

## **Floodplain Meadows Partnership Conference**

### **Day Three – 15 October 2021 am – Session 2**

Emma: Morning everybody and welcome back. We'll try and make a start on the final session of this morning. I had asked Ann Skinner to chair the session for us this morning but unfortunately she's been struggling with Teams today so I'm stepping in instead. But I just wanted to say a little bit about Ann. Ann has worked in nature conservation for over 40 years and is a member of the Floodplain Meadows Partnership Steering Group. She is also a River Restoration Centre board member and sits on the National Trust Natural Environment Advisory Group as a Specialist Advisor. She's a Fellow of Chartered Ecologists and Chartered Environmentalists and she also worked for the Environment Agency for a huge amount of her career finishing up as a National Policy Advisor before she retired. She asked me to share some of her thoughts about the last session and about this session. So I'm just going to do that briefly. She said the last fascinating session showed us just how extensive floodplain meadows used to be in our landscapes and the high value society based on them. We are of course suffering from the many unintended consequences of their almost total removal. However we are developing our understanding of the attributes that make them special, particularly their ability to store carbon and floodwater. This penultimate session concentrates on those all-important mechanisms that could help us all go forth and restore them. With no further ado I shall invite our first speaker for this session to present his talk. This is Jon Hollis, Integrated Outcomes Manager at the Environmental Agency who's going to talk about the Environment Agency and natural flood management. Welcome Jon and thank you very much.

#### **Jon Hollis: The Environment Agency and Natural Flood Management.**

Jon: Good morning. I am going to talk a little bit about what we've done with Nature Based Solutions, the natural flood management programme, and what we're going to be doing next. This is a session all about mechanisms for facilitating restoration. I'm not going to go into any detail of what I could expect you might think about doing on the ground in the landscape however that is. I'm going to talk about this more from a national perspective policy, those kinds of things. I think it's really important, I've already started to talk about a variety of different terms that I use interchangeably and that's really important when we're talking about the kind of ways that we're going to restore these things, or we're going to create them and emulate new ways of working. So I think it's important to just mention what those terms are. So sometimes I'll refer to working with natural processes and I hear this out and around. I then talk about, and I'm talking more and more about nature-based solutions, which are a subset of working with natural processes and then natural flood management, we still use the term but probably using it less and less actually because of all the wider things that nature-based solutions can deliver. So the graphic there kind of describes

how nature-based solutions and NFM are subsets of each other. But the broad term there working to protect, restore and emulate natural processes and that's the really key thing for this session. I think that is worth just bringing out where we are at the moment.

Going back a little while. We were given some money in the Environment Agency from DEFRA in government to trial a range of different natural flood management techniques. There's a number of projects that have happened over the years. I'm sure you're familiar with places like Pickering, Holnicote, Stroud, Belford, there's a few other places around the country that have been trialling nature-based solutions. But what they hadn't done is necessarily looked at nature-based solutions being delivered at a huge scale across a whole catchment. So government said to the Environment Agency 'You can have some money towards doing that work.' and it was £15M to try and put more of these interventions within the toolbox, the way that we can reduce flood risk. To do that each of the projects were given 4 aims.

The first was to reduce flood or coastal erosion risk because it was that money in the first instance. The second was to improve habitats and increase biodiversity because we know that we get those shared benefits from nature-based solutions. We wanted to contribute to the research and development that's going on around this space and reduce the evidence gaps. We know from the working with Natural Processes Evidence Directory where those gaps were, and so we're working at the minute on understanding and overcoming supposed gaps now we've got a bit more data and evidence coming from the project teams. The fourth thing was to promote partnership working and so I can tell you now that one of the key bits of learning that we've got from the NFM programme is that none of this work, it doesn't matter whether or not it's on floodplains or in the upper reaches of peatland or perhaps through towns and cities or on the coast, these projects only happen with really good community engagement and community involvement.

The programme officially completed in March this year, however, because of COVID a couple of the projects will continue through this year and actually some of them will continue beyond that with money from outside of the programme such as has been the kind of seed funding that we've given these projects that community groups and others have come with more money and want to continue these things for a long while. The other thing is that some of the projects that won't have any further government funding will continue to collect data for some time to come, which is great as well so we can be learning from these for years to come. That's helped us to really bring forward some ideas into the FCERM strategy, Flood and Coastal Erosion Risk Management strategy for those of you who are less familiar with the terms there. That's got some key themes in it, climate resilient places. So working with partners to really bolster resilience to flooding and coastal change across the nation, both now and in the face of climate change. So this is looking very much forward. Today's growth and infrastructure are resilient to tomorrow's climate. So making the

right investment decisions, planning decisions to secure sustainable growth and environmental improvements, as well as infrastructure resilience to flooding and coastal change. Then the third one there, a nation ready to respond and adapt to coastal change which ensures local people understand their risk of flooding and coastal change and know their responsibilities and how to take action. It is littered with references to nature-based solutions, as is DEFRA's policy statement that was released on the same day. DEFRA's policy statement also says that we are committed to doubling the number of nature-based solutions in our £5.2Bn capital programme that started in March which will run over 6 years, compared to the last programme. So that's a really big commitment and some of that will be on floodplains. Some of that will be on lots of other things that we talked about. I think when I talk about nature-based solutions quite often the ones that people visualise are leaky barriers because they understand how they look and how they work in the landscape.

But the role of floodplains is important for flood risk management. Now, if I'm really cold about it really from a flood risk point of view, it's about the amount of space that they provide for floodwaters to be slowed or stored temporarily or maybe even for a slightly longer time. So the floodplain is really important from that side of things. But the picture on that screen on the right hand side of that slide is from one of the projects in the NFM programme and it shows that when they reconnected the river to the floodplain, that they didn't just create that space and let Mother Nature get on with it. But what they did was they got a really good mix of different seeds to introduce different flowers and plants within that to increase the biodiversity. That's been really great not only for the biodiversity, but also for the community as well, because they get a lovely space that they can walk around and enjoy too, and it's those shared benefits that are really, really important. From all the things that we can do with nature-based solutions but I think probably it's communities will be able to enjoy some of the floodplains by having that rich diversity and that rich environment to go and visit.

To try and bring this to life I've taken some of this from the work with the Natural Processes Evidence Directory which was published in 2017 and we're going to do an update next year. But the diagram on the right hand side shows relative benefits that you get as a result of implementing some of these measures. Now floodplain measures in some ways, I've picked one here which is multiple benefits of floodplain restoration. You can see that habitats can increase. Now we've not put 'You will get x amount exactly and that equates to £y' because that's really difficult to do and every situation will be different. But to give an indication that actually you do get these kinds of benefits from working with those projects is exactly the right thing to do. So you can see that the benefits can help government with the wider ambitions at the moment, carbon reduction, integrated water management, those kinds of things. They can obviously do great things for carbon as Emma pointed out, that would have been a part of the intro to this session. They can produce less carbon during their

construction in some ways compared to other ways that we reduce flood risk and they can hold water in the landscape which obviously has all those other great benefits, aquifers, clean drinking water, keeping some of the fertilisers that farmers use on the fields rather than in the rivers, and that can choke and have an impact on the biodiversity in the rivers as well.

So how do we make this happen is probably the next question and from a strategic point of view, what does this mean for funding in the future? Now there is no specific pot within flood risk management to do nature-based solutions or floodplain works. But it does fall under the toolkit that we have for investment within the £5.2Bn capital programme that I mentioned. The way to access that funding is through partnership funding. Partnership funding is a very specific set of rules and I'm not going to try and go into it in too much detail at the moment. But suffice it to say that the principle is that government will pay for certain outcomes to a set value of £s and we've made some improvements to partnership funding arrangements in the last year which should encourage more nature-based solution-type projects to come online. Generally these projects are led by risk management authorities so we're talking local authorities, the Environment Agency, water companies, IDBs and highways authorities. But that doesn't mean to say that other organisations can't be contributors, collaborators and engage with us on those projects, and perhaps access some of that funding in some way. I don't want to give the impression that there's a free for all on all of that money, there really isn't. There's a whole process to go through but there could be potentially some funding through our programme if it's going to deliver the right benefits that stack up under the rules that we work in. The other thing that I wanted to mention is ELM, the Environment Land Management scheme. So this is, many of you are probably aware of this, the replacement from the Common Agricultural Policies. We've left Europe and we think that there will be literally hundreds of millions of pounds that can deliver things that reduce flood risk but can work in the floodplains to make agriculture more sustainable. Then there are other funding which can come from pretty much anywhere, I'm not going to try and give you a whole list of all the various places that we can get extra funding from. So that's what we've done.

What we're doing in the future is raising awareness about the nature-based solutions and we want to build capacity. We work internationally with the US Army Corps of Engineers who co-ordinate a big group that work across the whole globe actually. They've just launched their handbook, literally a couple of weeks ago, which you can download. It's 1000 pages but they are all very valuable. We were speaking with them just yesterday about what we might do as a launch event more local to home than the USA. We're working on guidance, we're going to update that working with Natural Processes Evidence Directory and we're looking at the way that we might do our ways of working too. That is all I was going to say. I have rambled through quite a lot there and I recognise that not all of that is directly related to floodplain meadows. But hopefully that gives you that bigger context of where we are with what

we're doing and that there is a role for reconnecting floodplains and renaturalising rivers that has a flood benefit as well as all of the other things but for flood we do recognise those. If you want anything more, if you want to get in touch with me, it's probably easier than my email address to remember is [NFM@environment-agency.gov.uk](mailto:NFM@environment-agency.gov.uk) and I'll do my best to get back to you and with that Emma I'll hand back to you. Thank you.

Emma: That's great. Thanks very much Jon and I'm really glad that you could come and say all that because we really want people to think about floodplain meadows as one of the NFM tools that can be used so that's really helpful. So we're going to move on but hopefully Jon will be around for some questions at the end. We are going to move on to 2 talks about the catchment-based approach, CaBA. The CaBA Biodiversity Hub Chair is Glen Cooper, who is Senior Advisor at Natural England and is the lake restoration lead. This will be followed by a pre-recorded talk by Lucy Butler from the Rivers Trust about the Rivers Trust Biodiversity Data Hub. So hopefully I should be able to hand over to Glen.

### **Lucy Butler and Glen Cooper: Rivers Trusts Biodiversity Datahub.**

Glen: Good morning everybody and thanks for the invitation to speak. So as Emma said I'm Glen Cooper, I work for Natural England as a Senior Advisor. This is really just a segue though into Lucy Butler's talk who will be talking to you about a new catchment biodiversity hub. But to set the context of that, I'm going to introduce where the work originated from, which is from the CaBA Biodiversity Working Group. I guess most of you probably know, but for those that don't, CaBA is the catchment-based approach and it's a grouping of catchment partnerships across England, alongside a national steering group, and also a number of national working groups. There are 9 of those working groups and they include a range of issues including urban water, agriculture, abstraction, coastal and estuaries and there's also the Biodiversity Working Group which is the group that I chair.

So to give you just a quick outline of who we are, as I said, we're a technical working group made up of NGOs and the statutory agencies are listed there and included in that are Emma and colleagues from the Floodplain Meadows Partnership as a standing member. We have a number of roles really. You can see there some of the things we do, but it's driven around advice to catchment partnerships to support their work and enhance their biodiversity delivery that comes through that. We do that through a number of ways through promoting information and data. We give advice on technical and policy issues that influence the management of wetlands and water. We develop communication and advice for partnerships and for others to use and I'll come on to talk about that in a minute. So that's a kind of overview of what we do. You can find out more about us and CaBA generally and the other working groups at the CaBA working groups page. The page has actually literally been updated

yesterday. So this is an old image here but if you go onto the CaBA website now and look for working groups, you'll find our webpage there.

The sort of things that we've done in the past and are ongoing at the moment, we've done various things around the 25 year plan. For instance, we produced an advice paper independently to DEFRA and Natural England around the Nature Recovery Network Development. We've been working for a number of years and it started with our joint role as TBG group on working up a new priority habitat, floodplain wetland mosaic, which is moving on from coastal floodplain grazing marsh and that's ongoing work. We produced a biodiversity pack, which I'll come on to in a minute and the latest work is around the biodiversity hub which Lucy will talk to you more about. So just for awareness really the CaBA biodiversity pack. There are a number of very accessible technical but very accessible PDF sheets which cover a range of wetland and water habitats, including wet grasslands and within that reference to floodplain meadows. These sheets are really designed for practitioners to understand the role of natural function within wetlands and water, but also understand how they can apply that, and particularly for partnerships, how they can apply that to projects and work that they're doing. So you can see the list of sheets there and you can access and download these yourselves or pass them on to partners. It just gives you a flavour of what the sheets look like. So there's guides for those species and habitats associated with water and wetlands. That's it really, that's just my little intro and I'm going to hand over to Lucy now who will talk you through the development of the data hub that she has been leading on on behalf of the group.

Emma: Thank you Glen. We can move straight on to Lucy's talk.

Lucy: Hello everyone. I'm Lucy Butler. I work for The Rivers Trust in the Data and Evidence team and I'm also part of the catchment based approach, the CaBA technical support team. Today I'm just going to give you a quick introduction and a bit of a demo of the new CaBA Biodiversity Data Hub that we've been developing in collaboration with the CaBA Biodiversity Working Group.

So CaBA partnerships are supported by a growing team of technical specialists. One of the key aims of the technical support team is to help make data and evidence more available and accessible to all partnerships and communities. The way that we've done this is primarily through development of the CaBA data package. So the CaBA data package and the user guide that sits alongside it have been developed over the last 7 years. There's now over 200 different environmental layers available that can help catchment partnerships understand the issues and characteristics of their catchment. It can also help them identify opportunities for action and where there's opportunities to collaborate with other partners to deliver multiple benefits. This makes it a hugely valuable resource for catchment partnerships. However, we do appreciate that now with over 200 data layers it can be a bit overwhelming sometimes to know where to start, or how to identify the really key pieces of

information for your particular situation. So to help with this the technical support team have been working with a number of the CaBA working groups to develop resources and hubs that make it easier to access the key data layers related to particular themes and that's included working with the Biodiversity Working Group to develop the Biodiversity Data Hub.

I'm now just going to give you a quick demo of some of the resources. So firstly, what's included in the Biodiversity Data Hub and where can you find it? So if you go to the catchment based approach, open data portal, which you can find at [data.catchmentbasedapproach.org](http://data.catchmentbasedapproach.org). If you click on the Working Groups tab here at the top, this will take you to the page where we've begun to theme the different resources available. So as you scroll down you see we've got the resources for urban data, health and wellbeing, coasts and estuaries and then you come to the biodiversity layers. So one of the first things that you can do from here is you can browse the biodiversity data catalogue. If you just click View Data that'll take you to the catalogue. In here we've got about 70 different national GIS layers that are all related to biodiversity or restoration of natural processes. These layers were identified by the CaBA Biodiversity Working Group who undertook a review of the CaBA data package last year and chose which were the key datasets that we should include. We've also added a few new ones that weren't previously available and there's a few more to come but I'll give you a bit more of a demo of the layers that are included in a moment. So then if we go back to the main page you've also got a link to launch the biodiversity data explorer. So this is a simple web application that allows non-GIS users to explore the data and create their own simple maps and again I'll give a demo of that in a moment. If you're an Esri GIS user you can request to join the ArcGIS online biodiversity data group so you can more easily search for the layers in your desktop or Online GIS. We then have a link to the CaBA biodiversity pack that was developed by the working group. This sets out guidance and key management measures to help partnerships guide decision-making around restoration of natural processes across a number of key freshwater and wetland habitats. Then we have a link to a supporting StoryMap that's coming soon and I'll say a little bit more about that again later as well.

So I'm now going to give you a demo of the biodiversity data explorer and show you some of the layers that are available within it. So when you first open the App you'll see that there's various icons and buttons around the screen that you can use to create your map and control what it looks like. So probably the first thing to do is to click on this button down here All Biodiversity Data and this allows you to add layers from the biodiversity data catalogue but there's still quite a lot of layers in there to search through. So to make it a bit easier we've split the data out into categories which you can access by the different buttons along here. So we've got data on issues and status. So that's things like triple SI condition status and WFD classifications. There's then information on designated sites. We've got data on priority habitats and important areas, and the new habitat network mapping from

Natural England both as combined and individual layers. We've also recently added the priority habitats, river and stream and lake restoration priority areas into there. So there's then data around opportunities related to climate change and resilience. So there's the Environment Agency's riparian shade data in there, working with natural processes data and information on peaty soils from Natural England. We've then also got Natural England's natural capital layers in there. There's data on coastal habitats so that includes opportunities for restoration of salt marsh, seagrass and native oyster. There's information on catchment characteristics predominantly land cover and soils. We've then got some data on where actions are taking place and also some citizen science monitoring data. For example, there's the modular river survey, some data from Riverfly and also from FreshWater Watch in there. There is then some basic base mapping data that you can add, such as administrative boundaries, etc. and then we've also added a tool that will allow you to upload your own data onto the map. So if you're an ArcGIS user you could search through your own account or you can search through everything that's available on ArcGIS Online. You can add data from a URL, such as a web mapping service layer, or you can also add data from a file, for example, a shapefile or a CSV file.

So I'll just now add some data to the map. So if we maybe add the triple SI condition status and the WFD classification data, so you just click on Add to add it there to the map. For some of the layers you might need to zoom in until they become visible. So that's the case for the triple SI data there. Then once you've added your data to the map you'll see that for a lot of the layers if you click on it it'll open a pop up with more information and for some of the layers you've got things like links to external resources. So we've got a link out to the catchment data explorer there as well.

So in terms of other tools and widgets that are available in the App, you can do things like you can change the base map if you want to overlay it on aerial imagery. You can just view the legend and you can also see the layer list for the layers you've added. So you can turn layers on and off through here and you can also do things like vary the transparency. You can also view the data that's contained in the attribute table by clicking on this little button here to see more information. Then the final thing, we've added a few little tools just to help you explore the data. So there's a simple measure tool for distances and area, we've added a swipe tool that allows you to swipe data on and off which can be quite useful in helping to compare overlying datasets. There's a select tool which allows you to select data for your local area of interest. Then there's also a print function that'll allow you to print off a simple map in PDF format. So that was really just a quick overview of the hub and the explorer.

Then finally, as I mentioned, we're also in the process of developing a supporting story map to provide further guidance and this will be structured around the same structure as the CaBA biodiversity pack. So it will provide information on key datasets from the catalogue that might be helpful in identifying opportunities to

restore natural processes within key water and wetland habitats. The story map will also include case studies showing how partnerships are using data and evidence to support biodiversity delivery, and there'll also be links to external resources. For example, we're going to have a link to the meadow map from the Floodplain Meadows Partnership in there. There will also be links to webinars. So hopefully the story map I'll be ready to release shortly later in the year and you'll find the link on that main page on the CaBA open data portal. So that was just a very quick overview. Thank you for listening and if you've got any questions then please do get in touch. Thank you.

Emma: That's great. Thank you very much Glen and Lucy, and we'll move straight on to James Locke who is Nature Recovery Network Delivery Partnership Lead Advisor at Natural England and he is going to talk to us today about the Nature Recovery Network and floodplain meadows. So thank you very much James and welcome.

### **James Lock: Nature Recovery Network and floodplain meadows.**

James: I'm Jamie Locke. I work for Natural England within the Nature Recovery Network Delivery Partnership team. So firstly just a thank you for letting me talk today. I've dialled in whenever I can and it's been a really lovely conference, really insightful and really positive. So say thank you for allowing me to speak. I'm quite new to the sector so I'll probably have a slightly broader focus than some speakers and I may touch upon some themes which have already been mentioned across the conference. But what I want to do is talk about the Nature Recovery Network in perhaps a little bit more detail. In particular, the role of the Nature Recovery Network Partnership. If I use the term NRN, I mean Nature Recovery Network. But I want to talk about the partnership in more detail, and how some upcoming policies and levers might align to help support floodplain meadows and nature recovery more broadly.

So what is the NRN? So the Nature Recovery Network will be a single national network of wildlife-rich places. It's a major commitment within the government's 25 year Environment Plan and ultimately it has its roots in the 2010 report by John Lawton into the State of Nature and the report recognised that protecting isolated pockets of nature wasn't really doing enough to prevent species declines and he advocated bigger, better, more joined up approaches. I think it's almost become a tagline. Bigger, better, more joined up and I think it's helped spark a shift from just conservation to nature recovery more broadly which is really what underpins the NRN.

So why have a Nature Recovery Network? So the NRN provides a framework for a new integrated approach to nature recovery, bringing together partners, policies and investment to help address the crisis facing biodiversity, climate and health. There

are 3 main objectives within the 25 year Environment Plan. So to significantly improve the condition of protected sites, to create an additional 500,000 hectares of new wildlife-rich habitat outside of these sites, and to recover wildlife populations and return lost species to their natural ranges. I think a large number of other objectives sit under the NRN umbrella. So looking to use nature-based solutions to adapt and mitigate climate change and improving access to nature to help ensure that nature can be used as a public good to benefit everyone. But I think those 3 objectives on the screen there are almost our top 3 headline objectives.

How will the NRM be structured? So existing but improved protected sites will be at the heart. Newly created or restored wildlife-rich habitat corridors and steppingstones will connect wildlife-rich areas to help wildlife populations grow and move. Buffer zones of sustainably managed land will protect key network areas, green and blue infrastructure and networks of multifunctional green space, urban and rural areas improving landscape resilience, ecosystem services, health, wellbeing and environmental equity, and also nature recovery areas that a landscape or catchment scale will make a significant contribution to help us restore nature, reach net zero and improve economy, health and provide wellbeing benefits.

How will the Nature Recovery Network be delivered? So we're taking forward 3 main action areas to help deliver the NRN. First and foremost is building strong partnerships including government, landowners, business, local communities and conservation organisations to help deliver action on the ground. This will be co-ordinated through a cross sectoral management group. The second is around spatial planning and spatial tools to help target and plan the NRN nationally and locally. You might have heard reference to local nature recovery strategies over the course of the conference which will be one of the key mechanisms by which we do that and I'll go into a tiny bit more detail on those in a moment. The third really vital work area is around the integration of nature into policy and key funding streams.

In terms of the first of those work areas, we know that we can't do this alone and it will ultimately be people that deliver the NRN. So we need to collaborate. So we've launched the National Delivery Partnership, led by Natural England, to provide support and advice and galvanise wide support and commitment to the NRN from public and private sectors. The partnership is open to any organisation willing to support nature recovery network delivery, and oversight will be maintained through a core management group with sectoral representation. We will also be helping to support local partnerships on the ground. They'll be absolutely key to delivery and our area teams are building capacity to help support existing partnerships and grow partnerships where perhaps they are needed. In terms of who is on the management group, this is just a snapshot of who we have. So on the left there's a range of cross government sector organisations. On the right, we couldn't fit everybody's logo onto the screen, but that gives a broad representation of the sectors which are on our

management group. That group may tweak and change slightly over time but we've got about 30 sectors represented there.

Local Nature Recovery Strategies or LNRS will be locally developed tools that map and target priorities for nature recovery. There'll be around 50 developed at a county level and joining up across England. They'll play a huge role in identifying what and where actions should be delivered and once the Environment Bill receives royal assent, which we expect to happen in November, responsible authorities will be appointed and the development of Local Nature Recovery Strategies will become mandatory. They'll be developed through a collaborative, transparent and locally-led process which will begin next spring. These will be mapping tools with a legislative underpinning. But ultimately the targets themselves that they highlight will be non-binding and the delivery will be driven through collaboration and incentivisation. The third key area that is being taken forward is around simply the alignment of a huge number of different policies and funding streams which are coming online at the moment. So I'm sure you'll have heard reference to ELM also known as more recently 'future schemes', new farming incentives which are being developed to help support action to deliver nature recovery. Mandatory biodiversity net gain will commit developments to improving and increasing biodiversity on sites and where this is impossible Local Nature Recovery Strategies will help target and enable local offsetting. We will be aligned with England's Tree and Peat Action Plan and associated funding, and we're also working with new partners including business and finance to help secure private investment and begin to explore how we can make blended finance work and support nature recovery on the ground.

Why is the Nature Recovery Network different? A lot of people ask this question. But I think one thing which is really different now compared to the past is the commitment and engagement across governments. The integration of funding and policy and nature being seen as a solution now rather than a barrier. The length of time being committed to because this is part of a 25 year plan so it's not a short term project. COVID and public support has led to a huge interest in nature and the capacity for nature to help us recover and heal. The range of partners from beyond the conservation sector, so landowners and businesses are now very interested in this as well. This incentive driven approach gives us a huge opportunity and finally, the fact that LNRS's have this statutory underpinning is quite new.

We're in a phase where we're trying to deliver nature recovery whilst many of the tools that will ultimately help this are still being developed. But there's so many success stories out there and we've heard a lot during this conference already. But I think really what I want to highlight is that we're entering a time of real opportunity for nature recovery with a lot of really exciting new tools and levers just on the horizon. I think Local Nature Recovery Strategies in particular could be a really powerful tool for floodplain meadows because they'll help us to identify opportunities to create more and will help build them into long-term collaborative action plans to restore

connectivity across the landscape. So do take every chance to engage with LNRS's when they're being developed in the new year.

Just to say if you do have any questions do ping them my way. So [James.Locke@NaturalEngland.org.uk](mailto:James.Locke@NaturalEngland.org.uk) or if you'd like to become a partner, again email myself or our nature recovery mailbox at the bottom, and just say you'd like to be a partner because we would love to work with you. If you want to know a little bit more about Local Nature Recovery Strategies, again do you get in touch with the above because we're holding a webinar on the 21<sup>st</sup> October, partly to support the national consultation which is underway just to help us develop the guidance and regulations around these strategies, but we'll also explain them in a little bit more detail on the pilots which have recently finished as well. So do sign up if you'd like to be involved. But thank you very much and that's me done.

Emma: That's great. Thanks Jamie. I feel a bit more positive listening to that which is nice. We are now behind time. We should have finished by now so we've got 2 polls we just need to answer and then we'll take maybe 1 or 2 questions. So if we could launch the first poll that would be great. The first poll is - Do we need a floodplain strategy? Yes or No? Barry Gardiner at the beginning of our conference said we did. I'm not trying to influence you or anything. It would be interesting if you think not if you're prepared to say in the chat why not? It'd be really interesting for us to know that. If we could launch the second poll. Can you suggest priority policy areas we should be focusing on in the next 6 months? Just put it down in the chat whilst we're doing the Q&A. That's lovely. Thank you very much. All right. So has anybody got any questions for our 4 speakers?

## Questions

Helene: There was a concern, a bit of discussion about the Magic Maps and data that is already available. I think a couple people talked about where floodplain meadows haven't been recorded yet. That's possibly a question for Glen. How can the hub record that? I suppose it'll be through floodplain meadows data.

Glen: Yes that's what I was going to say is that the priority habitats are set actually through the NERC Act ultimately. That's the point of the data hub is that you can take the information that you'll gather as the partners, the FMP, and upload those and we can have them on the data hub so that you can apply them to those other layers and refine them effectively with more up to date data.

Emma: I think the data hub and the strategy stuff is really important and it's really important that we feed our data in as best we can, but that other people locally do as well so that it's all there and it doesn't get missed on the system.

Martin: It was just a comment really on Jon Hollis's presentation about natural flood management. I think we shouldn't forget that the one great thing about floodplain hay meadows is they also provide natural nutrient management. They are where they are because you get the free fertilising effect of winter floods. Of course what you're doing is making a useful product from surplus nutrients entering the ecosystem. So I think that is worth emphasising, you have this virtuous circle of actually getting a useful agricultural product and also removing excess nutrients from the system.

Jon: I don't think there's much I can say different because I think you're right, absolutely. Great feedback loop there that creates great things for people and wildlife as well so nothing on that. I think, as I said in the presentation, from a purely cold perspective of what do we need from a flood risk perspective it is about the amount of space of water that we can hold back. But absolutely all of those other benefits are fundamental to choosing what we do and which measures we use. As you say, if we could do stuff for agriculture, if we can do stuff for health and wellbeing that is really important too. So yes that's a good point well made. Thank you.

Antony: So my question is about the policy and funding strands. So floodplain meadows which we were showing in the last session are a result of human activity maintained over a 1000 years and their restoration really depends on that continued maintenance and management and involvement of people. So what space is there for working with cultural processes and culture-based solutions to sustainability, they're somewhat cut out by the language in many cases.

James: I think there could be a link here to Local Nature Recovery Strategies. Again, I'm probably reaching a tiny bit beyond my knowledge at this point but these strategies will be hugely collaborative and will have a huge range of stakeholder input. So there could be opportunity to get shared interests and shared funding streams working together in the same place. I'm not sure if that fully answers your question but do sign on to that webinar if you get the chance because it could provide a little bit more detail into how this will work.

Glen: I think it's also worth saying that in delivery of the kind of landscape and biodiversity benefits that you could get from if you like it would be simplistic but from floodplain meadows, it depends how they are managed, but you're inherently drawing in those kind of cultural traditions and practices that have happened to create them. So really the way that they're, I'm not close to the ELM process or the new scheme process, but the delivery of those other objectives around climate resilience and biodiversity inherently have a degree of the cultural and historical management of some of those habitats built into them I think, so there is an element of that.

Ann: Are farmer facilitation groups part of the NRN partnership?

James: We've opened the door to anybody who wants to sign up. So on the management group in particular we've got the NFU involved, we've got the CLA involved. It's been a very busy and strange year with one thing or another, but we want to work with our management group to help our sectors engage with those sectors a little bit more. So I think potentially the NFU might fulfil that role to a degree but like I say we're keen to engage with sectors as much as we possibly can. So if you feel there's a gap in the management group let us know or if you want to sign up to be a delivery partner and work with us then do, we want to work with as many different groups and sectors as possible.

Kevan: We've heard all these amazing benefits that come from floodplains but there seems to be no mechanism at all for weighting them. So do we weight the culture or the biodiversity or the flood management or the hay production and so on. When we look at the funding streams, the funding streams are often just looking at one piece of that, and often looking at it in the very short term. Somebody suddenly says they have some money to spend, please could you write a grant to do x. So the sustainability aspect of it is also not factored in and this becomes really crucial when we are looking at the proposals to scale up massively the amount of floodplain meadows that are being created. So I think there's a whole other discussion which obviously we can't have now, just about how one balances all these interests and how one controls or manages the sustainability in terms of the financing, which is clearly when you follow the money it usually ends up not doing the 25 year but doing the next month for 6 months or something.

Jon: I think that is a really good point and it's something that I said in the presentation that we talking with the Americans yesterday, it was one of the things that we were talking about there and actually what is it that we talk about when we value these things? I think the trouble is is that numbers work in a lot of ways and so sometimes big numbers are good, sometimes big numbers are not so good, depending on what it is that you're looking at. But numbers are easy to compare. So the reason that's important is that we end up in this economic kind of assessment of where we want to put our money, not necessarily maybe that more philosophical idea of what the benefits are, because benefits that flow from the things we do are not always easily monetised and compared in monetary terms. I think this is the point that you were making there in terms of how do we bring all of those things together and how do we weight them? I don't think necessarily we do need to weight them. I think what we need to do is bring the experts, the people that are passionate about those different things together to create the shared view and ambition and idea for what it is that we want to do in the landscape. I'm being very broad in this because I don't think this is a specific problem just for meadows. I think this is something that we battle with across nature-based solutions. In some ways it's what all government departments maybe battle with in terms of where they are trying to balance the priorities. So I think there's something in there. But I think also on top of that, we quite often look at the money that we need for the upfront changes, the bill, the

capital project if you like, and we don't always necessarily make sure that we've got all of the money that we need lined up for the maintenance and we don't necessarily always use the right techniques that can minimise that burden in the future as well. But that's partly because things change and we need to be aware of those kinds of things. I think it's a really interesting point. But I would say it's about bringing everybody together, creating that shared vision, because getting the best balance of outcomes might mean that we don't get the best outcome for each of them but actually you deliver that range of outcomes and that can be more valuable in its own right, it's greater than the sum of its parts is what I'm trying to say.

Devan: So just coming back quickly, one always forgets that the floodplain meadows that we're talking about are as rare as hen's teeth. So you know 4 square miles left in the whole of the UK, so it's not a forest, it's not all these other things you're talking about. It has a massive value just on the rarity. So if you were, you know, an animal, you would be protected like crazy, the floodplain meadows are not, and their rarity value is somehow forgotten in all the NGO speak of what we should be protecting.

Emma: That's another really good point Kevan, but I think we're going to draw a line under it now. Thank you very much. Please do keep your comments on those discussions going in the chat. We need to wrap up now, I'm conscious that we're 15 minutes over time and I apologise for that, but partly I don't because it's been a really interesting discussion. So I'd like to say thank you really very much for our speakers and for all of you for participating. That's the end of the session.