Results-based Agri-environmental Payments Schemes (RBAPS) project in Ireland and Spain is developing and trialling results-based methods for the delivery of biodiversity on farmed land. RBAPS link the payments to the quality of the biodiversity at field level. In Ireland and Spain, the RBAPS project teams are designing, implementing and evaluating seven biodiversity measures across the three pilot regions. In the Shannon Callows (Ireland) three measures are being developed:

1. Species-rich Flood Meadows
2. Ground-nesting birds with Species-rich Flood Meadow
3. Breeding Wader Bird Habitat

Also developed under this project - in County Leitrim, Ireland: Species-rich grasslands and, Marsh Fritillary butterfly habitat with species-rich grassland and in Navarra (Spain), Traditional perennial crop mosaic. The project which runs from January 2015 to June 2018, has now completed one year of farmer contracts with 52 participating farmers in 2016. Farmer contracts will be administered again in 2017.



### **Shannon Callows Species-rich Flood Meadow Specific biodiversity target:**

The Species-rich Flood Meadow measure is designed to deliver good quality species-rich plant communities (including Annex 1 Lowland Hay Meadows (6510), Molinia meadows (6410) and Hydrophilous tall herb (6430) plant communities).

Result indicators: the number and cover of plant species which are indicators of high quality flood meadows are assessed, as are the cover of negative indicators (e.g. agricultural weeds, competitive species and woody plants) and the extent, if any, of damaging activities.

**Ground-nesting Birds** Shannon Callows Species-rich Flood Meadow with Ground-nesting Birds measure rewards farmers for both the protection of ground-nesting birds (GNB) and the quality of species-rich meadow present. This measure is only offered to those farmers participating in the Species-rich Flood Meadow measure (above) when the presence of Whinchat and/or Curlew has been confirmed in that particular breeding season. The same result indicators are used as above, but at a higher payment rate, as mowing of the meadow is delayed until after July 15th to encourage successful breeding of GNB. Preliminary results indicate a strong, significant positive correlation between the RBAPS score and, both the overall plant species diversity and the diversity of Annex 1 indicators of favourable conservation status. These results suggest that the RBAPS score is a good indicator of the quality of both the overall habitat and Annex 1 plant communities.

### **Career**

Caitriona Maher did her PhD on the effects of farming practices and flood variables on the plant communities and insect assemblages of the Shannon Callows floodplain meadows in Ireland. Following this she began working with the successful BurrenLife Programme in 2013, before beginning work with the EFNCP in 2015 on the Result-Based Agri-environmental Pilot Scheme (RBAPS) in Ireland and Spain. The RBAPS project is working with farmers, policy makers and other stakeholders to optimise both the delivery of wildlife on high-nature-value farmland and the spending of public money.

### **Professor John Rodwell    Contact: [johnrodwell@tiscali.co.uk](mailto:johnrodwell@tiscali.co.uk) Nature's ups and downs in a changing Europe**

Floodplain meadows, with their wildlife value, aesthetic appeal and productive hay crop, represent one of the most sustainable kinds of grassland in naturally-flooded lowland river valleys, delivering multiple ecosystem services. What can the European Red List of Habitats, a 3-year project just completed for the European Commission Environment Directorate, tell us about their diversity in different countries, their recent changes in extent and quality, their current state, the threats they face and the prospects for their recovery and survival? How might we play a full part in European initiatives to safeguard, harvest and enjoy this resource in the future, given possible changes in the political, economic and social situation across the Continent?



### **Career**

John Rodwell was Professor of Plant Ecology at Lancaster University but now works independently, providing expert advice and research products for environmental and wildlife agencies and NGOs in this country and elsewhere in Europe. Coordinator of the UK National Vegetation Classification, he continues work on defining plant communities, at the moment in a revision of the EUNIS Habitat Classification for the European Environment Agency. He was also part of an international team that has just completed a three-year programme of Red-List evaluation of all terrestrial and marine habitats across the EU28+ countries, with special responsibility for grasslands. He has worked on interpreting grassland composition and ecology for the Floodplain Meadows Project, Natural England, CCW (as was) and the National Trust and is chair of the UK Grasslands Forum. He is also interested in relationships between nature and culture, hosting discussions in aesthetic and spiritual ecosystem services for NERC and Defra and heads an Anglo-German conversation on belonging and place based in Manchester University.



# Other contributors

## Wheldrake Ings

Brian Lavelle - Yorkshire Wildlife Trust:  
David Gowing - Floodplain Meadows Partnership  
Hilary Wallace - Ecological Surveys (Bangor)

## North Duffield Carrs

Simon Christain - Natural England  
David Lindsay - Environment Agency  
Irina Tatarenko - Floodplain Meadows Partnership

## Clifton Ings and Rawcliffe Meadows

Mark Fuller - Environment Agency  
Hilary Wallace - Ecological Surveys (Bangor)  
Emma Leighton - Natural England  
Martin Hammond - North Yorkshire County Council  
Mick Pythian - Friends of Rawcliffe Meadows

## Chair of formal sessions

Richard Jefferson - Natural England Senior Specialist - Grasslands

## Thanks also to:

- Esmee Fairbairn Foundation for on-going financial support to the project
- John Ellerman Foundation for funding our restoration project
- Staff at Natural England, Environment Agency, North Yorks County Council and Yorkshire Wildlife Trust in York, and in particular Simon Christian, Craig Rawlston, Emma Leighton, Martin Fuller, Martin Fuller, David Lindsay, Martin Hammond and Brian Lavelle for their thoughts, ideas and help in organising this conference.
- Friends of Rawcliffe Meadows (FoRM) and in particular Mick Pythian for help regarding Clifton and Rawcliffe Meadows.
- All the site speakers. Saying the same thing repeatedly is a task, and we are grateful for their very valuable contributions.
- The Open University and particularly the School for Environment, Earth and Ecosystems Sciences for supporting our project and helping to fund some elements of this conference.
- The FMP Steering Group for their on-going and valuable support, direction and commitment.

